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## Selecting Help Desk Software

**A good helpdesk solution not only provides answers to users' questions, but also helps to manage assets and lifecycle changes.**

*by Alain Grillet and Marc Dallas  
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A reputation for impeccable quality of service is a substantial competitive advantage, and your company's ability to deliver on that brand promise promotes customer loyalty. Needless to say, selecting and implementing a helpdesk software package that is a good fit for your business is essential for managing customer relations professionally and efficiently.

At the most basic level, your helpdesk is a tool that links an external or internal contact with your support organization. Within your business, the use of support management tools brings improved personnel performance thanks to increased availability of resources and equipment and provides cost savings from better control over expenses, assets, and human resources.

A typical full-service helpdesk solution consists of an intranet/Internet architecture, a traditional request-opening process enhanced with an Internet browser-based client-entry module, and automated email integration.

It can be broken down into two operational domains that are technically and functionally distinct: the customer domain and the contributor domain. The customer domain—the only part seen by the customers—allows them to access information concerning their requests (either open or closed), to open new requests, and to scan through the public information in a knowledge base. The contributor domain is where requests and issues are resolved by your technical support team and where information is structured.

The two domains access the same common information, which is presented differently according to the destination. An integrated email messaging system allows active exchange between the service and the user.



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## **Where to Start**

When you evaluate helpdesk solutions, you will want to consider some of the features and functions outlined in the following paragraphs as we walk through typical helpdesk workflow.

In the area of technical support, chances are that someone else has experienced the same issue and that a solution already exists. That's why your helpdesk software should include a robust knowledge base with an FAQ module to capitalize on, and share, previous experience.

Before opening a support request, a user should be able to search a knowledge base to check whether the problem has already been resolved, perhaps by a more-recent version of the product.

If customers are unable to resolve their issues via the knowledge base, they must be able to open their own requests, which reduces processing time and tech support workload and avoids bottlenecks and time zone issues.

A Web form can prompt the customer to describe his problem. Once a request is active in the helpdesk system, the user can view the results of a preliminary analysis. He can then, if necessary, supply additional information to the tech support person in charge of the request. In this way, the user sees the "live" progression of his request to its resolution. Moreover, he can actively participate in the resolution process.

A helpdesk solution that is readily available and accessed via the Internet avoids the disadvantages of being tied to maintaining a proprietary system. For users without Internet access but who are able to send emails, automated email reception/handling means that the same level of request management functionality is available for incoming mails as for Web forms. They should still be able to create requests and add attachments and information throughout the resolution process.

The operational success of this kind of system depends on keeping the user closely involved. This means informing him, in real time, of the progress of his request. The fact that the internal and external information (intranet and Internet parts, respectively) come from the same source means that the customer and the tech support staff member responsible for the request have a common base for discussion.

## **The Tech Support Perspective**

On the support side, your helpdesk system should enable your support staff to do the following tasks:

- Identify the customer and the support resource and retrieve relevant log information from a database to respond rapidly to requests.
- Pinpoint the problem(s). Clearly, problems are not always fully defined at the outset. Look for helpdesk software that allows an initial description to be clarified or refined. This precision leads to faster resolution.

- Assign priority and deadline. Depending on customer expectations, a priority order can be set for processing requests. Setting a deadline leads to improvements in managing internal resources.
- Assign a follow-up number, identify a single support resource, and create a notification message. With the underlying aim of offering the user a high degree of transparency and clear dialog with the support service, the customer should receive the access "keys" he needs to track his request as soon as possible. Furthermore, the user must always be kept informed of the progress of his request. The system should allow particular tech support staff members to be defined as responsible for specific customers.

Via your helpdesk solution, your tech support staff must have access to all the information and functions they need to resolve a problem efficiently:

- What is the problem to be solved?
- Do I have all the elements needed to solve the problem?
- Does a solution to the problem already exist?
- Who is the right person to resolve the issue?

Your helpdesk software should allow you to list each staff person with a specific competency level for each system, product, or module, for example. That way the staff person responsible for initially analyzing the request can judiciously reassign it to minimize resolution time.

Once a request is identified and is assigned to a tech support staff person, he or she will receive notification. Look for a helpdesk system with the flexibility to allow your staff, based on authorization levels, to access outstanding requests that are not assigned to them (in addition to their list of assigned requests) or redirect a request to another staff member who is better qualified to handle the particular request.

When tech support acts on a request, the system should record and time-stamp the action performed and the result of the action. It should include a summary of the dialogue between the staff person and the customer, a third-party expert, etc., for a complete log of all interactions.

As tech support works on a request, they should be able to count on having access to customer configuration data, attachments if any, and the information contained in the knowledge base.

### **Priority Management and Escalation**

As soon as a request enters the "cycle," your helpdesk software must guarantee its follow-up. Multiple concurrent requests could compete in the system. Not knowing where to start leads to random selection, at odds with a rigorous policy of customer satisfaction. To avoid this problem, look for software that uses a weighting system to classify requests efficiently and provide a safety net against slippages in resolution time.

When a request is opened, the person responsible for the request should be able to assign a deadline and processing priority to show helpdesk staff the order in which to process requests.

Your software should enable you to put an escalation procedure in place and to assign a level of urgency to each phase. This level will determine which technical support staff members to notify.

### **Feeding the Knowledge Base**

The objective of the knowledge base is threefold:

- To centralize all the experience acquired about systems and products managed by your helpdesk
- To inform customers about system evolutions and bugs
- To offer a supporting methodology covering the implementation, update, and specific uses of managed systems

The knowledge base is unique in that it can be accessed from both inside the system (by tech support staff) and outside the system (by customers). Available information depends on from where it is accessed and on the role of the requester.

Your system should have the ability to restrict certain information for internal use only. Following this principle, each element in the database should have an access property of either "public" or "private."

For optimal performance, information on request resolution should be made available to other tech support staff members via the knowledge base. Ideally, staff members would refine the information. However if a contributor does not actively feed the knowledge base, the software can do so on his behalf and can insert the entire case study into the database. That said, it is important that each piece of information added to the database be verified and validated by a responsible person in advance. Be sure your system supports that capability.

Since the helpdesk system has full knowledge of all products or systems used by the customer, when a malfunction is detected within a particular version or module of a given system, all customers that are potentially affected can be located and proactively notified.

### **Asset Management**

It is likely that you will require an asset management module as part of your helpdesk software package to track hardware and software components for technical support purposes. A basic asset management system must perform these functions:

- Reference components by standard attributes (equipment identification number or bar code, description, hardware domain, system, serial number).
- Contain tracing information, such as order number and date, supplier, billing number and date, purchase price.
- Trace the life of individual equipment (changes in allocation, movement, sale, scrapping, etc.).

- Log all movements and the attachments/detachments of components to/from a configuration (a group of hardware or software components for a given user, including geographical and operational details). This provides you with the ability to trace movements of components throughout their useful life.
- Create requests for solving hardware problems; alternatively, hardware information can be associated with requests that are software or organizational problems.

### **Statistical Analysis**

Your helpdesk system would be incomplete without a dashboard feature supplying proactive data for quality analysis and the ability to generate reports.

Via your helpdesk software, you should be able to view reports. Here are a few examples of the many reports you might want:

- Service activity over a given period
- Average number of open requests
- Average number of requests processed by each staff person
- Number of requests processed by competency level
- Average resolution time for requests
- Time spent per customer
- Average slippage in the resolution date limit

While the systems you consider will likely come with preconfigured reports, you may want to check that your choice also includes supporting documentation so that users can customize their database inquiries using any SQL-compliant third-party tool. Since additional knowledge of the database structure is essential for formulating requests, your vendor may also supply a relational model with a description of tables and fields.

### **Security**

The information contained in your helpdesk software is vital for communication between your support service and your customer, but it also has enormous potential to help you manage knowledge, resources, quality, and customer needs.

Given its value, this information must be protected against misuse. You will want to be sure that the software you select supports connection and usage authorizations. Each user (customer or helpdesk staff) must have a connection ID ("login") and a password. He or she will need to supply this information each time they enter the system. A user's role defines what functions he can and cannot perform—in other words, what authorizations he holds. You should be able to easily set up a profile for a given user to grant him the authorizations he needs to fulfill his role.

### **Integration with Development**

If you are involved in software applications technical support, you may want to consider helpdesk software that integrates with your change management system.

For example, one popular helpdesk solution includes an ISO-compliant declaration mechanism that produces incident reports and change requests from customer requests. Once entered, these requests are grouped into a maintenance report and associated with an application version.

Version development takes place in the change management environment. Transferring the version to production closes the maintenance reports and the original incident reports or change requests. This information is passed to the helpdesk suite, and customers are automatically notified that the modifications they requested are available.

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