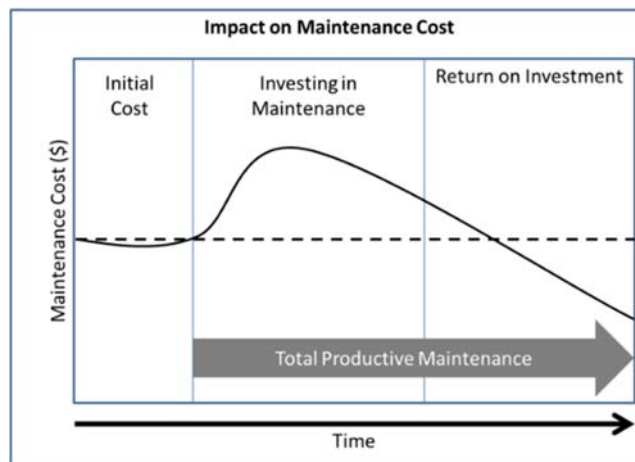
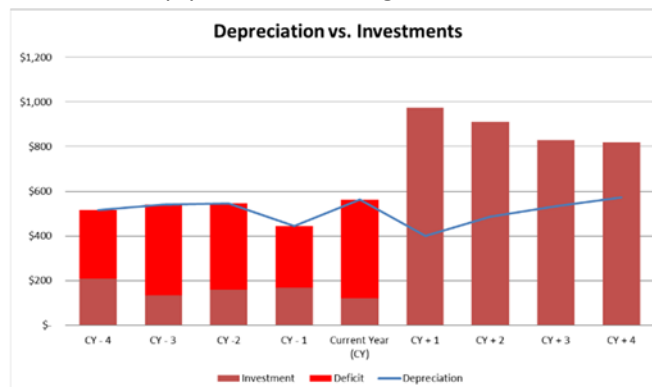


Equipment Performance Part 7

In last month's newsletter, we discussed the different types of maintenance strategies seen in businesses. This month, we will start our discussion with what it takes to develop a world-class maintenance strategy. When a company decides to implement a truly effective maintenance strategy, it doesn't come cheaply. The graph below shows that there is a substantial increase in maintenance costs in the beginning. However, one can expect the cost to drop below the original cost over time.

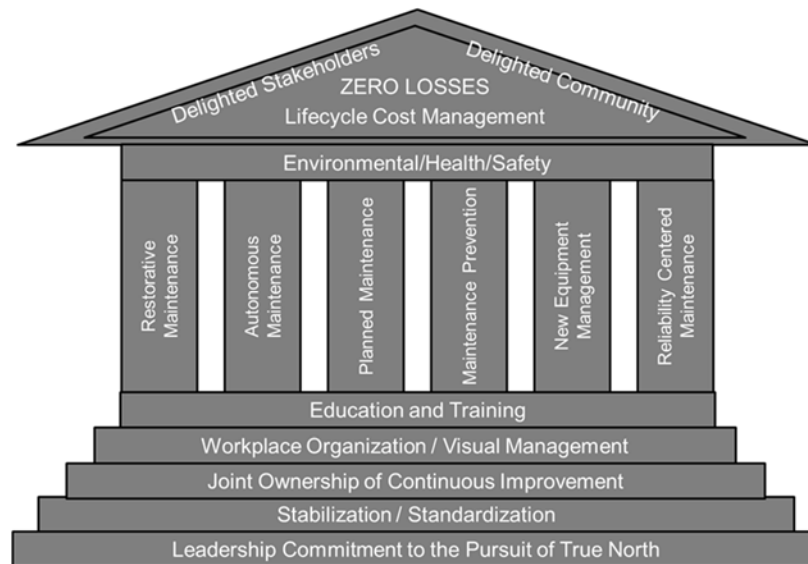


The problem we see most often is that companies stop the investment of time and money before they see the true impact of the work being done. The challenge is to stay with the plan and reap the rewards. Another phenomenon we see is the under-investment in companies that have been "propped up" for sale. Leading up to the point of advertising the company for sale, we see deep cuts in the maintenance investment. This is very short-sighted and requires the new owner to not only bring some of the assets up to current status but also to continue the ongoing maintenance required to keep any future assets from deteriorating. The chart below shows the cycle that is typically seen in companies that have been "propped up" for sale or simply have a short-sighted view of the business.



In the case above, the company stopped investing over the last five years. The depreciation is steady since the assets haven't been fully amortized. If this company isn't for sale, we would assume the company is not growing; it is dying. The current owners are simply "riding out the goose" until all of the golden eggs are gone. Our plan should be to preserve the goose for the current owners as well as any owners in the future.

There are two overarching frameworks that we will use to describe the work it takes to become world-class. Those frameworks are Drive's version of the TPM House and The Reliability Pyramid. The TPM house is shown below:



The ultimate goal (True North) of our maintenance strategy is zero losses. Zero losses mean we will have no losses due to downtime, running at a slower rate, or quality rejects from our equipment. The results of this would be delighted customers, delighted community, optimal lifecycle cost, and no environmental / health /safety impact. These are shown at the top of the TPM house since everything we do around TPM is to support this direction.

The pillars and a brief description of each are below:

Restorative Maintenance:

Bring the equipment back to a new or better-than-new baseline.

Autonomous Maintenance:

Involve the operators of the equipment in the foundational maintenance (clean, inspect, lubricate, tighten/adjust) of the equipment.

Planned Maintenance:

Create a robust preventative maintenance program, including predictive maintenance.

Maintenance Prevention:

Use improved technology to reduce or eliminate all forms of maintenance activity by ensuring that the design of the equipment enables standard maintenance practices to be performed faster, cheaper, and more effectively.

New Equipment Management:

With a cross-functional team, create general delivery specifications (GDS), Process Failure Mode and Effects Analysis (pFMEA), and conduct equipment runoffs while also quickly integrating the new equipment into our asset management programs and systems.

Reliability Centered Maintenance:

With a cross-functional team, consider the function of the equipment, what failures may occur, and what can be done to prevent those failures. Typically utilizes Machine Failure Mode and Effects Analysis (mFMEA).

In order for a true TPM approach to work, we must have leadership that is supportive of working toward True North. This support must be shown by providing the necessary resources at the start of the initiative and all along the journey. The leadership must also remove any barriers the team may have during the implementation of the strategy. Adding resources and removing barriers is how the leadership team can demonstrate true support. Otherwise, it turns into “make it happen with what you have,” which only frustrates the team and eventually ends the journey.

All efforts should be made to stabilize and standardize the processes as we move in the direction of True North. In addition to leadership owning and supporting the journey, ownership of the journey must also cost by maintenance, manufacturing, engineering, quality, purchasing, etc. We must also instill a culture of cleanliness and orderliness and make it easy to see what should be happening versus what is actually happening. And finally, everyone must be trained in the new tenants of TPM.

Is your business willing to invest in your maintenance program to ensure it is world-class? Have your assets been underinvested due to short-term thinking? Is your company “really” doing TPM or simply following the easiest pillars? Next month, we will continue our discussion around preventive maintenance strategies.

If your organization wants to improve uptime and Return on Net Assets (RONA), Drive can help. We have a team of proven experts on improving business performance as well as implementing world-class maintenance strategies. For a no-obligation introduction meeting, please contact Paul Eakle at paul.eakle@driveinc.com or 865-323-3491.

