THE ROLE OF MAINTENANCE IN ASSET MANAGEMENT

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If your organization calculates return on fixed assets, you should be aware of the impact maintenance has on that indicator.

The investment a company makes in its assets often is measured against the profits the company generates. This measure is called *return on fixed assets* (ROFA). This indicator is often used in strategic planning when a company picks what facility to occupy or the plant in which to produce a product.

Asset management focuses on achieving the lowest total life-cycle cost to produce a product or provide a service. The goal is to have a higher ROFA than your competitor, to be the low-cost producer of a product or service. A company in this position attracts customers and ensures greater market share. Also, a higher ROFA will attract investors to a company, ensuring a sound financial base on which to build further business.

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It is the responsibility of all departments or functions within a company to measure and control their costs, since they ultimately will impact the ROFA calculation. It is only when all departments or functions within a company work together that the maximum ROFA is achieved. However, it is beyond the scope of this article to deal with all those areas in detail. So, the maintenance function is the focus here.

Maintenance and Asset Management

In what ways does maintenance management impact the ROFA calculation? There are two indicators that may be used to show the impact:

Maintenance costs as a percentage of total process, production, or manufacturing costs. This indicator is an accurate measure for the costs of manufacturing and should be used as a total calculation, not a per-production-unit calculation. Maintenance will be a percentage of the cost to produce, but is generally fixed. This stability makes the indicator more accurate for the financial measure of maintenance, since it makes trending maintenance costs easier. If the maintenance cost percentage fluctuates, then the efficiency and effectiveness of maintenance should be examined to find the cause of the change.

Maintenance cost per square foot maintained. This indicator compares the maintenance costs to the total amount of floor space in a facility. This is an accurate measure for facilities because the cost is also usually stable. This indicator, too, is easy to use to trend any increases over time. If the percentage of maintenance costs fluctuates, then the efficiency and effectiveness of maintenance should be examined to find the cause of the change.

These two indicators show that traditional maintenance labor and material costs will have an impact on the ROFA. However, ensuring the equipment or assets are available can also have an impact. So, there are two main areas to examine: 1) maintenance costs and 2) equipment or facility availability.

Maintenance Costs — Labor

Maintenance productivity in most companies with reactive maintenance policies averages between 25% and 35%. These percentages translate into less than 3 hours per 8 hour shift of hands-on activities. Most of the lost maintenance productivity can be categorized into the following kinds of delays:

- Waiting for parts.
- Waiting for information, drawings, instructions, etc.
- Waiting for equipment to be shut down.
- Waiting for rental equipment.
- Waiting for other crafts to finish their part of the job.
- Running from emergency to emergency.

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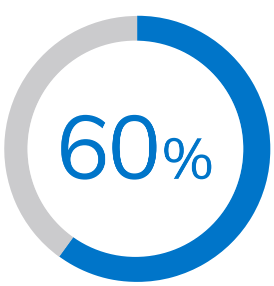

The productivity of maintenance technicians can be improved by concentrating on basic management techniques, such as:

- Planning jobs in advance.
- Scheduling jobs and coordinating schedules with operations or facilities.
- Arranging for parts to be ready.
- Coordinating the tools, rental equipment, etc.
- Reducing the emergency work to below 50% (measured by work orders).

With computer assistance, planning time per job is reduced, resulting in more planned and coordinated jobs. This results in more time for preventive maintenance activities, which in turn helps to reduce the amount of emergency and breakdown activities. The results are fewer schedule changes and increased productivity (by reducing travel and waiting times). Organizations that are successful in achieving good maintenance labor controls experience significant increases in labor productivity.

Maintenance Costs — Materials

Material costs are related to the frequency and size of the repairs made to the company's assets. The sheer number of parts, in addition to stores policies, purchasing policies, and overall inventory management practices contribute to overall costs of maintenance materials. In some companies, little attention is paid to maintenance materials, and inventories may be higher than necessary by 20% or 30%. This increases inventory holding costs and makes materials unnecessarily expensive. Sometimes, the inability of stores to service the maintenance department's needs results in "pirate" or "illegal" storage depots of 'lust-in-case" spares. This practice also drives up the cost of maintenance materials.

Good inventory controls enable companies to lower the value of the inventory and still maintain a service level of at least 95%. Such levels enable maintenance departments to be responsive to the operations or facilities groups, while increasing their own personal productivity. Organizations that are successful in managing their maintenance inventories typically average 19% lower material costs and an overall 18% reduction in total inventory compared to companies that have not focused on this area.

Equipment or Facility Availability

Consideration of equipment or facility availability reveals the connection between asset management and maintenance management. Downtime cost for equipment may vary from several hundreds of dollars per hour to literally hundreds of thousands of dollars per hour. These costs are due to lost production from assets and/or lost or reduced efficiency (or occupancy) of a facility. In some companies, levels of downtime run beyond 30%. Such levels result in lost sales opportunities and unnecessary expenditures for capital equipment. In general, the organization is in a weak competitive position.

By committing the organization to good maintenance policies and practices and using its computerized maintenance management system as a tracking tool, management can reduce equipment downtime. The result is more throughput, and more throughput enables the company to get more products or services from its assets, resulting in lower production costs and a higher ROFA.

Maintenance and ROFA

To learn more about the role of maintenance in asset management, contact us today!

If asset management is a focus for your organization, it is possible for the maintenance function to contribute to overall plant profitability. While it takes cooperation and focus of all departments and functions within an organization to be successful, the maintenance department can have a dramatic positive impact on ROFA.

Since maintenance is typically viewed as an expense, any maintenance savings can be viewed as directly contributing to profits. By achieving maximum availability from equipment, a plant or facilities manager ensures that a company does not need to invest in excess assets to produce its products or provide its services. This result is a good indication that a company is truly managing its assets.