

Just what is World Class Maintenance?

Written by MT Staff

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We often freely brandish the term “world class” around without a true comprehension as to what it really means. In my opinion, world class maintenance organizations are those that consistently demonstrate industry best practices and produce bottom-line results as well. The later part of that statement, “produce bottom-line results,” is what separates the best from the rest.

I believe it is possible to have a world class maintenance organization without paying through the nose to achieve it. Several years ago, I would send clients to benchmark an organization that had long been recognized as world class amongst its peers.

Closer examination showed that this company’s maintenance costs were high as compared to the estimated replacement value (ERV) of the assets being maintained. On top of this, the organization had a large amount of spare or redundant equipment which increased uptime but lowered the return from its assets. I stopped sending clients to this location because it was not encouraging cost reduction through efficiency gains.

One of the advantages of tracking financial ratios such as RONA (return on net assets) and ROCE (return on capital employed) is that it begins to show how efficient we are with generating returns from our asset pool.

RONA is a measure of financial performance expressed as $RONA = \text{net income} \div (\text{fixed assets} + \text{net working capital})$.

The higher the return (RONA), the better the profit margin performance for the company. In other words, we return greater margins when we can produce more with less. This is similar to increasing inventory turn rates so we become more efficient with smaller amounts of inventory.

ROCE is a ratio that indicates the efficiency and profitability of a company’s capital investments expressed as $ROCE = \text{EBIT} \div (\text{total assets} - \text{current liabilities})$, where EBIT stands for earnings before interest and tax.

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Obviously, ROCE, the efficiency with which capital is being utilized to generate revenue, should always be higher than the rate at which the company can borrow additional capital.

If we understand that our mission in maintenance is to ensure maximum capacity, we also should be aware that it is ensuring the right mix of assets to do the job. In other words, it is not enough to ensure availability, we also should be looking at utilization and returns from each asset. The problem is that we often look at groups of equipment and rarely focus on individual equipment profit and loss.

For example, perhaps we have several of the same type of equipment, say, 15 rubber-tire backhoes used in our construction business. Now, when we examine the asset utilization of the group, we notice that it is 51 percent. However, when we examine the asset utilization for each one, we can see that there is a range from 10 to 85 percent. We further find that three are primarily used for stand-by (10 percent) while four are worked very hard (85 percent). Now, if we sell the bottom three and focus on improving the utilization and coordination of the remaining 12, or renting the three when needed, we can produce the same level of output or more with fewer units.

By reducing the amount of equipment we also lower the overhead to support that equipment. Our ownership cost per unit goes down while our return per asset go up.

The problem I found is that few companies are actually looking at the bottom line of each piece of equipment. We assume that if we are spending more money on preventive maintenance and condition monitoring, we are doing an good job in reducing costs to the organization. But annual maintenance costs seem to escalate unless management constantly reviews buy-sell-lease options and measures the costs and returns of all assets.

Part of the answer lies with doing good maintenance but the remainder of the answer lies with the efficient examination of profit and loss by equipment piece. Ultimately, we should ask "just how much does this equipment return to our organization and is that the best we can do?"

Most companies see maintenance as merely the function or activities that service and keep the equipment functional.

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Maintenance can be seen as more than a necessary evil when it talks the financial language of those who make the final decisions about the fate of maintenance. We then move from simply maintaining assets to managing those assets.— [Preston Ingalls](#)