

Knowledge Management Improvement Plan for the Orange County Library System

Adriana Abufele Paz, Patrick Green, & Danielle Janney

School of Information, College of Arts and Sciences, University of South Florida

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Executive Summary

The Library Director/CEO, Steve Powell, of the Orange County Library System (OCLS) agreed to a knowledge management improvement plan between Questline and the county's library branches. The plan implements Questline's effort to bridge gaps of knowledge at individual library branches. The staff designated to service individual libraries are less inclined to know about every OCLS activity, and, therefore, they have less time for unique questions. In contrast, Questline's primary responsibility is to answer questions of any variety. Questline will record tacit knowledge and unique questions daily for weekly reviews by their manager, branch librarians, and Human Resources to knowledgeably construct an accessible, systemwide LibGuide.

Planning

Setting Description

As of 2023, the Orange County Library System is a public library system in Orlando, FL, and features sixteen locations, including a primary library in the center of the county. This primary library, also simply called the Orlando Public Library, is a five-story building, offering several services which include (but are not limited to): reference services, classes, technology centers, makerspaces, art studios, study spaces, and a children's library. This building also holds Questline, the OCLS call center. Questline facilitates calls for the entirety of OCLS, answering questions that vary drastically in their

complexity and breadth of subject matter. Common questions posed to staff members of this department include (but are not limited to): library accounts, library card renewals, class registration, reader's advisory, quick reference service, library website navigation, and digital media provider troubleshooting. These questions are answered via phone, chat, and e-mail. In total, the call center is always staffed by no more than 10 staff members, and all work is conducted in an office space setting.

On average, call center workers answer three to ten questions an hour, and each question can last from one minute to 15 minutes depending on the nature of the question. Staff members are expected to report to an assistant manager for any questions that a staff member cannot answer, or if the customer is challenging. All methods of knowledge facilitation are conducted through Microsoft 365 or the staff's Intranet. Outside of some e-mails sent between departments, Questline does not normally communicate with other floors or areas of the Orlando Public Library; other departments will inform Questline of any updates regarding procedures, incident reports within the Orlando Public Library, and recent changes to available policies, but Questline does not communicate regularly with anyone outside of the call center.

Overview of Proposed Project

Questline can answer most questions posed by the customers of Orange County, but consistent circulation of knowledge between Questline and other branches (or Questline and other departments of the Orlando Public Library) is miniscule or non-existent in many cases. Knowledge sharing is not heavily encouraged within Questline. New knowledge is expected to be accumulated by the workers of the department, but this new knowledge is not necessarily shared with other departments or branches. Unique

questions or questions which provide needed suggestions for recent updates to a policy and their answers are kept within the department. Furthermore, the answers to these questions are rarely formalized as explicit knowledge, except when the answers produce substantial benefits to OCLS. As a result, tacit knowledge is frequently employed by staff members, significantly limiting the department's ability to create explicit knowledge, restricting learned knowledge to the Questline call center. To produce an efficient knowledge management system, goals and objectives are necessary to achieve stronger management of knowledge within the call center.

If the OCLS call center is going to properly identify and capture uncommon questions and distribute explicit knowledge to other departments and branches, a formalized knowledge management system will be required to complete this objective. The goal of the OCLS call center will be the accumulation of unique questions and answers through notetaking applications and the dissemination of these questions and answers to other departments and branches within OCLS through electronic communication. The dissemination of these unique questions and answers will not be the only knowledge given to other parts of the library system. In addition, any knowledge accumulated, whether they are unique or not, will be shared with the entirety of the organization through various forms of electronic communication. The tacit knowledge acquired through unique customer interactions will be converted into explicit knowledge through the notetaking application Microsoft Notebook.

Microsoft Notebook is an application that will be accessed by authorized users (those who interact with customers) where unique and constant requests or comments made by customers will be noted. Given that the application is available online, it is

collaborative effort. Therefore, everyone can make their own notes and have them accessible to other library staff. The ultimate objective of these notes is the creation of a LibGuide where all the explicit knowledge will be collected. LibGuides will not be collaborative. Instead, one or two employees who have enough experience with library customer service and familiarity with the application can create guides out of the notes in Microsoft Notebook.

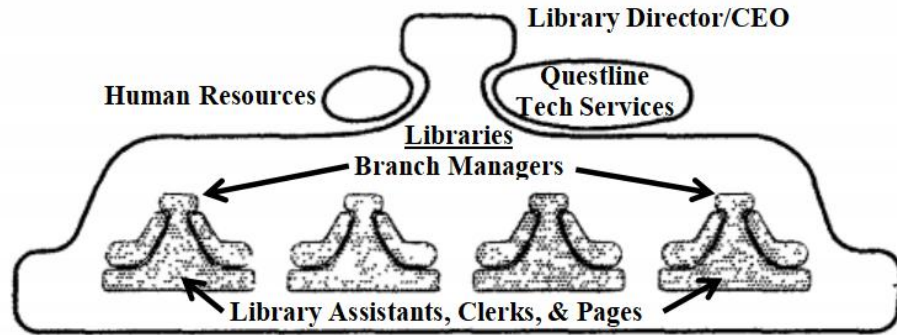
The goal of this knowledge management system will be a clear, abundant exchange of information across the entire library system. This goal will be achieved when library staff at every location can access this knowledge at any time during their work hours.

Organizational Structure

Currently, the OCLS call center is structured around specialized individuals with broad knowledge of all library operations and systems. The assistant manager fills in the knowledge gaps when these specialized individuals do not know the answer to a question. Any knowledge that the assistant manager does not have is filled by specialized workers in other departments including Reference, IT Tech Support, or Marketing and Public Relations. The organization's overall structure can be defined by the organizational structures outlined by Henry Mintzberg (1980); the structure includes a “strategic apex,” “operating core,” “middle line,” “technostructure,” and “support staff.” The operating core has the most influence on the structure of the organization, so OCLS can be considered a “professional bureaucracy” with influence from some elements of the “simple structure” and “divisionalized” configurations (Mintzberg, 1980). For visual representation, please see Figure 1. The resulting configuration is a hierarchical structure

Figure 1

Organizational Structure of the Orange County Library System



Adapted from “Structure in 5’s: A synthesis of the research on organization design,” by H. Mintzberg, 1980, *Management Science*, 26(3), p. 335,

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at every library branch and department where top management at each location is expected to manage the knowledge of workers within each location but rarely outside of these branches or departments.

Typically, staff members at other library branches are not expected to have extensive knowledge about other library branches, other departments, or systemwide dynamics. Branch or department managers are agreeable to staff gaining a systemwide understanding of the public library, but branch and department managers expect branch staff to only maintain knowledge of what is immediately impactful to their location. Exceptional knowledge of the public library system is impressed upon staff only at the employee or manager’s discretion. This results in an organizational structure that places a

high expectation on the call center to answer questions that most staff members cannot instantly provide answers to. Therefore, knowledge becomes concentrated in the Questline department while other departments and branches contain a sharp knowledge decrease in comparison to Questline. This leads to an inefficient system where customers must rely on the call center, even when they are located at a library facility. This is because staff members who possess less knowledge of OCLS's services and operations do not have a knowledge management system to assist in accumulating their knowledge of OCLS. To mitigate this issue, the organizational culture will be changed to fit an effective system of knowledge between Questline and other branches and departments.

Description of End Users

The targeted users of this knowledge system will be circulation staff members and branch library clerks. Out of the dozens of various positions available in OCLS, circulation staff are expected to know the least about the different branch locations and systemwide operations of the library system. Circulation staff are considered the operational core of the organization, and their primary duty is to assist customers in the use of individual library locations. This assistance may include (but is not limited to): library card creation, program hosting, enforcing the Rules of Conduct, assisting with basic technology questions, and reader's advisory. This position is the largest in the entire system, but it is also the least knowledgeable of all the workers in OCLS. Consequently, their knowledge needs are far greater than the needs of Questline.

Questline staff hold a significant amount of tacit knowledge from unique questions, but they do not have a system to help convert this tacit knowledge into explicit knowledge. Without this system in place, staff members frequently must ask other

Questline staff or the assistant manager for a reiteration of an answer that was already provided to a question from a previous point in time. This leads to redundancy and inefficient use of time on phone calls. Centralizing unique questions and answers into a notetaking application would mitigate or erase this problem. Additionally, circulation staff will have their knowledge needs met if Questline implements a knowledge system for communicating new knowledge in this notetaking application. Circulation staff would have their deficiencies in systemwide knowledge replaced with a strong understanding of the library system, eliminating the expenditure of customer time on making unnecessary phone calls. This allows the knowledge needs of circulation staff to be met while increasing quality customer service for library users.

Types of Gathered Knowledge

With a formalized knowledge management system, unique questions and answers would be gathered, organized, and communicated to all branches of OCLS. Namely, questions relating to specific programs, initiatives, and library policy would need to be prioritized. Branch knowledge deficiencies originate from lack of knowledge on specific questions relating to events at the Orlando Public Library and other branch locations. Additionally, library staff at branch libraries will not be knowledgeable of certain policies or initiatives unless a customer asks about them.

Questline is particularly well-suited to recording and managing this variety of knowledge and, as a result, will be able to gather knowledge that the average branch clerk may not be familiar with. For example, a Questline staff member will be more able to answer questions relating to out-of-county residents than one at a branch location because most branch staff members are not frequently asked these questions. To further elaborate,

branch clerks are also not necessarily encouraged to know this information. Questions and answers that would not normally be heard at branch locations would gain priority in knowledge gathering and sharing.

While obtaining knowledge would be considered more important in the Questline knowledge management system, information would also be considered important. Branch staff frequently look to Questline to answer questions that they do not know how to resolve, but Questline is not always able to answer these questions. Questline receives hundreds of calls every day, so it is only natural that some of those calls will expose a gap in knowledge. This new information may include questions about programs not offered by OCLS but could be used as suggestions for new policies and services.

KM System Description

The OCLS Questline knowledge management system will allow the creation and sharing of knowledge to all branches of the library system on a weekly schedule. To provide strong structuring for this knowledge management system, Microsoft OneNote will be used as the application for recording unique and recurrent questions asked in Questline. All staff members will contribute to this team application. Microsoft OneNote has the benefit of creating ‘tabs,’ and each ‘tab’ will designate an appropriate area for all Questline staff members to record tacit knowledge and unique questions.

However, only one or two staff members will be organizing the knowledge in OneNote. Due to the low frequency of calls on Sundays, these one or two staff members will utilize the library’s Sunday hours to organize the knowledge acquired in the Notebook. The notes provided in the application will be varied in the different questions asked by customers, so tabs will organize the questions. Then, the one or two staff

members will highlight notable questions that could not be readily answered without extensive searching by the Questline staff who wrote the note. These notes will be denominated with a UQ (Unique Question) label. The one or two Questline staff members will review these notes and send these notes to the assistant manager. The assistant manager will then provide a secondary review of the notes. If the assistant manager finds that the notes are worth distributing to the library system, then they will be sent to branch librarians and Human Resources for evaluation and cataloging.

If the notes are not worth distributing, then the notes will be archived into the Microsoft OneNote application for staff members to review later. Questline staff will be encouraged to provide key words into each entry for ease of use when staff members need to answer a question that has been answered in a previous month. In addition to the notes inputted in Microsoft OneNote application, staff members will be expected to write down key information about a question while on the phone. This will ensure staff can keep track of the questions asked if the call center becomes busy. Staff will not be expected to take themselves out of answering calls to finish taking notes, so it will be necessary to have a physical form of recording knowledge available. The Questline call center's slower times will be used by staff members to convert their notes into decipherable knowledge on the Microsoft OneNote application. If this knowledge management system proves to be useful over the course of 8 to 12 weeks, then the system will be expanded to include the assistance of Human Resources in creating LibGuides for this knowledge and notetaking from other branches. Once a guide is created, the LibGuides should be reviewed monthly to address any adjustments that could be made based on e-mail responses.

After the knowledge has been recorded, organized, and shared over 8 to 12 weeks, OCLS staff members will be sent a survey to fill out regarding the Questline e-mails. The survey will ask OCLS staff members about their level of satisfaction with the e-mails, the utility of the sent e-mails, and suggestions for making the knowledge management system better. If the responses are positive, then the knowledge management system for Questline will be expanded. Human Resources will be contacted to review the notes taken by Questline staff, and, after review from OCLS librarians, these notes will be collated into a LibGuide, highlighting the most useful answers to some of the most difficult questions. The LibGuide will be periodically edited according to the number of new questions asked and answered. Additionally, staff members will be encouraged to share their own unique questions in a forum created at each library branch location. These unique questions will be reviewed by the management of the branch location and considered for review by one or two Questline staff members. If this system were to be successful, additional members of Questline may need to be given responsibility of reviewing and organizing notes.

Justification for KM System

The OCLS call center is a hub for organizational knowledge in the library, but distributing the knowledge in this center to all branches would ensure universal understanding within the library system. Efficiency and effective customer service will be heightened with the knowledge management system. Staff will be able to decrease the amount of time spent looking for answers to unique questions, and, therefore, increase the amount of time spent answering questions or reallocating time to other projects.

Additionally, misunderstandings or the production of inaccurate information to customers will be lessened as staff members obtain a better understanding of the organization's policies, initiatives, and programs through the knowledge management system. Given the difference in knowledge between branch staff and Questline staff, the increased application of a knowledge management system is warranted. It is justified by the evident need for more consistent, explicit knowledge in library branches and other OCLS departments.

Estimated Budget, Human Resources, and Timeline

The estimated budget for the knowledge management system would be \$991 a month, with an annual budget of \$11,889 (see Table 1). This would consider the paid hours of each employee and the technology costs that would go into maintaining the knowledge management system. Human Resources would be allocated to facilitate some of the knowledge produced through the knowledge management system. Questline would be given 5 hours a week to work on collecting and organizing the knowledge gathered while the assistant manager would work to review this information at an estimated 2 hours a week. This work time would ensure that enough effort is given to facilitating the recording of knowledge.

To guarantee that the knowledge management system is successful and sustainable, the system would be given to the library director for approval. Following this approval, the system would be implemented for 3 months. Then, a survey would be sent to OCLS employees. This survey will ask questions regarding the success of the knowledge management system and methods of improving the knowledge management system. This survey would be available to fill out for a month after its introduction.

Table 1

Budget for Knowledge Management Improvement Plan (Questline)

Salaries	Expenses	Comments
Questline Reference Assistant 1 FTE	\$4,680	\$18/hour, 2 workers, combined 5 hours/week, annually
Questline Assistant Manager 1 FTE	2,704	26/hour, 2 hours/week, annually
Benefits		
Questline workers 1 FTE	1,404	30% FICA, annually
Questline Assistant Manager 1 FTE	811	30% FICA, annually
Contractual Services		
Microsoft 365	492	21/month, standard plan
LibGuide by Springshare	899	Annual subscription
Total	\$11,889	

Note: This budget table indicates a year's worth of expenses and does not represent lesser trials of the knowledge management system improvement plan.

Surveys would be collected in the following month, and, after observing the success of the knowledge management system, it would be expanded. The expansion would be approved by the library director, and then three months would be used to integrate the knowledge management system into Human Resources. Following this expansion, more surveys would be sent out to evaluate its utility. The timeline (see Table 2) for this would be a repetition of the time taken for the first survey. If the expansion also proves to be valuable, then additional time may need to be given to more Questline staff members to fulfill the knowledge management needs of OCLS.

Table 2*Timeline of Knowledge Management Improvement Plan*

Due Date	Activity
May 1, 2023	Library Director approves of KM improvement plan
May 1, 2023	Questline assistant manager prepares Microsoft Notebook, shares the plan for KM improvement with Questline staff, and schedules individual staff interviews during the first week of capturing
May 7, 2023	Questline assistant manager has recorded staff tacit knowledge and completed first review of unique questions in Notebook
July 31, 2023	Marked 3-month period, survey sent/made available to OCLS employees
September 1 ,2023	Survey results reviewed by Library Director Improvement plan halts if results are negative
December 1, 2023	Marked 3-month period, survey sent/made available to OCLS employees
January 2 ,2024	Survey results reviewed by Library Director Improvement plan halts if results are negative
April 1, 2024	Marked 3-month period, survey sent/made available to OCLS employees
May 1, 2024	Survey results reviewed by Library Director Improvement plan halts if results are negative
May 6, 2024	Library Director decides whether or not to expand Questline efforts in knowledge management improvement plan

Note: This timeline assumes the improvement plan will run for one year.

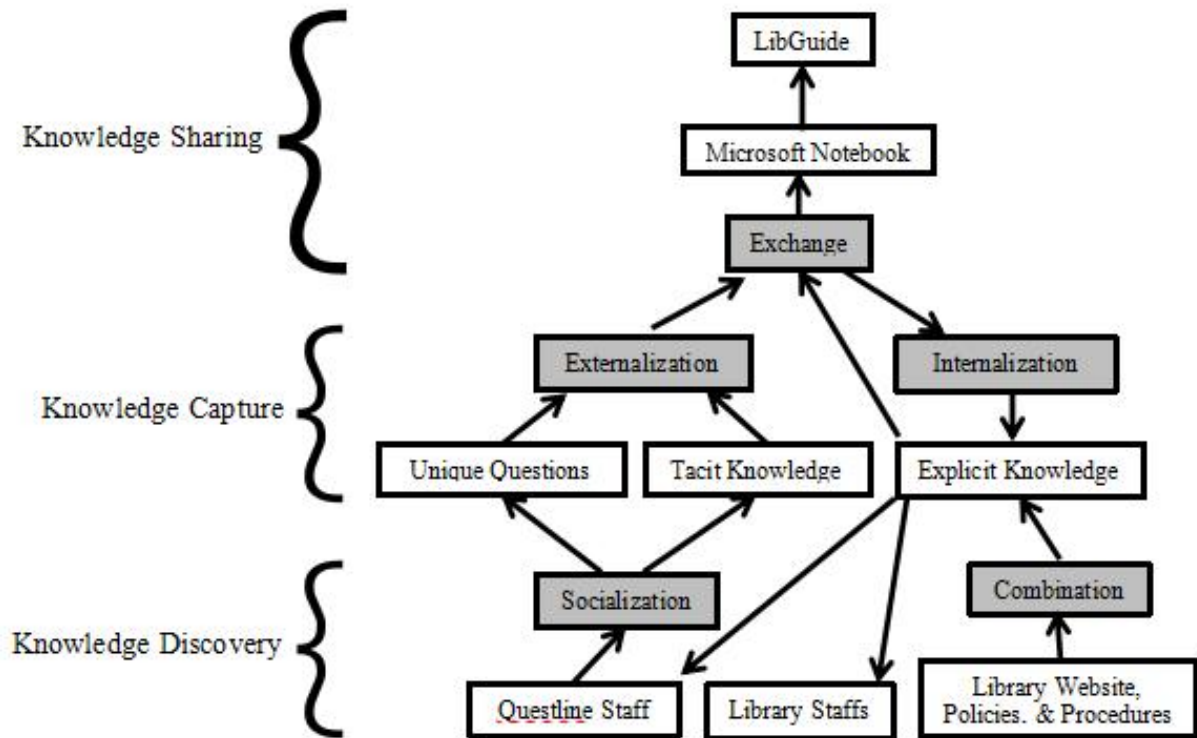
System and Interface Design

Knowledge Management Processes and Sub-Processes

The proposed improvement plan for the OCLS knowledge management system would include processes of capture, sharing, and discovery (see Figure 2) that will be reliant on the successful operation of information technology and Microsoft 365.

Figure 2

Knowledge Management System Processes and Sub-Processes



Note: Knowledge management processes are designated on the left; sub-processes are shown in gray.

Knowledge Discovery

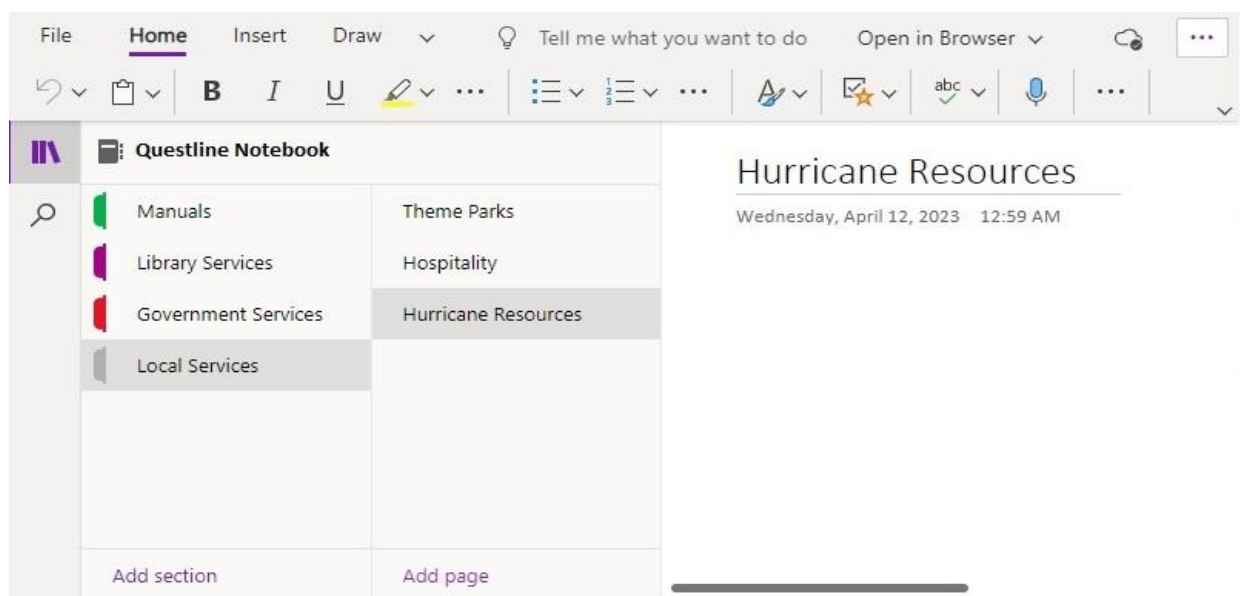
The process of knowledge discovery will kickstart the knowledge management improvement plan to begin recording tacit knowledge and any unique questions at hand. Socialization is the main sub-process producing queries and new explicit knowledge. The knowledge discovered this way will have been through interview, conversation, and cooperation to facilitate the knowledge management improvement plan. The explicit knowledge of library website navigation, policies, and procedures may be used in whole or in combination for the development of an improved knowledge management system.

Knowledge Capture

To capture discovered knowledge, externalization will occur in the form of a Notebook in Microsoft OneNote. A Microsoft OneNote notebook is made up of sections that contain further pages. The Questline assistant manager will have started and preemptively organized a Notebook to allow for collaboration and clarity of use amongst the Questline reference assistants (see Figure 3 for example). Each section will hold common knowledge. For example, sections could be labeled as: “Local Services,” or “Library Events Questions” or “Government Services.” If a new section needs to be created, then it should be done with discretion. The Notebook will be added to as needed and reviewed weekly by the assistant manager.

Figure 3

A screenshot of a Microsoft OneNote Notebook



Note: The content of this Notebook is for example use only and is not in use by OCLS.

Knowledge Sharing

The knowledge to be shared with the greatest intent will be exchanged from the Notebook to Human Resources and OCLS librarians for review. The exchange and review of this knowledge will determine the content of a LibGuide that the OCLS staff will utilize daily for knowledge needs. The reviews will be administered through e-mail and may instigate discussion groups (physically or digitally) and progress reports.

The outcome of the reviews will have important and unique knowledge chosen for inclusion in an OCLS LibGuide. The LibGuide will further enable the exchange of knowledge between Questline reference assistants and library assistants throughout the system's branches. LibGuide is a popular content management system created by Springshare and used by many libraries. As the name implies, LibGuides allow users to create digital guides about anything they wish. It would be beneficial to have one guide that is easy to navigate and explore. LibGuides have the benefit of including a 'search' bar. Therefore, even if the guide is not easy to navigate, viewers can still search for keywords. In addition, other items, like videos or images, can be added to guide pages if relevant.

Organizational Impacts and Prospects

In the beginning stages, the new workflow for Questline reference assistants will require a period of acclimation and could result in mild disruption of daily processes. During weekly Notebook review, Questline reference assistants not tasked with reviewing may experience heavier workloads. They may also experience greater pressure to document details of each customer interaction and find a frame of significance, leading to feelings of overwork, uselessness, or resistance. Questline assistants will have different

speeds and methods in which they record their caller questions. Acknowledging these realities at the initiation of the improvement plan may help quell complaints or backlash, securing an understanding that the change in routine will affect all reference assistants.

The Questline assistant manager is scheduled to review the Notebook for two hours a week. Considering this, the allotted time may be exceeded for whatever reasons, and regular communication with relevant branch librarians and Human Resources may be necessary. The assistant manager may shift their priorities, focus on the KM improvement plan, and have less time to work on other projects. Operations within the Questline call center, however, should function without issue.

The timeline (Table 1) and budget (Table 2) reflect predictable results and no additional expenses outside of regular salaries or subscription services. Questline and library branch staff will contribute to the collection of and feedback to captured knowledge during regularly paid hours.

Discussion

Summary

When Steve Powell was elected as the Library Director for OCLS, he brought insightful experience to the position. He had previously filled the role of Chief Operating Officer and became familiar with the various OCLS departments and facilities. Therefore, he sympathized with Questline's mission to improve the library's knowledge management system. A trial improvement plan was determined to be the best option for seeking more efficient knowledge sharing across the county's library system. A year of knowledge collection and feedback will determine the construction of a LibGuide, the

end goal of the plan. The LibGuide will feature key organizational knowledge and unique knowledge gathered and asserted by Questline reference assistants. The LibGuide will produce a cohesive and efficient knowledge discovery, sharing, and application system for individual library branch staff of Orange County and Questline to use as a single reference.

KM Goals, Objectives, and User Needs

The knowledge management system for the OCLS call center will achieve long-term efficiency in knowledge discovery, accumulation, and sharing. The goal of this system is to permit all staff members to acquire knowledge regarding unique questions. With the absorption of this knowledge, the Questline knowledge management system will imbue branch staff with a clearer perspective on the library's systemwide functions, programs, and objectives. This knowledge management system's objective is to increase understanding of the library system and its users' needs. Accomplishing the knowledge management system's objective will strengthen the library's quality customer, promote improvements in the organization's operational core, and invite further upgrades to the library's system for recording knowledge.

An evident difference in knowledge between Questline staff and library branch staff needs to be corrected if the library wishes to satisfy the demands of internal and external customers. Internally, facilitation of knowledge with the Questline knowledge management system will increase staff appreciation for the library's extensive services and decrease the amount of time wasted with customer interactions. This will lead to a confident and committed team of library staff. Externally, customers will be able to readily receive answers to their questions, fostering trust, respect, and dependence on

branch staff for library-related questions. Customers will find their needs for quality customer service and helpful answers to their questions met more often by both Questline staff and library branch staff.

Challenges

The improvement plan utilizes current employees without extra assigned hours. Consequently, work environments and their staff may experience a shift in regular participation of procedures. It is possible designated Questline assistants for Notebook review will be unavailable, and coworkers will have to increase productivity. Also, Questline staff may feel uncomfortable sharing knowledge previously available only to them. Encouragement and extensive communication between administration and Questline workers will be needed to quell uneasiness in the subsequent weeks from the system's inception. Reference librarians will also need to accommodate for weekly contributions to Questline's LibGuide propositions and may have less time for their own projects. This could lead to dissatisfaction with the level of fulfillment provided from their community learning-related projects, but underutilization in the reference department from community members should allow for lessened growing pains.

Human Resources or the library's administration may decide the project is not worth the effort, resulting in the limitation or complete erasure of time acquired to create a LibGuide. If this happens, librarians will be tasked with the LibGuide on a voluntary basis. This could lead to incomplete or dated knowledge accumulation in the LibGuide if library managers are not consistently encouraging librarians to work on the LibGuides. If no librarians volunteer, Questline may need to become acquainted with the possibility of producing the LibGuide. A consequence of this action would be an increase in the hours

needed to train Questline in the use of creating LibGuides and further impediments to knowledge gathering as Questline attention is turned to the development of the LibGuide. This assumes feedback to the knowledge management system is not positive. Any of one of these pitfalls will result in the LibGuide taking longer than expected to accomplish.

Lastly, the survey to be administered every three months may not exhibit the same questions every time. With every revision made to the knowledge management system after every survey, this could lead to inconsistencies in the quality of questions or increase time need to produce surveys that reflect changes to the knowledge management system. Poorly written survey questions could lead to a significantly worse picture of the overall effectiveness of the knowledge management system, resulting in unnecessary time spent attempting to fix a system that was never in need of repair. Responses from the first survey, however, could indicate a poorly formatted question or a lack of meaningful measurement. This would result in revisions of the questions on the survey rather than the knowledge management system itself. Revisions to the questions could limit the likelihood of the Questline knowledge management system's derailment.

Improvements

The Questline knowledge management system could be improved in the future with more time given to staff for knowledge discovery, accumulation, and sharing. As external customers become more accustomed to seeking out library staff at locations for assistance, the need for Questline staff to provide more time to organizing knowledge on Microsoft Notes may increase. Consequently, staff may need to be given more time to work on Questline's knowledge management system, or additional part-time staff may

need to be added to fulfill the requirements of maintaining the knowledge management system.

If Questline's knowledge management system is proven to be successful, then branch library staff may also consider creating their own knowledge management systems for their individual locations. While unique questions will be significantly less asked at branch locations, a thorough accumulation of knowledge in every department and branch of the library system would continue to improve the library's knowledge management. Branch locations currently do not have much communication with each other, so the addition of knowledge management systems modeled on Questline's knowledge management system would increase connectivity between branches. This could lead to a better knowledge management system and promote a communal sense of knowledge sharing with other branch locations.

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