Measuring ROI for a
Asset Maintenance Management System:
A TradeTec Whitepaper

In today's business environment, it is no longer practical to manage your company's assets by simply jotting notes on a clipboard, saving receipts or manuals in a file or even entering them into an Excel spreadsheet for that matter. Asset management is now a vital, critical component in every business with an important contribution to the bottom line. So, how do you design and measure proper asset management ROI? Let's start by looking at the challenges.

Today's Business Challenges

Business Communication

In today's business environment inter-departmental efficiencies are vital, especially for the maintenance department. Keeping on top of maintenance proactively ensures smooth and profitable operations. To achieve this, a business must communicate. Centralized communications is a key component not just for voice but for assets as well. Assets that communicate their health are assets that are better maintained. Today's world of embedded computers allows for monitoring all facets of an asset's health providing unsurpassed proactive maintenance scheduling.

Visibility

"Out of sight out of mind". Indecision usually stems from lack of visibility. If we are unable to visualize a process we are unlikely to assess it. Visibility of assets falls directly under this. If we don't see it it's not going to get fixed. The reality is it's so much more than that. Respecting the responsibilities of others while we process our own is a cornerstone of efficiency. It simply cannot be done without a reliable easy to use visual system. The gain in being able to think collectively is incalculable. Without visibility we are left to guesswork and indecision. Little or no work gets done by comparison.

Record Keeping

The "need to know" has never been more vital. Good communications demands excellent record keeping. A centralized data warehouse accessible by all employees allows knowledge to be shared across all users. Fingertip access to historical records and scheduling brings twenty first century knowledge to the forefront in your operation. The sharing of this data means people can be informed without suffering the possible embarrassment of not knowing. Despite the technological gains we have made over the millennia we are still being told "Don't be afraid to ask". People just plane don't ask. Our new generations are being brought up with computers and they know how to use them. But they are more afraid to ask than any generation before them. We must provide them with the means to excel and excellent record keeping both demands this and delivers.

Compliance

Outside governing bodies such as Occupational Safety and Health Administration (OSHA) and Insurance companies both for assets and Employee Benefits are becoming more and more demanding. Photographs, Inspection reports even video recording are not enough to satisfy their demands when they are called on site after an incident or general inspection. Companies that have a clear progressive and provable compliance system are rewarded beyond just monetary savings but also with less frequent inspections. Excellent record keeping demands a system that is easy. Without the ease of use of a record keeping system our compliance objectives will fail.

Asset Management

Seems like a relatively easy thing keeping our ducks in a row. Turns out it's more like herding cats. What's first, what's last, when, why, forecasting, history, compliance, depreciation, procurement, inventory to name a few. It's daunting especially when

things start to go astray. Workers look to management for directions and key decisions that without clean reliable data are a guess at best. Top performing companies don't guess. Effective asset management must rely on effective data to effectively manage the people that ultimately are going to make the difference between profit and loss. You can't afford to have your maintenance supervisor lost in indecision. What happens if you lose any of your key people to accident or illness? Your systems need to be able to efficiently get new staff up and running quickly. That's the sign of good management, a clear desk and everything humming.

Maintenance Scheduling

"The squeaky wheel gets the grease". This is so often the scheduling system that faces most mills. As owners we all know this is a poor way to run an efficient company. Without a system to hold people accountable for preventative maintenance we end up back to the squeaky wheel. Being able to have a bird's eye view of our mill and what is scheduled and by whom is not enough. We need an accountability system. One that brings to the attention of managers and owners what is getting done, what has been done and by whom. If people know they are being tracked and are being held accountable for it they will self-regulate. No one wants to risk their job and so they will go the extra mile when they know it's going to make a visual difference. Visibility is key in a scheduling system. It's not enough to know what needs to be done today, but also what's coming up. That's the extra mile.

Depreciation

For all of us in the Forest Industry depreciation is an annual challenge. Knowing, understanding and properly calculating depreciation is best left to expensive accountants. When it comes to year end, the task of reporting our assets to accountants is our job, and almost always left to the last minute which never helps the accountant and always adds more cost and pain. A Reliable, easy to use record keeping system minimizes this cost turning it from pain to pleasure. We all know depreciation is necessary to minimize tax, however that mountain of paperwork tracking down each asset in addition to our regular workday seems to blur the tax advantage. Effective, efficient record keeping removes the obstacles.

Procurement

In past times, all purchases were initiated by the purchasing or procurement department. Today's business needs allow many purchases under a specified dollar

amount to be initiated by a department manager and in many cases, purchased with a company credit card, not a check. This procurement structure is extremely convenient but creates financial and inventory challenges if all purchases are not part of a centralized asset management system. Approvals need to be made on larger capital expenses and we need to know where and when products arrive to ensure vendors don't create downtime.

Inter Departmental Assessments

Many departments touch each and every asset your company owns or leases:

Finance needs to know the original purchase cost and the expected depreciation value of the asset.

Procurement needs to know what vendor the asset was purchased from and the cost. It also needs documentation of the asset including a copy of the invoice and pictures.

Plant operations needs to know the location of the asset, the maintenance schedule and the projected maintenance cost. They also need a written maintenance record in the event the assigned technician transferred to another department or leaves the company.

OSHA needs to know when and how often the asset was maintained along with proper records to support it. It also needs to know the how the asset is maintained, proof of the last maintenance and the maintenance technician specifically assigned to the asset. This is also important in the event an insurance claim needs to be filed.

IT needs to know the make, model and serial number to provide any needed support.

Key Performance Indicators

When implementing a CMMS, there are a large number of important data considerations to follow, including:

How is the information collected and what information is mandatory to record?

Is the information collected manually and later entered into the system or are mobile devices employed that make data capture and entry simpler and more efficient?

Who can access all or parts of the information?

Can automatic alerts be setup to notify the right person at the right time when a maintenance task is necessary?

Can real-time monitoring of the asset be implemented to issue an alert when the asset is performing outside of the required parameters?-

Who can change or update the information as well as who can prioritize the order of which works requests are completed?

Is the system easy to implement and use for the non-technical user? Can reports be easily generated?

Have best practices on using the system been developed and conveyed in writing to all users?

What are the critical success factors of the CMMS including streamlining the scheduling process to save X amount of time, optimizing asset performance and ensuring each asset reach the manufacturer-listed lifespan?

Benefits

Why have an Automated System?

As was mentioned earlier, today's business world makes it impractical to use written records as your maintenance system. Today's modern system are based on automating your system to ensure that all tasks are listed, assigned to the proper individual and monitored to ensure proper and timely maintenance is performed.

So what needs to be part of your automated system?

Dashboards: one quick, easy-to-interpret view of your entire asset management system including new assets, assets scheduled for maintenance, asset location and much more.

Reporting: Standard, scheduled reports or ad hoc, on-the-fly reports providing management with all of the information they require to assess the financial health of company assets, including repair costs and planning for future capital investment expenditures. This allows for tracking maintenance costs and comparing them against budget.

Work Orders: No longer do you need to remember to allocate which job to which person and what steps to take to ensure proper maintenance. Additionally, costs are known for each work order.

Inventory / Procurement: Running out of a key repair component can cause not only expensive purchasing and shipping costs but also can shut down operations

waiting on that component. Never be caught short or overstocked for that matter on key components necessary for proper company operations.

QR Coding: Imagine every fixed asset having an easy-to-access QR code allowing the technician to quickly identify the proper asset and quickly entering the required information before moving on to the next asset. This makes capturing important information like usage as quickly as sending a text message.

Maintenance Management: Prevent issues before they occur. Know when parts needs to be replaced and when repairs are due.

Spare Parts Inventory Management: Know the exact description and quantity of every repair item in your organization, reducing the cost of carrying excess inventory while making sure necessary parts are never out of stock, shutting down production.

Bonus Benefits of CMMS

Remember that the goal of a CMMS is not only fixing things that need repair but as importantly preventing those assets from breaking down in the first place. Every company has limited resources, be it financial, manpower or time. Most companies are structured to always consider the financial ROI when measuring the costs and benefits of investing in any new systems. What few companies fail to measure are four other important factors that impact the bottom line:

Decrease in the time needed to complete a task

Increasing productivity

Preventing equipment breakdown

Making sure regulatory compliance is both followed and is documented. Imagine running an on-demand report when the OSHA inspector arrives for a surprise inspection.

Factors Determining ROI

Justifying the Purchase of a CMMS

Experts say that a computerized maintenance management system (CMMS) can help an organization save between 10-15% of their annual maintenance budget. For an operation with a budget as small as $500,000, that can amount to real savings of $50,000 to $75,000 annually. Depending upon your operation, the investment payback period of a CMMS system should be 12 months or less.

Downtime = Lost Revenue

Today's lumber mills vary in their operating costs, mainly due to the size of the mill and the technology employed. Costs can range from as low as $4.50 per minute to over $20.00 per minute or more. With an average mill running at roughly $12.00 per minute, adding a 10% profit margin reveals operating income of $13.20 per minute. Preventing even a modest 2 hour downtime each month preserves almost $1600 per in operating income. This does not take into account the cost of additional overtime. This amounts to at least $19,000 annually in lost productivity.

Equipment Efficiency

It is vital that all assets involved in producing the finished product be running at maximum capacity and maximum efficiency. In a mill cutting 120,000 board-feet per day, reducing sawing variation can save up to $500,000 in lumber per year which would otherwise be wasted.

Energy Savings

Another overlooked cost area in any facility is energy. Depending upon the facility, utilities can amount to 25% of operating costs. A simple example is properly maintaining the HVAC system. A well maintained system can reduce costs by 15 - 20%. Based on the average mill running at $12.00 as noted above for 8 hours a day, 260 days a year, 15% savings can amount to almost $57,000 in annual savings.

<u>Summary</u>

We have discussed the new importance of an automated Asset Management System. Companies of all sizes need to measure the impact of lost revenue by either not maintaining equipment under a proper schedule or the downtime incurred when important repair components are not readily available. Be it a million dollar piece of equipment or a simple fire extinguisher, any company needs to know the quantity, location, cost and inventory of any asset. Without this critical and easy-to-access information, searching for information in a legacy paper system or excel spreadsheet is both time consuming as well as inefficient in today's digital, need-to-know now information environment.