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Getting a program to stick requires communication with all affected parties.

Identifying the key elements to a maintenance excellence program and putting them together with a little communication mortar will form the foundation of a maintenance improvement effort. To focus on a few elements, planners must be assigned, a computerized maintenance management system (CMMS) must be implemented, and spare parts managed. Work management processes must be defined, preventive and predictive maintenance programs must be developed, and maintenance performance tracked. Training is also a key element in this process.

In all these efforts, communication to and among all affected parties must take place. Without this key ingredient, the maintenance excellence effort will not take hold.

Maintenance planners

When proposing the idea of maintenance planners, considerable effort must be expended to sell this concept to upper management who often is operations born and bred. To simply express the desire to add or reassign people to planning because maintenance thinks it is a good idea will usually fall on deaf ears. An important part of this task is to effectively communicate the "opportunity" to this part of the organization.

This opportunity is production capacity increases and worker efficiencies/reductions that will be achieved by making this change in organizational structure. Industry statistics and maintenance history records, if they are available, can be used to calculate these gains. Planned maintenance is three times more effective than unplanned maintenance. Well-planned maintenance also prevents re-work, which can affect equipment uptime. Quality of the product can be affected by poor maintenance practices. These are just a few examples that can be used to calculate the opportunity.

The true savings garnered by implementing maintenance planning can be significant, but beware, especially in communicating these numbers to an already skeptical group. Poor past performance by maintenance departments working in an unplanned reactive mode can be responsible for this skepticism. A detailed action plan should be developed which will show how planners will be selected and what their responsibilities will be in the organization. Realistic yet conservative savings and improvement projections will help get upper management into the mix.

CMMS

To make these new planning groups effective, the next element of maintenance excellence that must be well communicated is the need for a CMMS. Planning groups *can* function without one, but not very efficiently. To achieve maintenance excellence, a CMMS is a requirement. Communicating this need is one of the most daunting tasks because upper management often lacks understanding of what a CMMS does for the maintenance organization.

Another hurdle is the cost. Application service provider (ASP) models may help since this software can be leased for a low monthly fee instead of a capital investment. Considerable time should be spent outlining all the functions and capability that a CMMS will bring to the company. Equating this tool to a production control computer system can be a good analogy. The information needed to manage the maintenance process is similar to the important information a process control system brings to the production process.

Outline what each module can do to enhance the maintenance organization's ability to manage the maintenance process and increase production capacity. These figures will be needed to calculate the return on investment (ROI) or payback. Make sure this payback can stand up to an audit down the road.

Spare parts management

Another key element needed to achieve maintenance excellence is spare parts management. Depending on the situation, the resources and infrastructure required to manage and house these important assets may need to be identified. Again industry statistics can be used to calculate these savings, or there may be historical data for the plant.

Spare parts management can be a huge undertaking if parts are not presently inventoried in the plant. Communicate to upper management how a spare parts inventory and control system will make the planning system more effective and efficient. Time saved not having to look for parts, money saved not buying duplicates, and eliminating/selling obsolete spares can add up to a substantial return on investment.

Work management process

The next step is to focus on identifying the best work management process for the organization. To obtain buy-in by all parties, they all need to be involved. The communication mortar used here will help bring the parties together. In many cases this is a complete culture change. Some maintenance people will not want to be part of this activity because they are comfortable with

things the way they are now. Operations personnel may feel this process is just for maintenance personnel. All these people *must* be involved in defining this process.

Simple flowcharts can facilitate these discussions. The charts must show how communication between maintenance, planning, and operations cements the work management process. This process must be treated with the same importance as every other business process in the organization.

After defining the process, the roles and responsibilities of those involved must be defined. Job descriptions should be developed for each member of the organization. These roles must be defined with emphasis on the interaction with all groups involved. Daily and weekly meetings with operations and maintenance must be set up to facilitate communicating priorities and scheduling maintenance activities. The planning group should facilitate these meetings. With priorities identified, the planning group can now be certain what jobs to plan first. Work that has been properly planned can now be scheduled.

Preventive maintenance programs
Preventive maintenance (PM) programs must be developed or optimized if already in place. Once again, communicating the need for this element is important. Developing a comprehensive PM program can be time intensive and must use key resources in the organization.

High delay areas are a good place to start to identify the need for PM tasks. Defining equipment criticality also will help identify which equipment needs preventive tasks developed first. Bringing the appropriate parties together to develop these programs will not only ensure that the program is comprehensive, but also educate those who may be unfamiliar with a proactive approach to maintenance.

Predictive maintenance programs
Similar to the effort required for a comprehensive PM program, a good predictive maintenance program often can be the cornerstone of equipment reliability.

Vibration monitoring, thermography, and oil analysis should be performed at regular intervals and tracked through the CMMS. When problems are found, followup work orders should be

generated and routed through the work management process. Communicating impending failure can allow maintenance to plan and schedule the needed overhaul or replacement of the equipment.

Training

Training is needed in all facets of this effort in order for it to be successful. Training costs money and takes time, but both are well spent.

Maintenance planners must be trained on how to use the CMMS to its full potential, and they also may need to learn basic planning skills. Inventory management training may be needed if spare parts and materials are not presently controlled.

A lot of the training comes in the form of communicating what maintenance excellence is, and how it will be achieved using a well-defined maintenance process. People must be trained to run a production process and the same is true for the maintenance process. Straying from standard operating procedures will produce a substandard product on a production line. Straying from the maintenance process will produce mediocrity. There is no shortcut to maintenance excellence.

Performance tracking

The best way to communicate how the maintenance excellence effort is going is by first choosing a few key performance indicators (KPI) or metrics. Some examples are Percent Planned Work, Preventive Maintenance Completion Percentage, Maintenance Man-Hours per Production Unit, Backlog Weeks, Schedule Compliance, and Percent Delay.

All parties involved should agree to these measurements, and goals must be set. Elevating these indicators to the level of other corporate metrics will give them the importance they need and deserve. Weekly and monthly reporting of these statistics will keep progress (or the lack thereof) in front of those who are in a position to keep the effort on track. The old adage is true; what gets measured, gets done.

Good communication in each element of maintenance excellence will turn this effort into a way of life in your organization. Communication mortar cures slowly, so be patient. Maintenance excellence is not built in a day. **MT**

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