OFFICE OF
INSPECTOR GENERAL
UNITED STATES POSTAL SERVICE

Postal Service Knowledge Management Process

Audit Report

March 7, 2014

Report Number DP-AR-14-002

OFFICE OF
INSPECTOR GENERAL
UNITED STATES POSTAL SERVICE

HIGHLIGHTS

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Postal Service Knowledge Management Process

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BACKGROUND:

As a result of downsizing in response to declining mail volume and the retirement eligibility of about 31 percent of its workforce (152,000 employees), the U.S. Postal Service is at risk of losing the extensive knowledge required to manage its vast operations. The Postal Service had annual revenue of about $67.3 billion, delivered over 158 billion mailpieces, and managed over 31,700 retail locations in fiscal year (FY) 2013. It also operates one of the largest information technology infrastructures in the world, with an inventory of 795 computer applications. It spent at least $59 million on 49 contracts for studies or consulting services during FYs 2011 through 2013.

Our objective was to assess the Postal Service's knowledge management practices, systems, roles, and responsibilities. Accordingly, we compared Postal Service knowledge management processes with eight organizations to identify best practices the Postal Service might adopt to optimize its resources and efforts.

WHAT THE OIG FOUND:

The Postal Service does not have a comprehensive knowledge management policy or process or a chief knowledge officer to ensure that knowledge sharing is systematic and collaborative. Although not well-defined, there are knowledge management elements within several Postal Service systems to capture some tacit and explicit knowledge. In addition, we could not find any of the 49 studies or consultant reports in the Postal Service Headquarters library where they could be shared among all postal departments, as required by policy.

A comprehensive Postal Service knowledge management process would enable management to leverage information from throughout the organization for strategic decision-making and new initiatives. In the near term, knowledge management activities would also mitigate the possible loss of extensive tacit knowledge due to anticipated Postal Service downsizing and the retirement eligibility of about 31 percent of its workforce.

WHAT THE OIG RECOMMENDED:

We recommended the vice president, Employee Resource Management, develop a comprehensive Postal Service knowledge management strategy. We also recommended the Postal Service join the Federal Knowledge Management Working Group, which has experts to assist, inform, and support development and implementation of a comprehensive knowledge management strategy.

Link to review the entire report

March 7, 2014

MEMORANDUM FOR: ROSEMARIE FERNANDEZ
VICE PRESIDENT, EMPLOYEE RESOURCE
MANAGEMENT

E-Signed by Janet Sorensen
'ERIFY authenticity with eSign Deskto
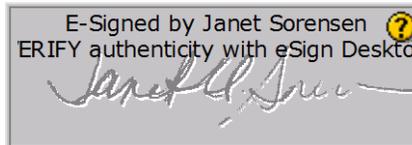
FROM: Janet Sorensen.
Deputy Assistant Inspector General
for Revenue and Business

SUBJECT: Audit Report – Postal Service Knowledge Management
Process (Report Number DP-AR-14-002)

This report presents the results of our audit of the U.S. Postal Service Knowledge
Management Process (Project Number 13RG019DP000).

We appreciate the cooperation and courtesies provided by your staff. If you have any
questions or need additional information, please contact Kevin Ellenberger, director,
Data Analysis and Performance, or me at 703-248-2100.

Attachment

cc: Corporate Audit and Response Management

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Introduction

This report presents the results of our self-initiated audit of the U.S. Postal Service Knowledge Management (KM) Process (Project Number 13RG019DP000). Our objective was to assess the U.S. Postal Service's KM practices, systems, roles, and responsibilities.

KM is a holistic process that optimizes intellectual capital to achieve organizational objectives by leveraging information and expertise. KM efforts typically focus on organizational objectives such as improved performance, competitive advantage, innovation, sharing lessons learned, and integrating and continuously improving the organization. In addition, the KM process is intended to lead to specific outcomes, such as shared intelligence, improved performance, and higher levels of innovation. Through KM, organizations are better able to capture critical information, make the right information available to the right people at the right time, and ensure that existing employees pass knowledge and experience to new employees.

The knowledge part of KM is defined as a mix of experience, values, intelligence, insight, and inspiration that provides a framework for intelligent decision-making using tacit and explicit knowledge:

- Tacit knowledge – knowledge that's difficult to write down, visualize or transfer from one person to another. It consists of informal and experiential knowledge that employees gain through work and life experiences.

- Explicit knowledge – knowledge that is formal and codified and contained within documents, best practices, and databases.

Organizations also use KM to enhance revenue and financial growth; remain competitive in the business world; and improve employee training, innovation, responsiveness, and organizational culture. See Appendix A for additional information about this audit.

Conclusion

The Postal Service does not have a comprehensive KM policy or process or a chief knowledge officer (CKO) to ensure that knowledge sharing is systematic and collaborative among its systems and employees. Although not well-defined, there are elements of KM that reside within several Postal Service systems to capture some tacit and explicit knowledge.

Our comparative analysis identified 18 KM best practices used by eight organizations (see Appendix B). Each organization uses those practices that best fit its particular circumstances, capabilities, and priorities. Therefore, while only one organization uses

all 18 best practices, all eight organizations use six of them. The Postal Service should act similarly when implementing its comprehensive KM process and keep in mind that these best practices are generally established in a 2- to 3-year period. This allows management time to set broad policies before taking more specific actions. See Appendix C regarding these best practices.

A comprehensive Postal Service KM process would enable management to leverage information from throughout the organization for strategic decision making and new initiatives. In the near term, KM activities would also mitigate the possible loss of extensive tacit knowledge due to anticipated Postal Service downsizing in response to declining mail volume and the retirement eligibility of more than 152,000 employees, or about 31 percent of the Postal Service workforce.[1]

The Postal Service needs a comprehensive KM process and a CKO to safeguard against tacit knowledge loss and to ensure knowledge is managed as a strategic asset that is broadly accessible throughout the organization. In addition, management should identify KM as a common strategic asset that should be broadly accessible and include it in Delivering Results, Innovation, Value, and Efficiency (DRIVE)[2] strategic initiatives.

Postal Service Knowledge Management

The Postal Service does have certain elements of KM, including:

- The Blue Pages, an employee intranet providing content, information, and tools to support employees in their business conduct and work performance.

- The Human Resources (HR) Learning Management System, a training website that provides online courses.

- The Supply Management (SM) Asset Management Group's Knowledge Sharing Program, which develops mentee employees into subject matter experts (SMEs).

- The HR Shared Services Center (HRSSC), the agency call center's KM system. The HRSSC is mainly composed of frequently asked questions and standard operating procedures (SOP), which were implemented along with a formal department level KM process.

For further details on the Postal Service's KM elements described above, please see Appendix A.

While the aforementioned programs are elements of KM, there is little coordination or knowledge sharing among the various departments. For example, the SM Group is

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[1] As of June 30, 2013, there were 492,596 career Postal Service employees and over 152,000 were either eligible to retire or would be within 5 years.
[2] A data-driven management system that improves business strategy. It manages key initiatives to provide streamlined reporting and accountability.

responsible for contracting for studies or program analysis for the Postal Service. During fiscal years (FYs) 2011 through 2013, the Postal Service spent about $59 million[3] on 49 contracts for studies or consulting services.[4] According to Postal Service policy[5] a copy of the completed studies should be stored in the headquarters library. However, we did not find any studies stored there. As a result, departments within the Postal Service are not made aware of studies or consulting services that other departments purchase. In addition, the Postal Service does not have a way to readily determine the studies or consulting services that have been conducted in the past or a process to ensure this information is available to future employees. If the Postal Service had a KM process in place, this information would be a shared knowledge resource accessible to appropriate personnel and would reduce the potential for duplication of studies.

In the near term, the Postal Service is at risk of losing extensive tacit knowledge as a result of downsizing and the retirement eligibility of about 31 percent of its workforce. A comprehensive KM policy could ensure the informal and experiential knowledge of its employees — which constitutes an organizational memory — is captured for present and future employees.

A comprehensive KM process, developed and administered by a CKO, would specifically:

- Foster innovation by encouraging the free flow of ideas.

- Improve customer service by streamlining response time.

- Boost revenue by marketing products and services faster.

- Enhance employee retention rates by recognizing the value of employees' knowledge and rewarding them for it.

- Streamline operations and reduce costs by eliminating redundant or unnecessary processes.

Best Practices

After examining KM practices at eight organizations, we identified 18 best practices (see Appendix C for details). They fall into three main categories and are used to create a formal, organization wide KM process:

- People.
- Processes.
- Technology.

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[3] The 49 studies or consulting services vary in type, from global business research and support, strategic management support to market research and economic analysis. The costs for the studies and consulting services range from about $6,300 to $13.6 million.
[4] Postal Service SM group.
[5] Management Instruction, AS-710-91-9, Contracting for Consultant Services, dated August 8, 1991.

We noted that all eight organizations use six of the 18 KM best practices. Also, there are multiple ways to manage knowledge across the entire organization; therefore it is important to tailor a KM strategy to the needs of the organization.

The Postal Service does not use any of these six practices. But it could phase them in over 2 to 3 years through a two-step process. Gradually adopting these practices with an establishment phase and an enhancement phase would allow management to set general, broad policies before taking more specific, technical actions.

Establishment Phase

This phase creates a formal KM process using the following most commonly used best practices:

1. Senior leadership involvement – this level of visibility and ownership ensures the KM process is aligned with the business objectives (People, best practice #1).

2. Organizational culture – a knowledge-sharing culture is critical to the KM process. Successful knowledge gathering and sharing is unlikely if people feel they would be at a disadvantage by sharing their knowledge (People, best practice #2).

3. Dedicated person/team – the role of a CKO or dedicated group is crucial to the success of the KM process. The CKO ensures implementation is aligned with current business approaches, targets the right problems, and is coordinated with other existing change initiatives (Process, best practice #1).

Enhancement Phase

This phase builds on practices implemented during the establishment phase and should include the following four best practices, which were the next most commonly used by our selected organizations:

4. Education and Training – an organization can enhance future operations by applying modern KM techniques. This will improve employee training, innovation, and responsiveness, and create a more balanced organizational culture (Process, best practice #9).

5. Appropriate technology – applications that work for the organization and encourage knowledge sharing, such as wikis and blogs. They are inexpensive yet effective knowledge-sharing platforms (Technology, best practice #1).

6. Communities of Practice (CoPs) – a process of social learning that occurs when people have a common interest in an area and collaborate over an extended period of time, sharing ideas and strategies, determining solutions, and building

innovations. This virtual repository fosters knowledge sharing within and between organizations (Technology, best practice #2).

Following the first two implementation phases, the remaining 12 best practices listed in Appendix C could be implemented as needed and as applicable.

Recommendations

We recommend the vice president, Employee Resource Management:

1. Develop a comprehensive Postal Service knowledge management strategy and associated policies and procedures, including appointing a chief knowledge officer. This process should build on current Postal Service knowledge management practices and the appropriate best practices identified in this report.

2. Join the Federal Knowledge Management Working Group, an organization that has experts to assist, inform, and support the development and implementation of a comprehensive knowledge management strategy.

Management's Comments

Management disagreed with the finding and recommendations.

Regarding the finding, management asserted that establishing a KM process and appointing a CKO will not provide any value and may impose additional costs while distracting from successful, ongoing strategic initiatives that incorporate KM. For example, management asserts that DRIVE incorporates cross-functional collaboration and communications. Further, DRIVE develops best practices and standardized methods and replicates them throughout the organization.

Also, the Technology Management Office System is an enterprise technology application used to capture knowledge and enable knowledge sharing for all DRIVE initiatives. Management also noted that the Postal Service's internal shared drives provide repositories for commonly accessed documents, such as the Blue and LiteBlue pages. Additionally, the SM Asset Management Group's Knowledge Sharing Program documents and manages knowledge for specific functional areas and activities. Management also noted they have a comprehensive program to identify and develop employees who use leadership development programs, including the Managerial Leadership Program, Advanced Leadership Program, Executive Leadership and Executive foundations, and a formal succession planning process. In addition, the Continuous Improvement Office identifies, develops, and disseminates operational best practices Postal Service-wide.

Regarding recommendation 1, management stated that a separate KM program with a CKO will not add value and may impose additional costs. Management did not believe the report adequately described how their current programs ensure that knowledge is effectively and efficiently managed within the Postal Service. In addition, management

believes the Postal Service has an integrated approach to operational and process improvements that includes cross-functional collaboration and communication that are consistent with the organization's strategic goals and the KM best practices described in Appendix C of this report.

Regarding recommendation 2, management stated they cannot commit to joining the Knowledge Management Working Group (KMWG) at this time; however, they will review the wiki content and contact the federal KMWG leader to determine whether the group could enhance Postal Service KM processes in the future.

See Appendix D for management's comments, in their entirety.

Evaluation of Management's Comments

The U.S. Postal Service Office of Inspector General (OIG) considers management's comments unresponsive to the finding and recommendations. As such, we view the recommendations as unresolved, but do not plan to pursue them through the audit resolution process. We will work with management to develop a mutually agreeable resolution.

Regarding the finding, management asserted that establishing a KM process and appointing a CKO will not provide any value and may impose additional costs while distracting from successful, ongoing strategic initiatives that incorporate KM. Management provided examples of the different pieces of the KM process that they have in place. In our finding we acknowledged the Postal Service has pieces of a KM process in place and provided some examples; however, as stated in the report, these separate elements do not constitute a deliberate and well-planned KM process.

Management, in their comments, did not demonstrate that they have a permanent, comprehensive KM policy or process or a CKO to ensure that knowledge sharing is systematic and collaborative among all Postal Service systems and employees. The Postal Service's KM pieces operate separately and not as a whole program. A KM strategy helps ensure that knowledge in all areas is effectively and efficiently managed. Merging these KM elements into an overall strategy would yield additional knowledge and lessons learned and would enable the Postal Service to more easily identify where it has gaps, such as in the areas of informal knowledge sharing and gathering.

Regarding recommendation 1, management disagreed with our recommendation to develop a comprehensive Postal Service KM strategy and associated policies and procedures, stating this will not provide additional value and may impose additional costs. We agree that it could impose minimal additional costs on the Postal Service, but the tangible and intangible benefits outlined in the audit should outweigh those costs. The benefit of appointing a CKO is threefold. First, it emphasizes that KM is a priority in the organization. Second, it designates someone to develop, implement, and direct a comprehensive KM strategy. Third, it ensures that KM is built into and informs all Postal Service processes and fills identified gaps.

Regarding recommendation 2, being a member of the KMWG would give the Postal Service an opportunity to share in the benefits of the federal government's intellectual assets. Additionally, the Postal Service would gain a further understanding of comprehensive and individual KM best practices used by federal agencies and the private sector.

The OIG considers both recommendations significant, and therefore requires OIG concurrence before closure. Consequently, the OIG requests written confirmation when corrective actions are completed. These recommendations should not be closed in the Postal Service's follow-up tracking system until the OIG provides written confirmation that the recommendations can be closed.

Appendix A: Additional Information

Background

KM involves making full use of a company's knowledge in a methodical way to facilitate optimal business activities, boost efficiency to foster innovation, and maintain a competitive edge. Industry analysts emphasize the rising importance of the KM industry because of today's rapidly changing business world. KM efforts typically focus on organizational objectives such as improved performance, competitive advantage, innovation, sharing of lessons learned, and integration and continuous improvement of the organization. KM focuses on the management of tacit and explicit knowledge as a strategic asset and encourages the sharing of knowledge.

The private sector used KM for more than a decade before the federal Chief Information Officers Council instituted the KMWG[6] in 2000. This group was formed by federal civilian and military organizations from more than 30 agencies. Collectively, they began developing and sharing what has been called the world's largest storehouse of knowledge and expertise.

The KMWG Charter was designed to bring together content, processes, and technology to ensure the federal community takes advantage of its combined knowledge, experience, and abilities. KMWG serves as an interagency body that shares the benefits of the federal government's intellectual assets among its organizations, customers, and partners. The KMWG also identifies KM best practices used by federal agencies and the private sector. Each agency has its own internal policies and procedures governing the strategic uses of knowledge and organizational structures for KM.

In the private sector, Walmart uses KM to focus organizational objectives and to improve business performance, innovation, competitive advantage, and operations. Its KM also includes formal apprenticeships, discussion forums, corporate libraries, mentoring programs, and professional training. The company uses technologies[7] such as expert systems, knowledge bases, group decision support systems, intranets, knowledge repositories, and computer-supported cooperative work.[8]

The World Bank relies on KM to generate knowledge in collaboration with its partners and clients to make its information easily accessible across the globe. In addition, it uses KM to respond to the fast-changing world of economic development and multiple sources of knowledge. The World Bank has used KM since 1996 to ensure the flow of knowledge and to support its work.[9]

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[6] The KMWG website is hosted by the National Aeronautics and Space Administration (NASA).
[7] This includes hardware and software technology.
[8] Computer supported cooperative work - also known as CSCW - is the understanding of how people work in groups with the enabling technologies of computer networking and associated hardware, software, services, and techniques.
[9] *The State of World Bank Knowledge Services, Knowledge for Development 2011.*

The Postal Service employed about 500,000 employees, had annual revenue of about $67.3 billion, delivered over 158 billion mailpieces, and managed over 31,000 retail locations in FY 2013. The Postal Service also operates one of the largest information technology infrastructures in the world, with 795 computer applications. In the near term, the Postal Service is at risk of losing extensive tacit knowledge as a result of downsizing in response to declining mail volume and the retirement eligibility of more than 152,000 employees, or about 31 percent of the workforce.

The Postal Service has some elements of KM. However, these elements do not provide internal policies and procedures governing the strategic uses of knowledge and organizational structures to sustain and evolve the management of knowledge. Elements of KM in the Postal Service include:

- Blue Pages – the Postal Service's intranet, which is a means of developing employees professionally, as well as personally. The Blue Pages have content, information, and tools to assist employees in better conducting business and performing their work. The Blue Pages contain numerous links that allow employees to access databases, postal applications, organizational initiatives, manuals, and handbooks.

- Human Resource Learning Management System training website — a learning solution that enables the Postal Service to maximize the benefits of its learning strategies. Based on security access, its links allow employees, managers, and instructors to request participation and manage training courses for themselves and others.

- SM Asset Management Knowledge Sharing Program — a program expected to improve overall organizational knowledge and develop SME in selected topic areas. The Asset Management leadership team will identify the knowledge sharing topics and target audience annually and a team will develop knowledge-sharing training sessions. The team will include an SME, an employee who demonstrates strong skills and abilities in his or her current position, and an employee with limited knowledge and expertise on the topic. The SME will mentor the other team members as they develop and present the knowledge-sharing topic, with the mentees expected to become SMEs on the topic.

- Human Resource Shared Services Center (HRSSC) — a call center that has used KM for about 3 years and consists of two main knowledge-based systems. One system is a knowledge-based repository of about 2,500 Frequently Asked Questions a call center phone team accesses when Postal Service employees call for assistance. It is a service engine team tool with stored knowledge. The second system is a reference guide knowledge base, which is a grouping of SOPs, such as, HR procedures governing benefits. In addition, the HRSSC has a mapping structure to establish and assist in their KM process. Using the HR example above a mapping structure will show what happens when an HR query enters the call center and how it flows through the process.

Further, in today's world, email, the Internet, and social media offer affordable paths for acquiring and disseminating knowledge, democratizing knowledge, and energizing a movement for open knowledge. More and more institutions and experts focus on producing and disseminating knowledge as a core business activity.

Objective, Scope, and Methodology

Our objective was to assess the Postal Service's KM practices, systems, roles, and responsibilities. To accomplish our objective, we performed a comparative analysis of private and public sector organizations to identify KM best practices using research and analysis based on their extensive expertise.

Specifically, we sought to understand how other organizations:

- Use KM as a systemic process to identify and capture tacit knowledge and transfer it into explicit information employees can use to create, compete, and improve business strategy.

- Use CKOs to implement, oversee, and evaluate the KM process; provide leadership and direction; and make decisions.

We interviewed representatives from selected public and private organizations and reviewed their established KM programs, each with a CKO to oversee the KM process. The eight organizations are:

- The Federal Aviation Administration (FAA).
- FBI.[10]
- General Services Administration (GSA).
- NASA.
- The World Bank.
- The U.S. Navy (USN) – Joint Staff.
- U.S. Secret Service (USSS).
- Walmart.

We considered these organizations leaders in KM, because they have received KM awards or recognition, are members of the KMWG, and are broadly similar to the Postal Service as part of our nation's infrastructure with similar budget constraints.

We selected the World Bank and Walmart as examples of private industry leaders in KM. The World Bank is a major source of financial and technical assistance to developing countries around the world and a contributor to global development knowledge. Walmart has a profile similar to the Postal Service's in terms of its number

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[10] In September 2013, due to the government sequestration, the FBI's KM group is no longer centrally or strategically coordinated through one office. However, KM still exists at the local or unit level.

of locations, workforce size, reliance on delivery and transportation, and service requirements.[11]

We noted in our comparative analysis that only one organization uses all of the KM best practices we identified (see Appendix B for a list of participating organizations). This illustrates the importance of adopting a KM strategy that best suits the needs of the organization.

To compare best-in-class KM practices against current Postal Service KM practices, we:

- Interviewed Postal Service personnel in the Chief Information Office, Government Relations and Public Policy, HR, and SM departments to determine what KM best practices, policies, procedures, and strategies exist in the Postal Service.

- Reviewed applicable Postal Service regulations, policies, and procedures.

- Interviewed federal sector organizations' KM personnel, including members of the KMWG, to obtain KM best practices, policies, procedures, and strategies.

- Reviewed and analyzed a KM case study for a private sector organization to understand how the world's largest retailer uses the KM process.

- Performed a comparative analysis of six federal and two private sector organizations with established KM processes to obtain a list of KM best practices.

See Appendix C for details regarding these practices.

We conducted this performance audit from May 2013 through March 2014 in accordance with generally accepted government auditing standards and included such tests of internal controls as we considered necessary under the circumstances. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our finding and conclusions based on our audit objective. We believe that the evidence obtained provides a reasonable basis for our finding and conclusions based on our audit objective. We discussed our observations and conclusions with management on January 21, 2014, and included their comments where appropriate.

We assessed the reliability of computer-generated data from the Contract Authoring and Management System by comparing key information against the Enterprise Data Warehouse for knowledge and research studies provided by management. In addition, we relied on our analysis and verified the accuracy of the data with Postal Service management. We determined the data were sufficiently reliable for the purposes of this report.

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[11] Walmart has over 11,000 stores in 27 countries, e-commerce websites in 10 countries, and 2.2 million employees worldwide. In addition, in 2012, Walmart's net sales were $443.9 billion.

Prior Audit Coverage

The OIG did not identify any prior audits or reviews related to the objective of this audit.

Appendix B: Organizations Using Knowledge Management

Organization[12]	Number of Employees (Approximate)	Organizations with KM Processes and Rationale for Selection
FAA	45,000	Federal sector organization that provides a safety infrastructure that is accountable to the American public; a member of the KMWG.
FBI	36,000	Federal sector organization that provides a national law enforcement infrastructure and is accountable to the American public; a member of the KMWG.
GSA	17,000	Federal sector organization that is funded like the Postal Service with a mix of agency-generated revenue from property management and acquisition, as well as some taxpayer funds; a member of the KMWG.
NASA	18,000	Federal sector organization that is responsible for the nation's civilian space program; a member of the KMWG.
The World Bank	10,000	In 1996, The World Bank launched its "Knowledge Bank" strategy, which led the way to other KM processes; recognized for its knowledge sharing achievements.
USN - Joint Staff	323,200	Federal sector organization that assists the Chairman of the Joint Chiefs of Staff in accomplishing his responsibilities for the unified strategic direction of combatant forces. It is recognized as a leader in KM implementation and a member of the KMWG.
USSS	6,500	Federal sector organization; a federal law enforcement agency; a member of the federal KMWG.
Walmart	2.2 million	Private sector organization; with a similar profile to the Postal Service because of its numbers of locations, workforce size, reliance on delivery and transportation, and service requirements. KM is used to focus organizational objectives to improve business performance, innovation, competitive advantage, and business operations.

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[12] Organizations are listed in alphabetical order.

Appendix C: Knowledge Management Best Practices

The key elements of a quality KM environment are grouped into three categories — people, process, and technology. They are used to categorize the best practices developed from our comparative analysis of the eight best-in-class organizations as follows:

I. People

1. **Senior leadership involvement** – senior leadership involvement is cited as an essential component of the KM process because senior-level visibility and ownership ensure the organization's KM process is aligned with its business objectives. KM senior-level visibility and support are particularly valuable when it comes to communication and change management. For example, in one organization, the fact that the CKO is only two levels down from the chief executive officer shows the significance the organization places on that role and its importance in achieving strategic goals. An organization can use change management to enable a culture of knowledge sharing, innovation, and collaboration and a deep appreciation of the value of its employees.

2. **Organizational culture** – effective KM requires an organization to have a knowledge-sharing culture to be successful. Key characteristics of this culture include:

   - Top leadership sees knowledge as a strategic asset and incentivizes and supports KM processes.

   - The organization focuses on developing and exploring its knowledge assets.

   - Tools and processes for managing knowledge are clearly defined.

   - Knowledge creation, sharing, and use are natural and recognized parts of the organization's processes, not separate from normal work processes.

   - Groups within the organization cooperate instead of compete with each other.

   - Knowledge is made accessible to everyone who can contribute to or use it.

   - Rewards and performance evaluations specifically recognize contributions to, and use of, the organization's knowledge base; communication channels and a common technology infrastructure enable and enhance KM activities.

   Instituting a knowledge-sharing culture is critical to the KM process but it is too large a task to be a single KM initiative. A better approach is to combine several initiatives and present a common vision and focus that integrates KM with overall

organizational learning and performance improvement. That means that KM needs to be very closely allied with the business strategy. An organization should ask itself:

▪ Which of our key strategic business issues can be significantly impacted by giving people access to knowledge?

▪ How can we apply KM to deliver that impact?

II. Process

1. **Support team** – every form of asset management has dedicated support and the same is true for KM. Even after the KM system is designed and rolled out, an organization needs a designated contact (either a CKO or a small group) to maintain momentum. The contact's main task is keeping the system maintained, running the monitoring and measurement activities, crafting the long-term KM strategy, and intervening as needed to sustain KM. Specifically, the contact monitors performance and analyzes results for continuous improvement. Successful KM depends on a committed group of knowledge workers, which, in turn, requires the support center to track performance, measure results, and report findings. Ideally, quantifiable results are broadcast weekly to executives, teams, and individuals. Participants at every level must be able to see evidence of the cumulative benefits so they actively participate and continuously improve the knowledge available to both agents and users of web-based, self-service options. Beyond this, visible progress ensures that the knowledge initiative will receive the necessary resources for long-term success. Industry research analysts have stressed and documented the value of KM for call centers, help desks, and other support environments. In addition, knowledge-based support is seen as the best way to ensure successful self-service for customers, employees, partners, and vendors via the web. Research suggests that, without a viable self-service strategy, organizations will be hard-pressed to meet the demand for high-quality, flexible service in an era dominated by competitive alternatives.

2. **Knowledge maps** – a visual representation of an organization's knowledge. There are two common approaches to knowledge mapping:

▪ Mapping knowledge resources and assets and showing what knowledge exists in the organization and where it can be found.

▪ Showing how knowledge flows throughout the organization, from where it resides to where it is needed.

Clearly the second approach provides the most complete picture for a knowledge auditor; however, the first is also useful and, in some organizations, exists to help employees locate the knowledge they need.

Knowledge mapping is social network analysis (SNA). Organizations that have been frustrated by traditional KM efforts are increasingly looking for ways to determine

how knowledge flows through their organization and SNA can do this. SNA maps a group's contacts (personal and professional) to identify how employees are connected to one another. In organizations, it provides a clear picture of the ways that employees and divisions work together and can help identify SMEs who possess the knowledge needed in certain situations. SNA can identify how knowledge flows through an organization, who holds influence, who gives the best advice, and how employees share information. SNA can also identify the skills an organization needs to retain, develop, and determine who among those eligible to retire within 5 years has the most important knowledge and experience to transfer to others.

3. **Locally owned and sustained knowledge** – keeps an organization's knowledge up-to-date, more contextual, and richer in connections (links to origins, owners, and operators) to enhance the ability of people to grasp and apply knowledge to their own situations. Knowledge that is close to the action is more likely to be reused.

4. **Acquisition of SME knowledge** – when there is an SME and a knowledge retention program that's part of a KM process, one of the first things needed is a plan outlining how an organization will preserve knowledge. An organization will have to identify the type of knowledge that is important, starting with soliciting supervisors and managers about who the critical employees are within the organization. There are several methods for capturing this information, including video debriefings, mentoring, and succession planning.

5. **Conduct formal exits or informal interviews** – interview departing employees to capture knowledge. This practice is more effective if structured with core questions and questions tailored to the employee's specialty. It also provides the organization an opportunity to receive information about the status of current programs and projects, as well as any outstanding issues or problems it may face in the future.

6. **Review of lessons learned** – managers and staff need to investigate what others have done to discover and capture critical knowledge within their organizations and build on this experience. For example, the following activities capture employee knowledge:

   ▪ Assign an employee to a temporary detail assignment within a unit to learn from an experienced SME or knowledgeable supervisor.

   ▪ CoP meetings, conferences, and symposia[13] with proceedings and interactions between new and old employees.

   ▪ Formal and informal mentoring.

   ▪ Staff publications that often preserve the most critical knowledge.

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[13] A conference or meetings held to discuss a particular subject.

- Video interviews (ad hoc).

- Certification programs.

- Various new employee orientations, many including new employees shadowing experienced employees.

The lessons learned process is a set of information management processes designed to preserve institutional knowledge and communicate experiences that can potentially reduce risk, improve efficiency, promote validated practices, or improve performance in the areas identified above. Lessons are collected from individuals, projects, and programs or supporting organizations, primarily at the unit level. The content of lessons learned systems in the organization can be discovered and searched across the organization to the broadest extent possible. Lesson recommendations shall be assessed for potential changes to policies, procedures, guidelines, technical standards, training, education curricula, and so forth, and infused back into the system via existing corrective action systems.

7. **A pause and learn (PAL) session** – a time for reflecting among fellow team members. A PAL session tends to focus on recent events, is simple to implement, and requires a small time commitment. Usually a facilitator from outside the team is brought in to guide the discussion over a period of 1 or 2 hours. The primary benefit of the session is the participants' own learning and reflection. Reports are not required and the environment is one of non-attribution.

8. **Case-based approach** – the best practice for transferring information from in-depth discussions with senior leaders about case studies is a case-based approach where the subject matter information comes from the experiences of people familiar with the organization's legacy of successful projects. Most case studies are facilitated in person by project team members who have worked on the projects being discussed with the workshop participants.

9. **Education and Training** – an organization can enhance future operations by applying modern KM techniques. This will result in improved employee training, innovation, responsiveness, and a more balanced organizational culture. A company could implement the following education and training methods:

- Classroom and simulator training.

- Video- or Internet-based coursework.

- Coaching, shadowing, and mentoring.

- On-the-job training and targeted work assignments – have junior-level employees sit in on important meetings.

- Apprenticeship programs.

- Action reviews and retrospectives to "pause" for knowledge acquisition; summarize, record, and share lessons learned.

- Storytelling (narrative) as a way to discover, capture, and share knowledge and skills.

- Time and place for employees to educate and learn from each other.

- Benchmarking across agencies to identify best practices and knowledge, record it, and share it agency-wide.

- Knowledge and skills improvement curriculum plan for critical disciplines to ensure continuous learning.

10. **Feedback** – design effective feedback loops everywhere. Giving and receiving positive and negative feedback is an important skill in knowledge sharing. Feedback mechanisms, such as those listed below, must be built in so that management can constantly assess the value of existing best practices and use feedback to create further improvements:

- Allow everyone the chance to provide feedback, either publicly or anonymously.

- Ensure action on feedback so people know what they contribute is worthwhile and advertise this action widely.

- Reward and recognize feedback.

III. **Technology**

1. **Appropriate technology** – when framing KM, technology is 20 percent and the remaining percentage is people and processes. Technology is not necessary to implement KM but does enable it. When an improper technology change occurs, it can discourage knowledge sharing.

When choosing technology, consider the following inexpensive but effective applications:

- Evaluating and deploying wikis[14] – to manage institutional knowledge, organizations deploy wikis, which enable users to create and edit the content of a website and comment on the content. Wikis act as a centralized repository for different types of corporate data, such as spreadsheets, Word documents, PowerPoint slides, and Portable Document Formats. Wikis can also embed standard communications media, such as email documents or instant messaging capabilities. Organizations deploy wikis for the following knowledge and content management capabilities:

  - Provide a forum for grouping and disseminating employee knowledge by recording conversations, arguments, and responses.

  - Serve as a central repository for recording internal communications.

  - Provide ability to logically structure and manage organizational content.

  - Serve as an internal enterprise system to log corporate activities.

  - Serve as an internal document access management system.

  Current developers of wikis for KM systems are using taxonomies[15] to organize information, enabling the right data to be retrieved through a search capability. In addition, organizations tag documents or information sources and deploy enterprise search products, thereby reducing the amount of time employees spend searching for information.

- Evaluating and deploying blogs[16] – a blog acts as an online diary or journal entry, which primarily supports text, photo, video, and audio formats. Organizations deploy blogs to instantly publish and share expertise within an organization and engage the author in a dialog with viewers. A successful enterprise blog provides a single, unified platform that specific business participants can use to write posts for discrete audiences.

- Tagging[17] – due to an increasing volume of information in the enterprise, companies face challenges in organizing and cataloging information assets. Tagging is a way to manage large amounts of unstructured information. Tagging allows content to be marked multiple times, providing multiple paths to information. Over time content can be defined by the tags assigned to it and tag

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[14] Website that allows the collaborative editing of its content and structure by its users.
[15] The science, laws, or principles of systematic classification.
[16] A personal website or web page, on which an individual records opinions, links to other sites, and so forth on a regular basis.
[17] The attachment of keyword descriptions (called tags) to identify images or text within a site as a category or topic.

clouds[18] can be generated to provide a visual of the subject matter that people can use to quickly and easily establish context and relevance.

- Enterprise search – the practice of identifying and enabling specific content across the enterprise to be indexed, searched, and displayed to authorized users. This helps capitalize on internal and external knowledge, increases the circulation and sharing of information across teams and organizational functions, and improves knowledge workers' productivity. Enterprise searches enable timely gathering of relevant information from different sources, deep analysis of large volumes of information, constant monitoring for topics of interest, alerting and notification based on targeted events and user defined criteria, and extreme personalization.

2. **Establish CoPs** – a group of people who share a concern, a set of problems, a common role or passion about a topic. It is a voluntary association of people who are drawn together to share ideas, concerns, and experiences in matters that affect them on a regular basis. It enables practitioners in a subject area to keep each other current, enhance their understanding of an issue, and broaden their professional network. The purpose of this virtual repository is to foster knowledge sharing within and among organizations, including sharing knowledge gained, best practices, and lessons learned; soliciting input for challenges or just-in-time help; and initiating knowledge-related, real-time discussions among members.

   CoPs provide an organization with:

   - Informal ways for individuals to learn, use positive experiences that improve a design or process, share and solicit input from others, and avoid repeating past mistakes.

   - A forum for practitioners of a discipline to interact, share knowledge and experiences pertinent to their jobs, and help solve business problems.

   - A mechanism for individuals to keep others current in the development of shared disciplines, which aids in better top-down communication by providing multiple and more direct methods of disseminating information and ideas.

   The organization would need to provide technology to take CoPs online so that communication is facilitated among teams, directorates, groups, and divisions, as well as issue areas.

3. **Case studies catalog** – lists an organization's cases from a range of sources. Case studies are used in workshops, conferences, training programs, and interactive media. A collection of cases should cover those of various sizes and a wide range of projects and topics.

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[18] A stylized way of visually representing occurrences of words used to describe tags, such as highlighting most popular topics in larger, bolder font.

4. **Knowledge or case study repository** – case studies are catalogued as document repositories that capture project stories and associated lessons learned or best practices. An organization's repository is designed and managed to store, distribute, and preserve digital publications and other resources. A repository's content may consist of collections produced or controlled by the organization's community. A collection is a group of digital objects and metadata related to the work of the organization. The repository may include items in a variety of formats, including text, images, audio, and video. The organization can control access to the repository.

5. **Corporate library** – in a learning organization, a library should provide a strong center of KM. Unlike those business organizations whose KM goal is competitive advantage, most public, academic, and research libraries — with the exception of company libraries (which may be called corporate libraries, specialty libraries, or knowledge centers) — have a different orientation and value. Instead of maintaining libraries for competition and limiting them to internal use only, with little sharing of knowledge with outsiders, the most important mission of public, academic, and research libraries is expanding their users' access to knowledge. Charged with this mission, libraries should have KM as a priority.

6. **Public SOP** – a company could post its SOPs on a public website so its customers, grantees, and contractors would be on the same page as its staff. Based on SME input, SOPs provide step-by-step instructions by role for dozens of procedures. SOPs also include contact information and links to more resources, including policy documents and required forms.

Appendix D: Management's Comments

Rosemarie Fernandez
Vice President
Employee Resource Management

UNITED STATES POSTAL SERVICE

February 21, 2014

JUDITH LEONHARDT
DIRECTOR, AUDIT OPERATIONS

SUBJECT: Postal Service Knowledge Management Process
              (Report Number DP-AR-14-DRAFT)

We have reviewed the subject draft report dated January 29, 2014. Below are responses to the findings and the recommendations in this report on the Knowledge Management (KM) Process.

The Postal Service disagrees with the draft report's recommendation that a separately-established knowledge management program including the appointment of a chief knowledge management officer will be a cost-effective approach to disseminating knowledge within the organization. In addition, we do not believe that the draft report adequately describes how current programs ensure that knowledge is effectively and efficiently managed within the Postal Service. Our success driving significant cost savings during a difficult declining mail volume period are a result, in part, of the Knowledge Management processes is embedded in our ongoing program management activities.

Recommendation 1: Develop a comprehensive Postal Service knowledge management (KM) strategy and associated policies and procedures, including appointing a chief knowledge officer. This process should include and build on current Postal Service KM practices and the appropriate best practices identified in this report.

Management disagrees with this recommendation.

The Postal Service's integrated approach to operational and process improvements includes cross functional collaboration and communication that are consistent with the organization's strategic goals and the knowledge management best practices described within Appendix C of the OIG's draft report. A separately-established KM process and identified chief knowledge management officer will not provide additional value, may impose additional costs on the Postal Service, and may distract from the successful, ongoing strategic initiatives that already incorporate effective KM processes consistent with the best practices identified in the draft report.

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The DRIVE (Delivering Results, Innovation, Value and Efficiency) initiative is a data-driven management process used by the Postal Service to improve business strategy development and execution for key strategic initiatives designed to meet performance and financial goals. The DRIVE process is a structured approach to organizing operational and management activities that facilitates cross-functional dialogue and collaboration, provides streamlined reporting and accountability, and incorporates measurement, analysis, and evaluation of initiatives. Each DRIVE initiative has been selected for focus by the Postal Service's Executive Leadership Team (ELT) and is critical to achieving successful cost reductions, increased revenue, or improved employee and workforce engagement. Each DRIVE initiative has established objectives, timelines, and metrics, scheduled ELT reviews, and incorporates facilitating cross-functional collaboration and communications.

Through DRIVE initiatives, the Postal Service has developed operational best practices and standardized methods and replicated them throughout the organization. Each DRIVE initiative must identify cross functional interdependencies ensuring that all stakeholders are identified. Our BlueShare sites facilitate collaborative development and management of policies, procedures, processes, and training guides. The Technology Management Office System (TMOS) is an enterprise initiative technology application used to capture knowledge and enable knowledge sharing for all DRIVE initiatives. In addition, TMOS facilitates DRIVE program reporting and accountability.

Our internal shared drives provide repositories for commonly accessed documents. As noted in the OIG report, we also use Blue and LiteBlue pages, HR Learning Management, Supply Management Asset Management Group's Knowledge Sharing program, and the Human Resources Shared Service Center (HRSSC) Knowledge Management systems to document and manage knowledge for specific functional areas and activities. Enterprise-level initiatives such as the HRSSC have designed processes and support teams to develop and maintain formal knowledge data bases. In addition, manuals, handbooks, publications, forms and other materials that inform customers about how to do business with us, and provides employees information they need to do their jobs are centrally located on the Postal Service intranet site (Blue) in the PolicyNet section and, as appropriate, available to external stakeholders on usps.com.

The Postal Service has developed a comprehensive program to identify and develop our employees including the next generation of high-potential leaders, ensuring a diverse and rich talent pipeline. In FY 2013, 843 employees participated in leadership development programs including the Managerial Leadership Program, Advanced Leadership Program, Executive Leadership and Executive Foundations. Leadership programs encourage cross-organizational collaboration and relationship building by designing program cohorts from diverse functions and different geographic areas and by incorporating team projects focusing on solving real-life organizational challenges; this approach requires that participants share knowledge from their own specific work experience with other participants to enable project success.

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In addition, the succession planning process has identified over 1700 employees as potential successors. This process incorporates the identification of successors for critical position pools where it is imperative for the organization to ensure that crucial skills are maintained. Effective succession planning has focused on identifying ways to transfer skills in anticipation of organizational changes rather than in reaction to an employee's departure. While exit or other informal interviews may capture some knowledge when an employee retires, resigns or is reassigned; our current employee development process is preferable because it not only captures knowledge on an ongoing basis, but it does so in a context that provides employees a potential career development path helping to retain employees and their knowledge base.

As future leaders are identified, they are evaluated using a set of competencies necessary for successful performance within defined organizational roles. Participants' individual development plans focus not only on general managerial and leadership skills but also on developing expertise in areas where a critical need may exist due to, for example, planned retirements. Development activities include online training through the Learning Management System as well as on-the-job experiences and detail assignments to ensure that subject matter expertise and experience is shared with potential successors.

The Continuous Improvement (CI) Office leads the Postal Services ongoing effort to identify, develop and disseminate operational best practices enterprise-wide. CI accomplishes this through building continuous improvement capabilities of employees, managing consistent Lean Six Sigma (LSS) standards, roles and methodologies with projects, and making these projects available in a common repository referenceable by all trained practitioners. The CI office also promotes structured development programs for employees to build skills and gain certifications through the Green, Black, and Master Black Belt programs. Development programs close the talent gap within the organization and facilitate a pipeline of LSS practitioners where cross-functional knowledge sharing is conducted among stakeholders, highlighting various projects with detailed process results, data and benefits. Investing in continuous improvement principles and practitioners impacts improvements with our products, services and processes, and will have a lasting effect across the organization.

Management Response/Action Plan: N/A

Target Implementation Date: N/A

Responsible Official: N/A

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Recommendation 2: Join the Federal Knowledge Management Working Group, an organization that has experts to assist, inform, and support the development and implementation of a comprehensive knowledge management strategy.

Management disagrees with this recommendation.

The Postal Service will review the wiki content and contact the KMWG leader to determine whether the group will be beneficial to the Postal Service for enhancing our knowledge management processes in the future. However, we are not able to commit to joining the Knowledge Management Working Group (KMKG) at this time and, and therefore, disagrees with the recommendation.

Management Response/Action Plan: Contact the Knowledge Management Working Group leadership.

Target Implementation Date: June 2014.

Responsible Official: Rosemarie Fernandez, Vice President, Employee Resource Management

Thank you for the opportunity to comment on this draft report. The Postal Service's ongoing program management processes including the DRIVE management process have integrated knowledge management as a key component. The Postal Service's ongoing focus on cost management and the organization-wide implementation of best practices contributed to an approximately $900 million reduction in FY2013 expenses as compared to the prior year[1]. Creating a distinct and separate knowledge management program is not necessary and likely redundant given our ongoing, successful project management processes.

This report and management's response do not contain information that may be exempt from disclosure under the FOIA.

Rosemarie Fernandez
Vice President, Employee Resource Management

cc: Jeffrey C. Williamson
      Douglas A. Tulino
      Corporate Audit and Response Management

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[1] United States Postal Service 2013 Annual Report to Congress, page 3.