IMPLEMENTING PROBLEM MANAGEMENT

Problem management deals with how problems are handled in the organization. It is a continuous cycle process that encompasses problem detection, documentation of the problem and its resolution, identification and testing of the solution, resolution, closing the problem, and generating statistical reports. This article describes the process steps for managing problems.

Step 1: Define problem management process and practices

The first step in establishing an effective problem management discipline is to publish a plan on how to handle problems. This plan should cover:

- **Procedures for handling problems -** What is done after a problem is detected and reported, how problem data is captured and stored, and how the problem is managed to resolution.
- **Roles and responsibilities of the IT support staff -** Who receives the problem, who records all information, who handles problem resolution, and what each entity is supposed to do.
- **Measurements for problem resolution -** What will be tracked to monitor the efficiency of the problem management discipline.
- **Tools to be used -** See below.
- **Problems to be handled and how to classify them -** Severity and priority assignment methodology, as well as escalation guidelines.
- **Bypass procedures -** Actions that can be taken to immediately restore system availability in the event of certain specific events or problems.

Step 2: Detect or recognize the problem

In this step, activate the necessary tools to detect problems. Use all facilities for capturing problem reports, including the help desk. Gather data, and record all pertinent information in a location accessible to all support staffers. Notify affected users to help them minimize the impact of the problem.

Step 3: Bypass the problem

As soon as the problem is detected, take all possible steps to bypass it or minimize its impact on users. Ideally, identify bypass procedures in advance, ensuring that they have no side effect on other systems, applications, or users. Recognize that a bypass is *not* a resolution of the problem. All too often, problem bypasses are left installed and treated as a permanent fix, only to have the system eventually fail because the bypass was not designed to run forever, or because the bypass impacted other systems.

In some cases, bypass procedures are invoked so often that they become the norm for "solving" the problem, when they do little to prevent the problem from happening again. Some simple examples of bypasses that don't represent permanent solutions are:

- Rebooting a server or network router without identifying the source of the failure.
- Pressing "CTRL-ALT-DELETE" when the PC hangs instead of finding the failing software application and fixing it.
- Choosing Retry or Ignore when presented with a "Diskette write error, Abort Retry Ignore." Sooner or later, the user will find his data completely unrecoverable because he chose not to reformat or replace his diskette.

Record all bypass activities along with the problem information so that when the problem is passed to other support staffers, no relevant information is lost.

Step 4: Analyze the problem

At this stage, identify the true cause of the problem, and evaluate, test, and apply possible resolutions. Review historical records of related problems to see if similar problems are on record. Efficient, effective problem analysis can significantly reduce the time it takes for resolution.

Step 5: Manage the problem to resolution

Often, a single support professional cannot resolve a problem entirely on his own. Problems must be shared amongst multiple support staffers, especially if they are complex or involve multiple systems or applications. In these cases, it is important that there is an entity to monitor and manage the problem to resolution, ensuring that it is resolved within the process performance targets.

Management of problems also involves escalation to higher management and support staffers when the problem is repetitive or has occurred before, has not been resolved during the set resolution times, affects many users, or has a serious impact on the business.

Once the problem has been fixed, flag it as *temporarily* closed for a given period of time, such as one week. After this period lapses, ask the affected users if the problem has recurred, or if any unwanted effects were caused by the fix. If not, you can close the problem permanently.

Step 6: Report on the status and trends of problems

Gather problem statistics and generate summary reports to aid in identifying trends and implementing preventive measures. These reports may include:

- **Summary of closed problems** — Problems that occurred, how long it took to resolve them, and what the solutions were
- **Status of open problems** — Existing unresolved problems, when they were opened, and why they remain as unresolved action items

- **Problem trends and statistics** — Number and type of problems, areas affected, frequency of occurrence
- **Root cause of problems report —** Problems that occurred, why they occurred, what can be done to prevent recurrence
- **Action plan for the next period** — Plans to improve on problem trends and resolution times

These reports inform IT management of the current health of the system *and* offer a way to communicate with users on IT's support activities.

Step 7: Redefine the problem management process if necessary

Sometimes, delays in resolving problems are not due to the complexity of the problems, but to a failure of managing the problems to resolution. This step provides a way to refine or enhance the existing management discipline, based on the measurements that have been achieved. It is part of the continuing improvement cycle of this and all other systems management disciplines.

The following process factors are critical to the success of problem management:

- **All problems, big and small, are covered -** Small problems lead to (or are symptoms of) bigger problems, so it is important that *all* problems are recorded. The recurring data read error eventually becomes a bad diskette problem. The intermittent LAN connection problem sooner or later turns out to be a broken cabling problem. And the nuisance "General Protection Fault" error in Windows is likely due to a bad memory component.
- **Escalation procedures are followed -** Many IT support staffers mistakenly believe that escalating a problem is an admission of incompetence, so they violate established escalation guidelines. This situation is dangerous - IT management loses control over the problem, often without even realizing it.
- **Problems are assigned severity levels and prioritized accordingly -** We've said that all problems should be covered, but we did not say that all should be treated the same. On the contrary, you need a severity and priority assignment methodology that ensures important problems are handled first. A problem may be deemed as more severe if one or more of the following conditions are true:

  - Multiple users are affected
  - Critical business function cannot be performed
  - Alternate systems are not available
  - Entire system is not available

- **Users are updated on the status of the problems -** Users experience major frustration when they have to wait for IT support staff to update them on the status of a problem. It is thus imperative that the IT staff in charge of managing the problem regularly updates affected users as often as possible. Users appreciate

knowing what has been done, the current status of the problem, and when to expect a resolution.

- **Problem trends are analyzed and measures are taken to address them -** The objective of systems management is to make everyone proactive in resolving problems. Wherever possible, you should prevent problems from occurring, instead of simply resolving them after they are already causing business losses. The analysis of problem statistics is a valuable tool for achieving this goal, because it helps identify potential problems based on past experience.

Summary

With a well-defined problem management process in place, your IT organization will realize numerous benefits - solve repetitive problems, reduce number and impact of problems, reduce problem resolution time, and improve support staff productivity.