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In my last column, we looked at the important role the CMMS (computerized maintenance management system) plays in communicating with our business partners and in the facilitation of managing people who manage assets. We recognized the value of the CMMS data collection instruments—in particular, the work request and the work-request acceptance process, both of which play a significant role in assuring a correct and timely response to failure events.

Every day, the Maintenance Department confronts a minefield of work requests to which it must respond in some way. The level of response depends greatly upon a number of factors:

- The manner in which the request is allowed to be delivered
- The amount of information contained within the request
- The manner in which the request is accepted

In a continuing endeavor to appease its partners, maintenance has traditionally accepted work requests in many different ways, including through casual, face-to-face discussion, telephone conversations, voice-mail messages, e-mails and informal hand-written forms. The typical process allows a "poorly detailed" request to be verbalized, with the request being readily accepted and immediately queued into the Work Order system for scheduling. Most of us know all too well about the scrawled "matchbook" request passed to a maintainer on the run, often without explanation. Unfortunately, almost every request is categorized by the requestor as "URGENT."

Without direction, human nature dictates that we typically will take the path of least resistance. Following the aforementioned work-acceptance model allows the requestor to comfortably pass on the responsibility of the problem without effort or conviction. Accepting work in such a manner forces the Maintenance Department into an immediate reactive-maintenance approach due to the lack of preliminary information—*meaning that it must stage a preliminary investigation for almost every work request* . This modus operandi can greatly increase the maintenance workload and unnecessarily overburden the maintenance work backlog.

With little effort, the problems described by this poor work-acceptance model can be alleviated, even eliminated, through the introduction of a simple work-order-acceptance business process, backed up with a well-designed work-request form.

Building a quality work-acceptance model

By adopting a "written only" work-request system, the requestor is now required to think more objectively about a problem. When maintenance provides a formal work-request process and document for completion, the requestor is guided into giving the basic information required for maintenance to move ahead and accept the work request with confidence—*almost immediately* . If the request is incomplete, the Maintenance Department simply does not accept the work request and returns it to the requestor for completion. This part of the model requires fortitude on behalf of the Maintenance Department, as well as cooperation from other departments. A simple change like this quickly eliminates virtually all nuisance calls as requestors are less inclined to extend the effort for a frivolous event.

Many readers are familiar with—*and have been exposed to*—the concepts and principles of Quality Assurance/Quality Management (QAQM) systems driven by the ISO/QS 9000 quality system. The basis of any QAQM system is focused around clear communication and clear documentation: Affected parties work together to understand the communication problem, develop procedures in which clear expectations and guidelines are set out and complete the process by documenting the results with a step-by-step procedure and business process map. The following five-step process details the simple change process:

Step 1: Understanding the problems…

Maintenance meets with other departments to discuss the shortfalls of the present work-request system and documents the others' concerns, while voicing the Maintenance Department's concerns.

Step 2: Building the work acceptance structure…

Maintenance builds a process map (flow diagram) that shows the Maintenance Department will now accept only written or e-mail requests (no more verbal work requests).

Step 3: Building the new work request…

Adopting the ISO/QS 9000 approach, the Maintenance Department develops a "Minimum Information Work Request" document that can be sent via e-mail or filled out in a two-part form and delivered to a specified collection point. The following "10-Point Work Request" contains

the mandatory information needed to develop a qualified planning approach to the work:

- Date and time of request—*critical in tracking of Mean Time To Response/Repair (MTTR).*

- Requestor name—*we need to know who to call for further information; who calls in also could activate a political-priority response.*
- Requestor contact details: phone and pager numbers and e-mail—*we need to know how to get more information as quickly as possible, if this is a true emergency.*

- Exact geographical location of problem (building, floor, room, column)—*this information reduces response time by understanding travel time, and allows us to review any relevant floor plan drawings for job plan development.*

- Asset number—*allows maintenance to immediately review asset history and assign the work order to the correct account.*
- Exact location of problem on asset (asset sub-system)—*again allows the work order to be assigned at the correct level for capturing work information and for reviewing history and Bill of Materials.*
- Problem symptoms—*what is happening that causes the requestor to believe there is a problem?*
- Primary sensory information—*important for determining the true nature and criticality of the problem. These include:*
  - Vibration—*visual, feeling, touch*
  - Noise—*hearing*
  - Unusual odors—*smell*
  - Smoke—*visual, smell*
  - Heat—*feeling, touch, smell*
- Immediate impact on equipment operability/availability (downtime, limp mode, no effect)— *allows the planner to prioritize the work more effectively.*
- Immediate impact on safety—*allows the planner to prioritize the work more effectively.*

Step 4: Presenting the new approach…

With new tools in place, maintenance must meet with its customers and present the new work acceptance approach. The rollout plan is discussed along with a mutually agreed-upon work request drop-off point and procedure.

Step 5: Implementation…

The program is rolled out and monitored carefully.

This simple, proactive approach provides a relatively painless change-management process, allowing maintenance service levels to increase substantially. The requestor now knows the minimum information required to expedite a faster response and subsequently becomes a significant partner in providing a solution. **MT**

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