



Developments in technology during the past decade have transformed and shaped how we conduct our lives. From travel, to healthcare and medical advances, to banking, to communication and more, the increasing evolution of technology has touched almost every aspect of day-to-day activities. In general, advances in computer technology have made it possible to do things better, faster and smarter. One area in which computerization has emerged and shown itself to be exceptionally helpful is in the maintenance and facility management arena.

Until the past couple of decades, companies managed their operations using a pencil and paper approach consisting of hard copy invoices, receipts, purchase and work orders, inventory lists and memos. Purchasing and work orders often took days to fill, resulting in valuable time lost and production delays. Needless to say, these approaches are time consuming, cumbersome and unresponsive to the increasing demands for lean and efficient company operations. More than ever, today's facility managers are challenged to keep pace with changing industry trends and economic demands while at the same time being cognizant of profit margins and returns on investments (ROI). The current economic climate has resulted in an increasing number of companies turning toward Computerized Maintenance Management Software (CMMS) systems as their facility management solution.

CMMSs are best be described as highly sophisticated software programs that utilize thousands of data points that at any given time, can provide a user with an overview of a facility's operation or alternatively,

with the status of an individual piece of equipment. Current CMMS softwares offer businesses the ability to track work orders, quickly generate accurate reports, and instantly determine which of their assets require preventive maintenance. This improvement has led to extended equipment lifespans, improved organization, better time management and labor utilization and ultimately, reduced operational costs and increased company profits.

At the core of an efficiently managed operation, is well-maintained equipment and assets. Poorly maintained equipment generally results in unanticipated breakdowns, costly repairs and often equipment replacement. Conducting regular preventative maintenance is the best way to avoid unforeseen equipment failure while also prolonging their lifespans. When it comes the preventative maintenance, CMMSs provide a checklist of all tasks involved in maintaining each piece of equipment as well as create routine schedules, send notifications and reminders, and generate reports. The ability to conduct routine preventative maintenance (PMs) is a major reason companies are attracted to maintenance software systems. The following are six things to be considered when developing an effective preventative maintenance checklist.

1. Get the Right People on the Maintenance Team

Just as computers will not produce useful information without knowledgeable people to run them, it is also true that a preventative maintenance program will not be effective without the right people to oversee and do the work. When it comes to operating a CMMS run preventive maintenance program, selecting individuals from top management, maintenance managers, maintenance technicians, and any other staff who understands the way the system operates is essential. Specifically, this could include people skilled in data processing, accounting and craftsmen, as well as members of production and production control.

2. Set Goals for the Preventative Maintenance (PM) Plan

Every company is unique in terms of its operation, resources and industry. When setting specific goals, these factors should be kept in mind since the scope of a PM plan is largely dependent upon the size and structure of a company.

3. Collect Detailed Information on Existing Equipment

Before a preventive maintenance checklist can be initiated, it is important to becoming familiar with company equipment as well as establish a baseline on its usage. To do this, the make, model and serials numbers of each piece of equipment need to be documented along with all maintenance guidelines as well as specifics on installations, repairs and parts replacement. Once this is done, the functioning of a piece of equipment should be assessed. To do this, machine downtime, meantime-between-failure (i.e., amount of time between repairs), the cost of parts replacement, the amount of time spent by technicians, the technician's response time and percentage of parts deliveries made on time all must be established.

Utilizing this information, it is then possible to calculate the average cost of one hour of downtime. The above data will form a baseline from which a preventive maintenance program can later be evaluated.

4. Decide Which Assets and Equipment to Include

Once a detailed inventory list is in place, then the next step is to make decisions about which equipment pieces should be included in a PM program. Relying on the results of the equipment baseline data, inclusion in a maintenance plan should include assets with high repair/replacements costs, assets with a need for routine maintenance to be performed routinely and those that are critical to a company's success.

5. Create the Preventative Maintenance Schedule

CMMSs have the ability to create different preventive maintenance schedules based on prior equipment maintenance history, maintenance standards for individual assets, inspection times, technician availability, equipment location and production downtime. Keeping these factors in mind ensures optimal maintenance with minimal operations disruption.

6. Monitor Costs, Performance and Other KPIs and Adjust as Needed

Once in place for several months, PMs should be monitored by evaluating associated cost/benefit effects. While keeping in mind that results may vary depending on conditions or changes within the company's activities, maintenance managers may choose to adjust PMs as needed with the goal of further improving overall operations efficiency.

The overall goal of preventative maintenance is to improve operations functioning by reducing equipment failure and prolonging their lifespans. CMMS driven preventative maintenance software are designed to meet this challenge through customized scheduled maintenance that offers uninterrupted manufacturing runs resulting in increased productivity. By taking into account technician availability, equipment location and operations downtimes, PMs can be conducted cost effectively because maintenance technicians can be deployed strategically within a facility. Overall, increased product quality as well as decreased capital expenditures means increased profits and a greater ROI. All factors considered, it is easy to understand why an increasing number of companies are turning toward CMMSs as their maintenance management solution.

