

Strategic Advantages

The Management Level Newsletter for Maintenance Professionals Around the World.

Short-Term Scheduling—A Dying Art

During the past ten years in particular I have noted what appears to be a surprising lack of attention to short term scheduling. In many organizations planners and schedulers have been the victims of cost cutting, in some organizations they never existed at all!

When they are removed from an organization it is generally due to a lack of concrete understanding of exactly what it is that this function provides in terms of supporting the corporate goals and mission.

In extreme cases companies manage their maintenance by producing a long list of tasks to be done within a long time frame, usually between 3 months and a year, and the supervisor is given these to manage as they see fit.

There are two functions that short term scheduling fills within the administration of physical assets:

1. Firstly ensuring that maintenance strategy is executed at the precise time that it should be and
2. Increasing the efficiency in execution of planned maintenance tasks by the elimination of waste in terms of time and materials

Timing for Maintenance Strategy

Each of the areas here is complex and requires some additional explanation for those new to the concepts, however for the sake of space they will be summarized here.

Predictive Maintenance Tasks

Predictive maintenance is timed to look for warning signs that a piece of equip-

ment is about to fail. These may be in terms of increased heat on a high tension electricity joint, increased levels of particles of certain types in oil samples or increases in vibration on rotating equipment for example.

In each of these cases the ability to accurately predict the coming failure of components or equipment is determined by the frequency in which these tasks are executed.

Programmed Overhauls and Replacements

Programmed overhauls and replacements are applied to components or parts that are more likely to fail as they get older. That is to say they are programmed interventions designed to restore the equipment or component to an almost new state. (Thus resetting the clock)

Fault Finding Tasks

The last of the major maintenance policy decisions. Fault finding tasks are programmed inspections not to see if something is ready to fail, rather to see if it has failed. An example of this would be the regular testing of trip functionalities on electricity circuit breakers.

The frequency of such tasks are determined through calculating the probabilities of failure as well as other relevant factors. When we exceed this frequency we are reducing the level of assurance that we have that the equipment, whatever it may be, will work when it is required to work.

Timing for Administrative Efficiency

When combined with adequate planning short term scheduling will reduce the waste that can be found in almost every maintenance effort throughout the world. Some examples of waste in these areas include:

- Waiting for parts
- Waiting for equipment
- Waiting for labor

Short term scheduling provides the logistical preparation to either eliminate or substantially reduce these areas of waste.

It is also the driver of high levels of human resource utilization through application of advanced scheduling techniques such as capacity scheduling and other such measures.

Conclusion

The elimination, or lack of inclusion, of the short term scheduling function within organizations can have consequences that are both dangerous and costly.

Even in small operations there are advantages to a controlled and directed process of short term scheduling. However as the scale of the operations grows so do the potential consequences of not having short term scheduling as a part of the overall management plan for the administration of physical assets.

A New Argument Against Outsourcing

Outsourcing is generally one of the solutions put forward by the latest consulting witchdoctor who is trying to assist a corporation to save money on direct costs of asset management.

Although I have now seen numerous maintenance outsourcing contracts in place, in numerous countries around the world, I have yet to see quantifiable proof of this statement. Where there are cost benefits they need to be measured alongside the trade offs that will have been made to achieve such savings.

Trade-offs such as the economic focus of the contractor being different to that of the asset owner, trade-offs in terms of differing work cultures when there has been an integrated approach and also trade-offs in terms of who owns the asset knowledge base. No amount of contractual maneuvering, nor processes can change the fact that when contractors do work, they learn about the assets. (While the asset owner does not)

It is my opinion that the claim to reduce maintenance costs is at best dubious. However as can clearly be seen by recent history, there are other factors which need to be taken into account in the areas of asset management.

In 2003 there were 6 people charged with manslaughter in the united kingdom as a result of a train disaster. All of these people were those responsible for either the management of or the maintenance of the rail track lines that were found to

be at the heart of this fault. One of those people originally charged was the ex-CEO of the company responsible for the stewardship of the assets.

This has raised yet another issue in the field of asset management. It is becoming clear that in the future those responsible for the stewardship of physical assets will be held accountable for their failure, and it will most likely be individuals rather than companies.

This has some dramatic implications for outsourced maintenance solutions. Although you may be able to delegate the responsibility for maintaining physical assets, there is no form of delegating the ramifications of the consequences of the failure of those assets.

In other terms those responsible for the stewardship of the asset base, the company that owns and/or operates them, has an inherent accountability to ensure their continued safe operation.

Does this mean an end to outsourcing of physical asset management functions? Probably not. As with many unpopular trends many will try not to hear the message. However there have already been large scale moves to bring previously outsourced maintenance functions back in-house in some large corporations around the world.

However for those clinging to the vision that this will reduce their direct maintenance costs there are a few items that they will need to keep control over.

Firstly there is a need to control what maintenance is done on the asset base. As we are now all aware over-maintenance is as dangerous to equipment as is under maintenance. In some cases more so. Not only that but only a handful of maintenance tasks that are generally done are actually achieving anything useful.

Therefore it is the direct accountability of the asset owners to ensure that the correct maintenance is being done to preserve the functions of their assets in a cost effective manner.

Secondly there is also the matter of ensuring that maintenance tasks are done at exactly the time that they should be done, as per maintenance policy decisions, and in exactly the correct manner.

In short asset owners will need to retain control over both **doing the right job** and **doing the job right**. The two cornerstones of an effective asset management approach.

There is an article on the website www.strategic-advantages.com that goes into some further detail regarding the ramifications of this event on the world of physical asset management. It is called "The Strategic Importance of Asset Management"

Strategic Advantages is a management level newsletter distributed monthly to a broad international subscriber base. It is dedicated to assisting asset management professionals in identifying areas of potential strategic advantages within their maintenance and reliability operations. To receive this newsletter in your email every month please send an email to newsletter@strategic-advantages.com

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