

Commentary

Managing Knowledge for the Help Desk: Best Practices

As enterprises make the transition to a more proactive support model, problem resolution and knowledge management become critical priorities in lowering costs and improving service quality.

Knowledge management (KM) is a business process for managing the intellectual assets of the enterprise. It is a discipline that promotes a collaborative and integrated approach to the creation, capture, organization, access and use of an enterprise's information assets. These information assets include databases, documents and, most importantly, the uncaptured, tacit expertise and experience of individual workers. For the IT support organization, it is critical to incorporate this data into a knowledge base that can be readily accessed by help desk staff and distributed to end users for self-help. Successful support organizations have a well-defined sense of their customers; a defined workflow for creating, disseminating and using knowledge; and established measurements of performance. However, by 2002, less than 35 percent of IS organizations will have implemented the problem-resolution process and tools necessary to reduce and control the increasing costs of ownership (0.7 probability). This *Research Note* highlights the benefits, challenges and key steps in creating a problem resolution process to manage knowledge in IT support.

Benefits of an Effective KM Process in IT Support:

- Increases efficiency through faster identification of potential solutions
- Recognizes and responds to problem trends in a proactive manner
- Increases the problem solving capacity of IT resources
- Leverages knowledge and experience of the IT staff and content providers
- Allows reuse of existing knowledge and solutions
- Captures valuable information
- Solves problems at more cost-effective levels
- Decreases the mean time to closure
- Eliminates repetitive research
- Increases opportunity for teamwork

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- Provides consistent advice
- Establishes standards (quality control)
- Reduces overall support costs
- Enables self-service for easy-to-access solutions to end users via the Web
- Increases customer satisfaction and loyalty by providing timely resolution
- Manages turnover = accelerated “ramp-up” time for new hires or outsourcers
- Promotes more-stable staffing by making careers more satisfying
- Allows management to evaluate and reward support staff
- Brings management closer to the day-to-day field-level experience

Outline the criteria for success. As a difficult process, KM must begin with achievable goals and clarity of objectives and language to facilitate success. It spans the technological efforts (e.g., groupware and enterprise data warehousing), the staff development efforts (training and mentoring), and the organizational development efforts (benchmarking and best-practice capture), and requires innovative approaches to capturing key information from staff and end users. The KM project should be broken down into manageable stages with a general time frame for implementation, including management support, defined roles and responsibilities, established standards for knowledge architecture, culture of sharing and using knowledge, and proper technology.

Obtain management commitment. The alignment of enterprise goals is critical in the creation of the knowledge base and support of the KM process. Therefore, identifying the stakeholders and key players (e.g., upper management, managers, and support center management) will be a success factor in the project’s resource commitments and understanding the “skin in the game,” if the knowledge base is built and functions properly. Management must stress the importance of using the resolution process and technology to create and maintain a knowledge base that benefits the department and contributes to the rest of the enterprise. If it does not, the implementation is “dead on arrival.”

Define roles and responsibilities. Another key determinant for success is personnel management strategies. As “keepers” of the KM process, knowledge managers set policy for the knowledge administrators, and draft, guide and reward knowledge contributors within the enterprise. A “rapid response” team should also be prepared to generate and distribute mission-critical resolutions. The most difficult KM success factor is a knowledge-friendly culture; and recruiting, retention and management help determine whether knowledge sharing is possible within each support environment.

Document problem resolution workflow. To control costs, knowledge must be updated to ensure accuracy. Ensuring that controls are evoked to eliminate repetitive tasks is critical. As knowledge will frequently change, the procedures for handling IT support content need to be documented clearly and distributed. Create a separate document for each procedure and link to it from the main document. For instance, each time “rebooting the PC” is referenced, link to same document. For day procedure changes, change the single document one time to update the entire knowledge base to ensure efficiency and accuracy.

Develop standards and templates for entering cases. Determine first whether the knowledge needs to be formatted or constructed into cases before it can be used, or whether existing sources of knowledge, such as online documentation, training materials and service manuals, can be leveraged. In general, the more effort put into structuring the knowledge, the more accessible the knowledge will be to nonexpert users. Additional structuring increases the precision of the response, ideally resulting in a



single correct answer, which is typically more useful to a nonexpert than less structured approaches, which deliver a ranked list of possibilities. The process of automating the collection and creation of problem-resolution data in a format that can be distilled and shared among a body of untrained users is essential to moving users from a “help me” to a “help myself” mentality. The service desk must have a way to automate the capture and “distilling” process for KM.

Create controls for knowledge base maintenance. If a KM process is done well, the maintenance process is simplified (otherwise, it is a nightmare). Maintenance, which involves correcting, refining and expanding the knowledge base, should be a single step, reducing lapse time between discovery and publication. The creation and maintenance knowledge bases can be burdensome. If knowledge is not easily maintained, it will become obsolete quickly. With a rapidly changing environment, a significant amount of maintenance is required, as new projects and procedures are constantly being rolled out. It is critical to pinpoint high maintenance items, which happen repeatedly and require information on an ongoing basis. Review frequent changes in the enterprise to technology, versions of software, and organizational structure. Procedures should be documented, and a product availability list should be developed. Enterprises need to assign responsibility for information quality control, create mechanisms to ensure accountability, and give credit for contributions.

Automate KM process. Problem resolution technologies automate the collection, organization and representation of knowledge necessary for support staff and end users to increase efficiency in resolving IT issues. If the knowledge bases are to be maintained internally, then efficient maintenance tools become an important evaluation criterion. If internal resources are unavailable for creation and maintenance, these services have to be obtained directly from the vendors. Enterprises should acquire systems that automatically pass the history of what has been done in attempt to solve the problem and facilitate collaborative problem solving. To prevent any additional, unnecessary steps in populating the knowledge base, detailed procedures can help ensure data capture through the process of users doing their everyday jobs. A major hurdle occurs when the act of capturing knowledge becomes a bottleneck in the KM process. Problem resolution systems should have a mechanism to capture, validate and publish end-user contributions to the database, making solutions to critical problems available to the entire enterprise — this is the essential core of the KM process. Problem-resolution knowledge can be bought (ServiceWare, KnowledgeBroker and Ziff-Davis) or created (by the knowledge base administrator). Resolution knowledge exists in multiple, incompatible formats and needs to be distilled to a pristine condition for reuse by end users who are untrained and unmotivated to access the content specific to their immediate problem.

Connect intranet to problem resolution database. Enterprises should consider support technologies that offer a consolidated knowledge base. If solutions are duplicated in multiple databases, the consolidated service desk has no means of determining which solution is the correct one. By implementing the service desk through an intranet environment, IS organizations can create an atmosphere where solutions’ reuse can be monitored and subsequently rewarded. Issues from end users who attempted self-service through Web access could be given high priority and escalated for faster resolution. Repetitive problems can be identified on the Web for faster self-service that provides analysts with more time to tackle creative and challenging issues and subsequently to increase their expertise. The efficiencies of “fix it yourself” options are driving problem resolution toward a self-service pattern.

Avoid common pitfalls in the KM process, such as:

- Lack of senior management support
- Too much complexity and difficulty to manage



- Technology not available or too expensive
- Lack of staff and management commitment
- Stale information — poor maintenance tools
- Employee turnover — failure to reward team sharing
- Unrealistic goals and expectations
- No owner or sponsorship — process leader must be in place
- Timeliness (tacit information changes more quickly)
- Employee resistance (fear of sharing knowledge)
- Not involving right parties (e.g., support groups, customer support, management, HR, accounting, marketing)

Bottom Line: Many enterprises invest in the technologies for KM, but fail due to lack of process development and education/training (e.g., they miss or discount the cultural and organizational change issues). As with most new business processes, the implementation cost is only 10 percent to 20 percent of the total cost of ownership. Although the problems eventually get solved, the knowledge used to resolve a problem is most often not captured or fed back into the system for reuse, much less shared with other parts of the enterprise, such as design, engineering and marketing. With KM, the help desk can more rapidly respond with the right answer to the right customer at the right time and capture knowledge that, when shared, contributes value throughout the enterprise.

