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Executive Summary

Challenge

Today’s support organizations are facing an ever-increasing set of challenges, brought on by growing service demands and an increasingly complex IT environment. Many organizations are evaluating forward-looking concepts and technologies — including ones they may not have fully embraced in the past — in order to meet these needs.

Knowledge Management (KM) is an approach that helps address these challenges and the potential benefits of knowledge management for IT support and self-service are well known. However, the steps that need to be taken are not self-evident: Support organizations are often unsure how to organize a KM initiative because the decision to embrace knowledge management is predicated on answering a number of vital questions: What kinds of processes are needed to create content? How should roles and responsibilities be assigned? How should content be structured? What is KM “good practice”?

Opportunity

Since the establishment of knowledge management as a discipline, more organizations have created formalized knowledge management functions within IT Support. Correctly leveraging people, process, and technology yields a more powerful IT support structure which operates at a higher level of efficiency, helping do more with the same resources.

Benefits

The effective use of knowledge management techniques and technology equips the Support organization to be more responsive to customer needs, optimizing productivity and enriching support.

The potential benefits of knowledge management include:

- Decreased costs associated with the “ramp-up” time for new staff
- Reduced re-work and repetitious research into common incidents
- Increased customer satisfaction through expedited incident resolution

When self-service is introduced, the benefits can extend to:

- Lowered cost of interaction by deflecting phone support calls to the web support channel
- Empowerment of customers with immediate access to answers, 24 hours a day
SECTION 1

Knowledge as a Key to Success

To effectively resolve incidents and help end-users remain productive, analysts must quickly diagnose IT incidents and problems and provide solutions to address customers’ needs. Unfortunately, unless knowledge management is a formalized process within support, the know-how of support personnel is often under utilized. Such deficiency is manifested in a number of ways: Pockets of expertise among Service Desk staff and clusters of experience in given areas may limit the capacity of the support organization to respond rapidly, especially in areas of high demand. The staff may waste time researching a technical challenge which has already been solved many times before. Depending on the incident, the solution may be known but inaccessible or poorly defined. In some cases the solution may not have been documented at all.

In the face of increasing service volumes, evolving IT environments, and a growing dependence on IT, the goal of identifying ways to control IT costs and do the same — or do more — with limited resources has become much more daunting.

When IT support professionals capture and share skills and knowledge, they substantially enhance the services they provide to the organization. By having direct access to the right knowledge, agents can respond in a faster and more reliable manner. Furthermore, when the knowledge is made available to customers directly through self-service, further benefits accrue.

Knowledge sharing is therefore a key part of the answer. Creating a formalized knowledge management process which effectively captures and harnesses the IT organization’s collective knowledge is a major opportunity for any IT support organization to evolve to a higher level of capability and become more effective.

The answer, then, is a knowledge management system. But that begs another question: How to set one up?

SECTION 2

Knowledge Management 101

Knowledge Management is a multi-faceted initiative involving a degree of cultural change for the organization. It requires a change in processes, a reevaluation of how knowledge is captured and represented, and the use of technology to manage, retrieve and monitor the knowledge.

Many books exist on Knowledge Management within organizations which discuss a wide range of subjects. The scope for this paper on Knowledge Management is more manageable as follows:

- The creation and sharing of useful and reusable knowledge which helps IT provide effective technical support.

There are two ways this is typically accomplished:

- Allowing IT staff to create and retrieve knowledge content from a knowledge base
- Providing knowledge content to non-IT end-users via web-based self-service
Merely facilitating knowledge management does not mean it will be done, let alone done well. To be successful, the three pillars of people, process and technology must be brought into alignment and utilized effectively.

The knowledge program needs to be managed in a way that encompasses these critical elements. A well-managed program with adequate breadth and a strong integrated technology base allows users to willingly and easily contribute, retrieve, utilize, manage and measure their collective knowledge.

SECTION 3
Making Knowledge Management Work

To avoid time-consuming and costly mistakes in launching a knowledge management initiative, here are some factors to consider to help ensure the success of your initiative:

**People**

**GET BUY-IN AND SUPPORT FROM THE EXECUTIVE LEVEL** Ensuring executive involvement and buy-in will extend beyond merely approving the budget for the Knowledge Management initiative. To make the initiative successful, it is important to have a senior executive champion who realizes the value to the greater organization at the outset, drives the adoption of the program among different groups, supports it through its initial steps, and helps publicize and promote its successes.

**DEFINE ROLES, RESPONSIBILITIES AND EXPECTATIONS FOR EVERYONE INVOLVED** Ensure all relevant members of IT support have a clear understanding of their roles. Set responsibilities and expectations, and develop these, incorporating them as needed into Human Resources and performance systems.

**MANAGE THE CHANGE IN THE ORGANIZATION’S THINKING** Educate and communicate the need to capture and harness knowledge for the overall benefit of the organization. This can be communicated in a variety of ways including through management emphasis, existing communication channels, informal mentoring and training and revised compensation plans. Collaboration with representative stakeholders from affected groups is essential to demonstrate the collective nature of the initiative and to garner the support of various groups. Providing recognition and incentives for good results is often the most tangible means of effectuating change.

**MEASURE PROGRESS, AND PROVIDE FEEDBACK TO THE RELEVANT GROUPS** Create a set of measures to determine the performance and results of knowledge management. Metrics are critical to understanding and motivating the performance of an organization. These metrics should be shared throughout the organization providing there is an understanding that the goals are based on the outcomes, such as impact on the support process, and not for activities, such as the quantity of content submitted.

**Process**

**DEFINE A CLEAR KNOWLEDGE LIFECYCLE MANAGEMENT PROCESS** Ensure the process covers the entire knowledge lifecycle from the initial creation of content through to its ultimate retirement. Ensure that the knowledge lifecycle management is regarded as a permanent ongoing process, and that the creation of content is not seen as a project “finishing line”.


STEP-BY-STEP APPROACH  Select a group or area with a “good fit” for the initial implementation. Pilot the rollout, initially deploying on a small scale. Refine and improve the approach, achieving success in the initial area. Then move on to the next group, refining, proving and improving, spreading the rollout step-by-step.

IDENTIFY AND CREATE REUSABLE CONTENT  Focus on the creation of relevant and useful knowledge content. Relevant content reflects real customer demand—in the form of incidents and problems. Emphasize the need for reuse. When first implementing knowledge management, think broadly about where knowledge can be found — it may be in the form of Post-it® notes, training binders, static web pages, bulletin boards, or merely be part of the conversation between cubicles or loosely written into the narrative of incidents. Think laterally about where knowledge resides, but be sure not to try to “boil the ocean” or waste effort by trying to capture everything. Some implementations flounder when attempting to capture too much content. First create knowledge which is essential before advancing with more content. The same is true for a more mature system: Create for reuse, and avoid focusing on content that provides little value.

STREAMLINE THE CONTENT CREATION PROCESS  If an approval process is defined for the creation of content, it is essential that the process is streamlined and fast enough to enable sufficient “time-to-value”. Creating reusable knowledge from the incident management process, or consistently feeding relevant and important content from release management — and then publishing it rapidly to appropriate groups — can help drive the value of the knowledge base. To ensure simplicity, knowledge creation should have few steps and should also be easy to follow.

CREATE AN EASY TO UNDERSTAND CONTENT STANDARD  Promote ‘ease of use’ by creating a content structure that is simple for content contributors to follow. By applying a brief, simple and clear set of guidelines for content, style, and structure, the content will be in a format that people will be able to make better use of the content in the knowledge base.

MEASURE PROGRESS, AND PERFORMANCE  Measure knowledge creation and utilization, identify gaps and exceptions, and measure overall outcomes of the knowledge initiative on the support process. Use a broad range of metrics prior to the beginning of the project, continue while the implementation is underway, and maintain tracking as the system is improved.

Technology

MAKE KNOWLEDGE RETRIEVAL EASY  Allow users to access knowledge content in context of the situation and process where they need it — to promote fast and easy retrieval. This may include all types of IT users, and when self-service is rolled out, the end user community as well.

ALIGN PROCESSES TO SUPPORT KNOWLEDGE CREATION AND KNOWLEDGE USE  Ensure effective integration and easy linkages between IT processes especially between incident, problem and knowledge management. For example, it is highly desirable that knowledge can be easily created to explain a known error, and be accessible to be used by other analysts from within an incident.

AUTOMATE THE KNOWLEDGE LIFE CYCLE  Automating the knowledge life cycle helps ensure that content is produced in a timely way, and helps maintain the quality and relevance of the knowledge base over time.
QUERY AND REPORT FROM THE SERVICE KNOWLEDGE MANAGEMENT SYSTEM  Use the service management system to query data and visualize knowledge-related and knowledge-impacted operational and performance metrics, providing feedback, as relevant, to IT users, management and executives.

Knowledge Management Best Practice Methods — How can they help?
ITIL® Version 3 elevates knowledge management, defining it as a process that carries through all five phases of the service life cycle. The ITIL Service Transition book, in particular, includes overview analysis and high-level guidance about using knowledge management when instituting IT services.

Knowledge management can also be applied in a number of ways to the more operational aspects of ITIL such as incident management and problem management— which are the primary context of this paper. With ITIL V3, as has been the case with ITIL V2, knowledge management can help the processes of incident management and problem management in a variety of ways. Examples include:

INCIDENT MANAGEMENT
• Diagnostic scripts and known error searching is valuable during the initial diagnosis of an incident using search, retrieval, and linking functions
• Knowledge searches are used to help find known errors during further incident investigation and diagnosis
• Incident categorization (where an organization may choose to use a knowledge base to help apply the correct categorization to an incident).

PROBLEM MANAGEMENT
• Accessing information about known errors, and helping with problem matching to help the analyst save time in obtaining the resolution, if the problem has occurred before
• Maintaining and providing access to information about workarounds
• Recording information about procedures, work instructions, diagnostic scripts and known errors (while supporting rich content, editing tools, measurement, and a definable approval process for the development of resolutions)
• Better problem analysis through the linkage and analysis of incidents

While ITIL best practices are valuable in providing guidance on IT service management, ITIL does not currently include detail about the application of knowledge management to these support processes. Other knowledge management principles and best practice approaches such as Knowledge-Centered Support™ can serve as a useful addition to ITIL.

Knowledge-Centered Support™ (KCS) is a method developed by the Consortium for Service Innovation™ (www.serviceinnovation.org), a non-profit industry alliance comprised of support organizations.
KCS provides a practical approach to organizing and implementing KM in a support environment. It provides a process framework which encompasses operational objectives in a knowledge initiative as well as providing tactical and managerial guidance. Among the many elements included in KCS are guidance on structuring knowledge solutions for comprehensibility and effective reuse, methods to expedite the creation and refinement of “just-in-time” knowledge, and metrics for performance assessment.

KCS also includes an emphasis on communicating with stakeholders and a focus on continual improvement, which can help promote, sustain and enhance the program. Many KCS principles can be applied with great benefit to almost any IT support knowledge initiative.

The KCS approach to content creation is that knowledge is created by support analysts while they handle incidents. This ensures that content is demand-driven and captured in the context of the incident and in the way the user expressed their needs. This enhances the usability and findability of the solution.

Although the KCS emphasis on creating knowledge from within incident management can work well in organizations that have the leadership, commitment and capacity to effectuate substantial changes to the ways in which support staff members work, many organizations do not adopt this aspect of KCS, choosing other approaches. The alternatives include making use of dedicated knowledge specialists who create content or who refine and publish content created by domain experts. Some organizations use a mixed approach where some solutions are created by analysts from incidents and others are created by knowledge specialists. The mix may depend on the structure of the teams or departments involved, the expertise required, and on the nature of the support provided.

While not all of the elements of KCS will necessarily apply to all organizations, KCS has become a valuable source of best practices which can be applied, as appropriate, to IT support knowledge management programs.

**The Benefits of Knowledge Management**

The potential benefits of adopting a Knowledge Management strategy are significant and have far-reaching implications for a business when implemented correctly. The correct use of Knowledge Management techniques and technology makes a company agile and more responsive to the needs of the customer, resulting in enhanced business performance and greater return on investment.

Benefits of Knowledge Management for IT support can include:

- **Decrease in support costs associated with staff “ramp-up” time**
  - The upfront learning curve needed for a new analyst is shorter because the solutions are documented and readily available to them

- **Decrease in costs due to less re-work and duplication of research activity**
  - With more knowledge available to support analysts, incidents can be resolved more rapidly, and with less unnecessary repetition of similar troubleshooting tasks by different analysts

- **Increase in customer satisfaction from shortened incident resolution times**
  - Since customers often gauge the quality of support by how quickly their incident is resolved, they will gain higher satisfaction for getting their issues resolved faster
By introducing self-service, organizations realize:

- Lowered cost per interaction by deflecting phone support calls to the web support channel
  - As end-users use the knowledge base to diagnose and resolve their own IT issues, calls are logged via the web instead of the more costly phone support channel. This results in a reduction in the cost incurred by responding to a user inquiry – thereby lowering the incremental cost of support.

- End-User self-empowerment and continuous direct access to IT information
  - Users are able to obtain immediate assistance, in the form of knowledge base content, at all times. The provision of this kind of service enriches the service provided by IT, and opens up a valuable IT-branded channel to the business user community in a controlled and managed way.

While there is no single metric to use to measure the benefits of Knowledge Management, multiple measures of relevant activities and business outcomes can help quantify the estimated hard-dollar savings.

Metrics are critical to understanding and motivating the performance of an organization. Metrics allow us to measure the effectiveness of an initiative, and based on the results, eliminate failures to drive further successes in Knowledge Management and in Service Management.

SECTION 4

Conclusion

Knowledge Management provides distinct benefits to IT support. It is important to ensure that people, process and technology are aligned towards the goals of knowledge management, and that best practice approaches are used in the knowledge management program, to help the greater organization benefit from the skills learned by individuals. Leveraging various techniques that have proven successful before can help achieve faster and better outcomes.

The CA Incident & Problem Management solution — including CA Service Desk Knowledge Tools — is a powerful technology enabler for Knowledge Management. This solution delivers innovative technology solutions, value-added professional services and education to enable the IT organization to improve the customer’s support experience, to increase support capacity and to provide a more cost-effective service.

SECTION 5

References

http://serviceinnovation.org/kcs


SECTION 6

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CA, one of the world's largest information technology (IT) management software companies, unifies and simplifies complex IT management across the enterprise for greater business results. With our Enterprise IT Management vision, solutions and expertise, we help customers effectively govern, manage and secure IT.