An Effective CMMS Strategy

Often Organizations underestimate the importance of their Computerized Maintenance Management System (CMMS) database. The growth of your CMMS never stops. It will always evolve as your use and understanding of the software matures.

How does a CMMS evolve? For the CMMS system to provide an effective management tool, it must be continuously updated. The CMMS is only as good as the data entered. As changes occur, it is imperative that the software be kept up to date. A database that is not current leads to a perception that the information is not value-added, and therefore is a make work project.

A robust accurate database facilitates Root Cause failure Analysis through life cycle costing, mean time between failures, and time to repair reporting. These reports are best used in both a regular visible reporting frequency and ad hoc. Have you identified your top ten critical pieces of equipment? Do you measure what the downtime for each was in the last week, month, quarter and year? Are you aware of the five top reasons for the downtime? How much has the downtime cost for each of the machines to be out of commission for each scheduled hour of production?

The key for an effective CMMS strategy is to recognize a CMMS for what is, and use the CMMS as a support for the Maintenance Strategy.   A CMMS is not a genie out of the bottle solution. A CMMS is an effective tool for data collection, organization, and reporting. The four basic components of a CMMS are

- Labour
- Equipment
- Inventory
- Work Order

Labour

The objective of a labour component is to allow the system to track the labour cost and hours recorded against the maintenance of equipment. Tracking the labour wrench time allows management to determine optimal human resources required to maintain the capital assets of the Organization. It further provides the labour history component of effective life cycle management of the asset.

The national average for wrench time is less than 30% for maintenance technicians. Labour productivity is sacrificed when technicians are waiting for instructions, searching for parts, looking for supervisors, making multiple trips between the worksite and storeroom, looking for the appropriate tools and waiting for approval to continue improperly scoped work. Poor planning and scheduling is the largest contributor to low wrench time. While 100% maintenance productivity is an unrealistic objective a far more realistic goal for any maintenance organization of 60% wrench time is achievable.

Often companies will encounter resistance from maintenance personnel to a CMMS especially within a union environment, for fear of big brother watching over them. It is critical that the Organization focus on the objective of equipment performance and de-emphasize an individual's performance. Do not use the CMMS to point fingers.

Equipment

Equipment outage means lost opportunity, lost revenue, and lost customers. The high value of capital equipment and high cost of downtime demand a complete and current knowledge of a piece of equipments performance and history. To obtain the maximum value from maintenance personnel, scheduling effectiveness and equipment utilization must be improved.

The objective of the equipment component is to identify and categorize equipment in as many ways as possible so that reporting of maintenance activities on equipment becomes easier. The equipment component is used to track the maintenance effort against the equipment's life cycle and identify when it is time for replacement. It accomplishes this objective by keeping a work history of what has been done on the equipment. It also tracks the performance of the equipment.

In order for the CMMS to track the maintenance cost, including labour and parts history equipment records will need to be created in such a fashion that will identify all required information. The design will also need to be configured to allow for benchmarking, measuring uptime, conducting Root Cause Failure Analysis, and the potential for creating hierarchy relationships.

Equipment nomenclatures should be meaningful and relevant to the users of the system, with cross references for other department users.

Inventory

The objective is to have effective inventory control, such that parts are available when required. Before scheduling equipment maintenance, a CMMS would determine if the necessary parts and supplies are in stock. By identifying what parts are used for each job, both stock items and direct purchases, an accurate usage and expense is maintained in the equipment record.

This information can be used by management to determine the utilization of stock items and the associated carrying cost. Building a relationship within you CMMS could show where parts are used. This would allow a tradesperson to quickly identify what parts are needed for a job, and cross references to other equipment.

In a multi-warehouse environment, parts not in stock at one warehouse can be transferred from another warehouse, providing an opportunity for reduction in downtime and part purchase. This can have a tremendous impact on returning equipment to production when a part has a lengthy lead time.

The key in having a successful inventory component inside a CMMS is making sure that the physical warehouse is organized such that the software reflects what is physically on hand.

Work Orders

Benchmarking in maintenance management is achieved through the work order system. When there is no work order system in place, it becomes difficult if not impossible to measure or control maintenance activities.

Work order systems should be several types of work orders:

- Proactive
- Reactive
- Preventive work

The work order system has several objectives. It serves as a manner to request, assign and follow up on work, transmit job instructions, estimate and accumulate maintenance costs, and collect all data necessary for producing management reports. Therefore, before a work order is closed it is important to ensure that all comments, labour, work description, parts, and analysis be recorded. This diligence enables the primary users of the work order system value-added information but also Operations, Engineering, Inventory, Purchasing, Accounting, and Upper Management.

Conclusion

With your CMMS, historical information about a piece of equipment is only a few clicks away. This historical information enables you too intelligently, and with justification, compare cost of maintenance versus replacement. In addition this information allows you to more accurately prepare a budget, cutting spare part costs due to overstocking, and spreading maintenance dollars to more critical pieces of equipment. A detailed well thought out plan for the implementation, continual improvement and utilization will enable you to achieve your departmental and corporate goals.