

## Knowledge Management Success and Failure: 2 Case Studies

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### Abstract

*Knowledge Management (KM) systems can be difficult to install. It can be even more difficult to ensure its use by employees. We present two case studies – one that failed and one that succeeded. The first case study examines the efforts to implement and use a KM system at a tax firm, and the challenges encountered that defied resolution, leading to the KM system's demise. The second case study examines the building of a customer service solution that is based on a Knowledge Management system. The system not only is a repository of knowledge that is shared with the customers, but also allows customers to add to the content. Though the customer service system fulfills the current requirements, the plan is to allow it to be a living system, changing when necessary to meet the customers' needs.*

### 1. Introduction

Knowledge management (KM) refers to the practices and strategies that a company uses in an attempt to create distribute and enable adoption of strategic insights and specific experiences [6]. In service organizations, collaboration and sharing of knowledge have clear benefits for internal and external stakeholders, enhance business performance [11], and build customer loyalty.

Service companies know that good knowledge management of their customers is the main successful factor of current corporations [1]. Many service companies are brokers of knowledge to their stakeholders [2]; the two companies in this paper fall specifically into this category.

### 2. Literature Review

Porter discusses differentiation as one of the three strategies for competing in the marketplace [7]. Implementing a knowledge management system is a way to decrease costs and differentiate your company from competitors. This sentiment is shared by Riege, who found that “in a knowledge-driven economy, organisations' intangible assets are increasingly

becoming a differentiating competitive factor, particularly in services industries” [8].

As such, service industries must instill in their employees a desire and enthusiasm to share their knowledge with coworkers and customers. “For an organisation to achieve the desired level of collaboration and knowledge sharing, it needs to communicate to its employees how the generation, sharing and then application of knowledge is valued at the individual level, while also recognising group or team-based performances and collective accomplishments” [8].

Zetie argues that one barrier to adoption and integration of a knowledge management system into our daily work lives will probably be human reluctance to potentially become redundant or be replaced by a machine [12]. This is particularly true for service and knowledge companies – the employees fear that sharing their knowledge that can then be easily accessed by customers will render them unnecessary and irrelevant. The barriers to knowledge sharing and the implementation of knowledge management systems are as numerous as the companies who strive to implement knowledge management systems.

The literature is replete with studies showing the relationship between commitment to the organization and sharing knowledge; we will mention but a few.

Hall argued that people are more willing to share their knowledge if they are convinced that doing so is useful and that sharing their knowledge will be appreciated and the shared knowledge will actually be used [1]. Additionally, Hooff and Ridder concluded that an individual who is more committed to an organization is more likely to be willing to share their knowledge [10], a conclusion shared by Jarvenpaa and Staples [2].

### Case Study #1: Language, Culture and Leaders: A Case Study of the Challenges of Installing a Knowledge Management System in a Tax Firm

### 3. Business Setting

The organization in this study is a tax division in the Tokyo, Japan branch of a multinational tax firm. Their business depends on making time sensitive, informed tax decisions for their customers. The company and its tax analysts rely heavily on extensive internal research and external data sources for the latest tax rules and compiling this information to make actionable decisions, which are then recommended to customers.

As a way to improve their service and better compete, the company, like others, agreed with Shen that it “needed to continually develop and improve its working practices, culture and environment, systems, and tools by implementing knowledge management initiatives and developing a knowledge management strategy to more formally identify, manage, and apply its knowledge assets” [9].

The tax division for expatriate taxes consists of several tax managers, an English editorial manager, a few partners, and one managing partner. When the tax manager receives a request from a client about a tax issue, the team follows a process to research the issue, find a solution, and then write an opinion letter to the client. Specifically, the process steps are:

1. Customer contacts tax manager with problem/issue.
2. Tax manager and his/her team researches issue and potential solutions
3. Tax manager writes up an opinion letter and sends to the tax partner in charge of the customer
4. Tax partner reviews for correctness. Returns to tax manager for revisions
5. Tax manager revises and sends to English editor reviews for correct English, then returns it to tax manager
6. Tax manager resends opinion letter to partner
7. Partner reviews and approves (if not, restart at appropriate step) and sends to managing partner
8. Managing partner gives final review & approval
9. Letter sent to customer on company letterhead

#### 4. Business Problem

While this process works, it is not as efficient as the firm would like it to be. The senior partners have “always done it this way” and did not see a need to change. As they moved up through the ranks, they worked the same way and felt that the current method was sufficient. However, the managers would like to see changes to the process and technologies used, both to decrease costs and to speed up the process. Specifically, the managers see the following problems with the current process:

- The “print, review, correct, and repeat” cycle is too lengthy.
- Two tax managers may be researching similar customer problems/issues. This can result in redundant research and/or the managers may reach dissimilar solutions
- There is no collaboration among the managers; hence, future customers with similar issues do not benefit from previous research by managers on a different team.
- With each problem/issue and solution, the opinion letter is printed multiple times, increasing the cost.
- There is no index or catalogue of the issues. This makes it difficult to keep track of issues and their solutions.

It was clear that a new process was needed, and technology would facilitate the change.

#### 5. Goals of the KM System

The goals of the new KM system were threefold:

1. Cut costs of researching and publishing an opinion letter.
2. Take less time to research an issue and publish each opinion letter.
3. Take advantage of previous research efforts by sharing.

#### 6. Proposed Solution

To rectify the problems with the current process, we recommended a knowledge management system set up as follows:

1. All tax research done and all opinion letters can be added to the KM system.
2. All documents in the KM system will be indexed and the text of each document fully searchable.
3. The documents and opinion letters should only be printed once – just before sending to the customer. All reviews should be made electronically and changes tracked. All versions should be kept in the system.
4. Metadata should be added to the final version of each opinion letter to facilitate indexing and searching.

The tax partners at the firm were enthusiastic about the new KM system as that it appeared it would enable them to cut costs and increase revenue. The costs of researching an issue would be lowered as much redundant research could be saved. Additionally, the research could be shared among many clients, but the partners believed they could charge the same fee for the research to each client that required it. The senior

partners were enthusiastic that the entire tax department could work as one team – indeed, the Japanese culture emphasizes cooperation and teamwork [4]. The hope was that by working as one team instead several independent teams, that the research could be shared and overall costs would decrease.

## 7. Implementing the KM System

The easiest part of the new KM system was the hardware and software. For this system, a commercial off-the-shelf server with Windows Server OS was purchased. The documents placed in the file share were indexed and searchable with a search engine installed on the server, with a web interface.

Users were trained in the KM system's use; topics included preparing documents for inclusion, adding metadata, saving documents to the system, searching the repository, saving a search for later use, downloading a document to the local PC for modification, adding a modified document to the repository, etc.

## 8. Challenges

Riege found 17 individual barriers and 14 organizational barriers to knowledge sharing, and that different combinations of knowledge sharing barriers would be found in organisations [8]. Much like Riege's findings, the challenges to implementing and using this new KM system stemmed from leadership, cultural, and language issues. When the new KM system was implemented, several of the tax managers and partners expressed trepidation at the transparency the new system provides. Their concerns included:

- Managers and partners see the research as their own work and not something that someone else in or out of the company should be able to benefit from without appropriate remuneration or compensation.
- The leaders were concerned about what others might think of own work/research, possibly because they have poor research skills or are shy and do not want others to see or share their research.
- The managers do not want to be responsible for mistakes that propagate beyond the initial opinion letter. Even though there is a review by the partner in charge of the team, there is always the possibility of an error. If the error were not discovered, it could affect more than just a few clients. If the error were discovered, it would bring shame upon the entire team.

At the time of implementation, the KM system only handled English text; thus the language challenges included:

- For several team members, translating their research and opinion letters into English was quite challenging. Many team members were embarrassed by their poor English skills and did not want to even try to translate their work, even though this is why they hired an English editor.
- Developing English language metadata was also deemed too difficult by many team members. For several, there appeared to be no acceptable English translation for some words, ideas, and metadata.

The greatest challenges came from the cultural environment. These challenges included:

- The KM system provides more transparency for each partner's team so a spirit of competition entered into the group. Japan is quite team oriented, and competition among teams in this firm was a new experience.
- As teamwork is the norm, a manager or partner with more opinion letters than the others made them feel like they would stand out above the rest. Though the goal was to have the entire team succeed, if one team was deemed to have contributed much more than the others, team members would feel uncomfortable.
- The work culture was one of staying as late as possible, many times catching the last train home. Team members often went to dinner together and returned to the office afterwards to finish up work. The practice of checking your work into the KM system at the end of each day resulted in the date and time stamps on documents showed who stayed late and who left early.

In spite of these challenges, the project received approval mainly on its financial merits. The cost savings of not printing multiple copies of each opinion letter, the time savings of not performing redundant research, and the idea of becoming one large team instead of several small teams convinced the senior partners to approve the project.

## 9. Results and Conclusion

Ultimately the KM system was successfully installed and implemented. However, the project was a failure because the challenges listed above defied resolution.

Specifically, the managers and partners didn't like to share their research with others. Their knowledge domain can be specialized, and it was also a validation of their worth and importance in the firm when they

are asked for input or advice from other partners or managers. Furthermore, many were shy and didn't want others to see their research skills or lack thereof. The biggest challenge for the leaders, though, was the fear of making a mistake that was then propagated to other teams and clients. This was a fear that we were unable to overcome.

Additionally, the language challenges proved to be more difficult than anticipated. The firm was unwilling to hire a professional translator to help the English editor (who was not bilingual), and thus translating documents into English and developing the English metadata for ease of indexing and searching was not able to be accomplished.

Finally, the cultural challenges proved the most difficult. The competition that had entered into the team as a whole was not something that the leadership was comfortable with continuing. Moreover, conformity and not standing out in the crowd are valued characteristics in this culture. Having more opinion letters in the KM system than other teams would be a cause for embarrassment and make some employees feel uncomfortable and self-conscious. And knowing that your boss was able to see what time you checked in a document, which could point to what time you finished your work on a given night, was something employees were reluctant to encounter.

Riege found that "knowledge sharing practices often seem to fail because companies attempt to adjust their organisational culture to fit their KM or knowledge sharing goals and strategy, instead of implementing them so that they fit their culture" [8]. Clearly the tax organization did not attempt to consider all the cultural barriers before designing and implementing the KM system, which resulted in the ultimate rejection of the system.

Due to the inability to overcome the challenges and the cultural environment, the KM system was scrapped less than a year after implementation.

## **Case Study #2: Building a Better Knowledge Management and Customer Service System**

### **10. Introduction**

The customer on the phone was not happy. His service ticket for maintenance on his server was a few days old. The technician assigned to his case was on vacation, and there were no status updates to give him. Another technician was assigned, but it would be hours before he would be familiar enough to provide adequate service. Becky, the customer support

manager at Acme Solutions, thought "There must be a better way."

This case study will detail the challenges encountered and successfully overcome in designing, implementing and using a knowledge management system as the basis for a customer service solution.

### **11. The Business Setting**

Acme Solutions provides the backend hardware and software for cable and internet companies providing video on demand. Acme is based on the west coast of the USA with customers spread throughout the USA and in various countries.

The customer service team worked normal office hours for the west coast, as well as providing on-call service during evenings and weekends. The team used an internal help desk ticketing system to track customer service and maintenance issues. The ticketing system also produced reports which gave management an idea of the time it took to respond to calls for service, which customer support technicians handled each service issue, and the length of time to resolution for each issue.

Customers had access to a small but growing collection of technical articles and white papers on the company's website.

### **12. The Business Problem**

Based on customer comments about recent service issues, Becky knew a new system or solution was necessary. The current help desk ticketing system was sufficient for internal purposes, but the customers wanted more information about their service issues and more timely status updates.

Nätti found that insufficient communication channels among experts and subgroups of service providers can cause problems in relation to knowledge transfer, which can result in difficulties combining expertise creating innovative service concepts for customers [5]. Becky also knew that a repository of issues and problems and their associated solutions would be necessary to satisfy the needs of the company and the wants of the customers. The employees generally kept solutions to common issues to themselves, usually because they did not know if anyone else needed the information, but also because the knowledge made them more valuable to the company.

Beyond the help documentation and online information, Becky needed an incentive to encourage support personnel to add issues and their solutions to

the knowledge base part of the KM system she had planned.

## 11. Goals

The overall goal for the KM and customer service system was simple: Differentiate Acme Solutions' product and service offerings by providing a repository of information that internal and external stakeholders can access, modify, and add to if necessary. Breaking down this goal to more achievable and measurable units, the list of goals included:

1. More timely information for customers.
2. Repository for issues and solutions, accessible by both internal and external stakeholders.
3. Customers can access and add information to service tickets.
4. Internal only area in the help desk ticket system for customer service technicians.
5. Provide an incentive for customer support persons to add issues and solutions to the knowledge base.

## 14. System Implementation

The system was implemented in phases. The first phase involved modifying the help desk ticket system into a customer service system. Phase two involved implementing a KM system that would be accessible both internally and externally. Phase three included devising an incentive to encourage employees to add to the KM system.

As the new system will be customer-facing, the system creation methodology included the customers in the planning, development, and implementation stages. This methodology followed the company's method of adding features to the video on demand systems Acme provides to its customers, an adaptation of agile programming.

### 14.1 Help Desk Ticket System

It was decided that in addition to customer support technicians, systems analysts, and management having access to the system, the customers would also be able to add information to the service tickets. This interactivity would allow the customers to participate more on the resolution of their issue(s), serving also as a way to educate the customers. The customers were quite enthusiastic about this idea, and had many requests for features they wanted in the system. After implementing and testing each feature, the customers were contacted and asked to try it out and give their

feedback. The feedback was then incorporated into the feature(s).

There were some challenges that were encountered, including:

- Requested features that could not be implemented. For example, near the beginning of building the system, all of the entries added by the customer support technicians were visible by customers. Unfortunately, some of the entries concerned bugs in the program and other proprietary information. The system had to be modified to allow the customer support analysts flag which entries were not to be seen by customers and which were visible by customers.
- Customer support technicians and customers were not able to access the most up-to-date information needed. Part of the reason for this is that the customers often performed system maintenance and restarts in the middle of the night and would report the results the next day. It helped the customer support technicians to be able to arrive at work in the morning with an update from the customer in the system. Conversely, the customers appreciated not having to wait until the support technician was available so they could report the results of the maintenance and have it entered into the ticketing system; they could enter the results and information themselves. This sped up the resolution of service issues.
- Customers wanted the ability to do some things that the company was not ready for. For example, several customers wanted the ability to open a service ticket, and assign their preferred technician.
- The customer service system was situated in the DMZ on the company's website. This required setting up an extranet and potentially exposing some proprietary information to public view. This challenge was overcome by requiring each customer to register each of their employees who needed access to the system. Security logs were kept and reviewed in order to ensure that customers only tried to view their own service tickets and information.

### 14.2 KM System

Implementing the KM system was easier than first imagined. A simple online knowledge base was created and populated with initial articles and white papers. All articles were fully indexed, searchable, and viewable by both internal and external stakeholders. The knowledge base was also situated in the DMZ on the company's website. Beyond the security

challenges that were shared with the help desk ticket system, there were no real challenges encountered.

During the investigation of each issue, the help desk employees were able to mark entries in each ticket as private or not shareable with the customers. This was important because some bugs in the programs or issues with the video on demand systems were not to be publicized.

The KM system could not only be accessed via the company's website, but each help desk ticket included links to any appropriate knowledge base article. When working on an issue, help desk employees would refer to appropriate knowledge base articles related to the issues. If none existed, but the employee deemed one or more were necessary, then the employee could create an article and link to it in the help desk ticket, allowing the customer to see where the solutions to their issues were found.

### 14.3. Incentive Program

As with many programs, getting support from all levels of employees can be challenging. Morris and Empson found that "when a company has a KM system that is technology-based, as most currently are, it is imperative to have the right combination of personal incentives and cultural norm of cooperation" [4]. In this case, the management and leadership of the company supported the new customer service system and KM system fully. Unfortunately, however, the help desk employees were reluctant to contribute to the knowledge base – it appeared to be just extra work for them. This caused the content of the knowledge base to stagnate, and slowed its growth.

To encourage help desk employees contribute content to the knowledge base, an incentive was devised. For each ten technical articles, white papers, issue and solution papers, or help-type articles, an employee was rewarded with a gift card from a local merchant, chain store, restaurant, or grocery store.

Upon implementation of this incentive, several employees started to participate. Soon there were a few hundred articles in the knowledge base, but another challenge presented itself. The quality of several knowledge base articles was very low, and in some cases, the content of the articles were wrong.

To overcome this challenge, a peer review system was implemented whereby two colleagues reviewed each article in the knowledge base before it was flagged for indexing, searching, and viewing by external stakeholders.

## 15. Results and Conclusion

Riege states that "the main reason ... why most companies do not reach their knowledge sharing goals seems to be due to the lack of a clear connection between the KM strategy and overall company goals, possibly because knowledge sharing time and again is perceived as a separate activity" [8]. After a while, Acme Solutions' employees discovered the connection between the KM and the company goals of great customer service. As a result, shortly after implementation of the new KM and customer service system, the goals were quickly realized:

- The timeliness of information on service issues provided customers with better and quicker service. The transparency provides motivation to customer support technicians to resolve issues quicker, which is facilitated by more active participation by the customers.
- The knowledge base became a wonderful repository of not only an online user and technical manuals, but was accessible from the customer service system. As issues are resolved, the service tickets link to relevant information in the knowledge base. Service ticket information remained available only to customer who owns the issue.
- Active contributions to the knowledge base increased. Some employees contributed for the incentive, some contributed in spite of the incentive, and a small group even began a contest of sorts to see who contributed the most articles.
- As more and more customers access the knowledge base for information including user manuals, the user manuals are no longer printed, saving thousands of dollars a year.
- One manager thought the prolific contributors were spending too much time writing knowledge base articles and not doing enough service tickets. Fortunately, the customer service system logged which employee handled each ticket, and we found that part of the reason some employees contributed more articles is because they handled and resolved more issues, and wrote articles to help the customers resolves issues without calling for help.
- Customers love being able to add info to service tickets and often times found issue resolution information in the knowledge-base before the need to open a ticket. This created more loyalty among customers who were thinking of switching to a competing provider.
- Non-customers were invited to try out the customer service system and knowledge base, and as a result several customers switched to Acme's products and services.

- Because “customers don’t always know how to express what they really need” [3], several features were implemented that were later eliminated from the system after a period of time. Many of these were requested by customers, but after a while they found they did not need the feature or functionality after all.
- Customers continue to request new features or modification to current features. These are always taken under consideration, and if possible, implemented.

As a result of implementing the new customer service and KM system, ACME is retaining customers in a volatile market, competitor’s customers are starting to switch the ACME’s services and products, and employees feel more able to research and resolve issues more quickly, thus strengthening the customers’ loyalty.

## 16. References

- [1] Hall, H 2001. “Input-friendliness: motivating knowledge sharing across intranets” *Journal of Information Science*, 27:3, pp139-146.
- [2] Jarvenpaa, S.L. and Staples, D.S. (2001) “Exploring perceptions of organizational ownership of information and expertise” *Journal of Management Information Systems*, 18:1 pp. 151-183.
- [3] Koplowitz, Rob, “It’s time to talk about customers”, *KM World*, Volume 23, Issue 6. Available at <http://www.kmworld.com/Articles/Editorial/Features/Its-time-to-talk-about-customers-97040.aspx>.
- [4] Morris, T. and Empson, L., “Organization and expertise: an exploration of knowledge bases and the management of accounting and consulting firms”, *Accounting, Organization and Society*, 23(5/6), 1998, 609–624.
- [5] Nätti, S., Halinen, A., Hanttu, N. “Customer knowledge transfer and key account management in professional service organizations”, *International Journal of Service Industry Management* 17(4), 2006, pp. 304-319.
- [6] O’Leary, D., Technologies of knowledge storage and assimilation, Holsapple, C.W., *Handbook on Knowledge Management 1: Knowledge Directions*, Springer-Verlag, Heidelberg, 2002, 29-46.
- [7] Porter, M. “How competitive forces shape strategy” *Harvard Business Review*. March-April 1979): 57.
- [8] Riege, Andreas 2005 “Three-dozen knowledge-sharing barriers managers must consider.” *Journal of Knowledge Management*. 9.3 2 pp. 18-35.
- [9] Shen, C.C., Ogiwara, N., Nair, P., and Young, R. *Knowledge Management: Case Studies for Small and Medium Enterprises*. Asian Productivity Organization, Tokyo, Japan, 2009.
- [10] Bart van den Hooff and Jan. A. de Ridder 2004 “Knowledge sharing in context: the influence of organizational commitment, communication climate, and CMC use on knowledge sharing. *Journal of Knowledge Management*. 8.6 pp117-130.
- [11] Wong Man Chit, Chris Yuen Ching Yee, Christie Chan Yin Ling, Elza Chan Yuk Lin, Samantha Cheng Leong, Leo, *Knowledge Management Cases in Asia/A Case Study on the Effects of Implementing a Customer Knowledge Management System to a Public Transport Corporation..* Available from Wikibooks at [http://en.wikibooks.org/wiki/Knowledge\\_Management\\_Cases\\_in\\_Asia/A\\_Case\\_Study\\_on\\_the\\_Effects\\_of\\_Implementing\\_a\\_Customer\\_Knowledge\\_Management\\_System\\_to\\_a\\_Public\\_Transport\\_Corporation](http://en.wikibooks.org/wiki/Knowledge_Management_Cases_in_Asia/A_Case_Study_on_the_Effects_of_Implementing_a_Customer_Knowledge_Management_System_to_a_Public_Transport_Corporation).
- [12] Zetie, C. 2003, Machine-to-machine integration: the next big thing? *Information Week*, April 14, available at: [www.informationweek.com/story/showArticle.jhtml?articleID=8900042](http://www.informationweek.com/story/showArticle.jhtml?articleID=8900042).