eGuide

6 big challenges faced by Maintenance Managers in North America in 2021, and how to overcome them in 2022

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Maintenance Managers across the world are faced with a huge variety of challenges every day, with the Covid-19 pandemic adding a whole new layer of setbacks and issues to deal with.

Many of these challenges can significantly impact the effectiveness of maintenance programs, reduce production, and risk the safety of their team. And while there are similar challenges across the globe, we want to focus on the key issues faced by maintenance teams in North America.

Susan Steyn, Vice President of the US and Canada Add Energy offices, shares 6 of the biggest issues she has identified while working with maintenance teams across this region, and offers tips on how best to overcome them and improve maintenance and inspection programs.

Challenge 1

Creating a culture of teamwork and shared responsibility

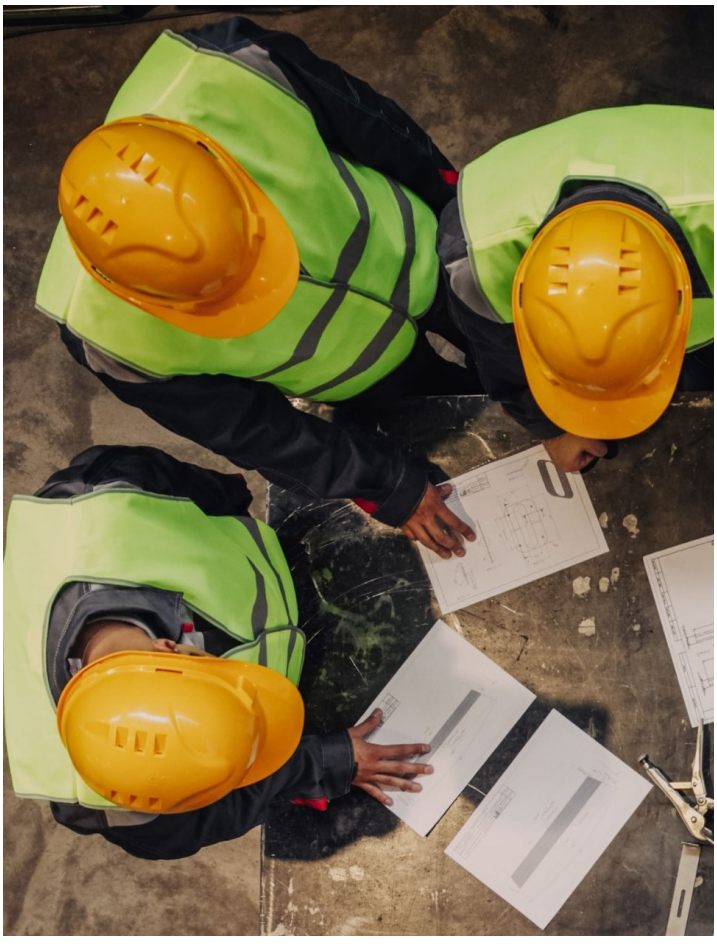
"We all know **it takes teamwork to effectively manage and run a group of assets**, but a huge challenge I have witnessed is when maintenance teams are working within embedded functional silos (e.g. maintenance, operations, engineering), that reflect the historical culture of the plant.

"In other parts of the world, teamwork is a high priority and a valued trait, and is regularly recognized and rewarded. But what I have seen in the US is a long history of operations being separate from maintenance, which results in a lack of communication, shared learning, inefficient use of resources, and ultimately higher maintenance and inspection costs.

"With social distancing measures now in place, many facilities are reducing the number of people on-site, meaning staff who can work from home are adjusting to a new way of operating whilst being expected to keep work functioning at the same level as before. This new way of working can be very isolating and can make teamwork difficult."

TIPS AND CONSIDERATIONS

- Every plant needs a rally point to tear down silos - a reduction in OPEX or an increase in stream time usually works
- Take the time to understand the issues experienced by both silos when working together previously, and **construct joint team building sessions to work through those issues together** - in person where possible or via video conferencing
- Change the way business is done by instituting new lines of communications and inviting members of all silos to participate in necessary planning sessions
- And most importantly, get senior-level buy-in by instituting a legitimate and generous recognition and rewards program to boost morale during trying times



Challenge 2

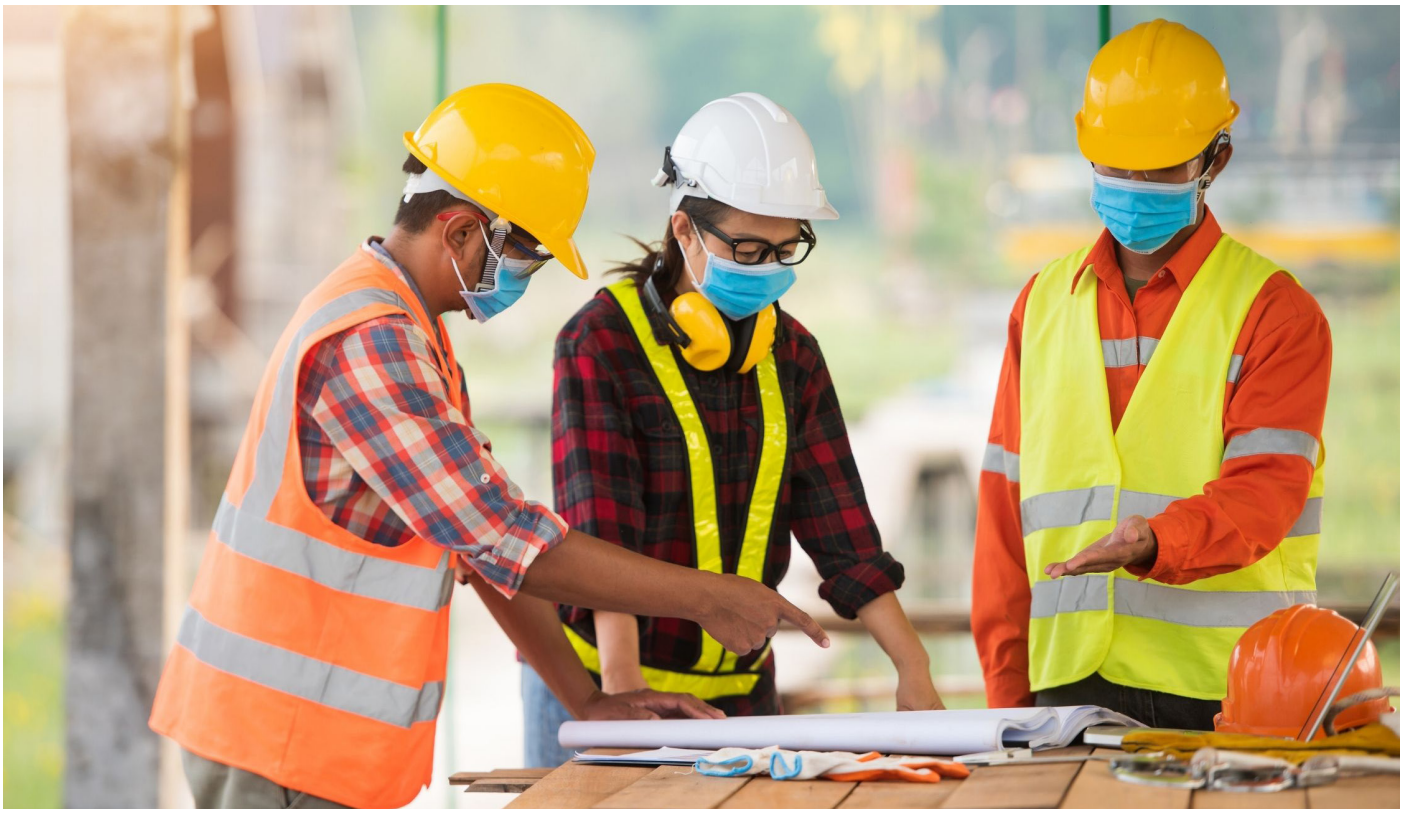
Implementing effective Covid-19 contingency planning

"Throughout Covid-19, we have seen many companies go through redundancy processes, which has resulted in lack of resources. **Organizations are now required to do more with less people**, putting added strain on maintenance teams, with workers now wearing multiple hats and taking on more responsibilities.

"Getting workers on site and offshore has become a big challenge due to time consuming quarantine periods, expensive testing kits and vaccination guidelines. If employees are to catch Covid-19, they will then have to isolate for 7-10 days, meaning the company can't bill them throughout this period. This becomes a larger challenge when the employee who is unbillable in isolation has a certain skill set that is difficult to replace in the short term."

TIPS AND CONSIDERATIONS

- Efficiently **cross-train workers** from the beginning, so when the time comes, they can execute different responsibilities with ease rather than feeling overwhelmed
- Adapt to Covid-19 related issues by implementing contingency planning into the project scope from the beginning, rather than dealing with problems as they arise
- Have **contingency workers** who can step in when inevitable Covid-19 related issues arise, such as isolation periods and testing



Challenge 3

Getting the most out of your CMMS

"The sole role of the CMMS (computerized maintenance management system) is to provide teams with accurate and up-to-date information, to enable them to make the best decisions possible.

"**I typically see two extremes of CMMS users:**

1. The plant with missing, inaccurate and inconsistent data, which forces the maintenance team to spend a great deal of time on hardcopy reports and spreadsheets. Reporting to management can also be late, and data can be out of date.
2. The site whose CMMS is accurate, consistently well-populated and maintained, with clear ownership and accountabilities. In this scenario, the trained maintenance team is wasting no time with manual reporting or planning, and the CMMS is used to gain helpful insights to make their work more effective and streamlined, and can be accessed in real-time.

"In my experience, most maintenance teams in North America seem to fall in the first group. The reason is simple - it takes a lot of hard work, dedication and monetary resources to have a successful program, especially if it's an older site. It is particularly important in the Covid-19 environment to have an accurate CMMS as companies are trying to do more with less people, while also adhering to onsite social distancing restrictions.

"At the end of the day, **your CMMS is only as good as the data that you put into it.** It's like any other tool; you must maintain it and make sure that the data you're putting into it is validated and correct. And there are a few simple things you can do to ensure this..."

TIPS AND CONSIDERATIONS

- Conduct a **site-wide physical asset verification (PAV) to ensure the data in your CMMS is correct.** Using electronic tools like our ePAV™ software helps to complete PAVs faster and also requires less manpower, which will in turn help to adhere to any social distancing regulations
- Give ownership of the program to a single individual with senior management support and funding
- Implement a cloud-based collaborative master data build software such as Effio™ which will allow functional location hierarchy development, visualization and trackability of data
- Don't accept one-off spreadsheets for reports. Always depend on the accuracy of the CMMS, and insist on using that data
- Invite the wider team to attend user group meetings hosted by the CMMS software provider, whether these are in person or online eLearning courses to learn about the latest releases and to share experiences and learnings
- Track success through appropriate KPIs, and always look for ways to improve
- Look into **transforming your workflow digitization** which will in turn allow you to do more with less people

Challenge 4

Managing the costs of aging assets

"As an asset begins to age, a significant challenge Maintenance Managers face is ensuring they spend the optimum level of expense money (OPEX), at the right time, to maintain the highest level of integrity and reliability that ensures continuous production and the safe operation of the facility.

"Ultimately, **you want to be efficient, but you need to spend the right amount of money to achieve this level of integrity and reliability** - which can be a difficult balance to achieve. And I have found time after time that maintenance teams tend to overspend their allocated maintenance budget, because they don't have a clear understanding of the relative risk associated with the failure of their equipment.

"The key to overcoming this challenge requires not only assessing the risk associated with each element of the plant, but also determining how these risk rankings come together to form the basis of your planned maintenance and inspection programs."

TIPS AND CONSIDERATIONS

- Have a clear and well understood RACI (Responsible, Accountable, Consulted and Informed) program in place, so that the right level of management is making the decisions for expensive corrective work
- Aging assets all have repair histories that can be trended. Look at those trends to help determine the next inspection or planned maintenance
- Ask the manufacturers for a list of other companies that have the same equipment at a similar age and in similar service, and then contact these companies for additional insight
- Be aware that when you operate outside the stated integrity operating window (IOW), your inspection and planned maintenance intervals will no longer be applicable. If your plant operates outside of these IOWs, risk will usually be heightened, and inspection intervals need to be shortened

Challenge 5

Shifting the balance from corrective to planned maintenance

"When a plant does nothing but corrective or reactive maintenance, I often see teams losing sight of the bigger picture - which is to perform proper planned maintenance to avoid such breakdowns. And these unexpected shutdowns can often result in blown budgets and missed production targets.

"Frustratingly, **it can seem almost impossible to get ahead of the backlog in order to become more proactive** and implement a planned and risk-based preventative maintenance program.

"But the words of Peter Drucker, the famous management consultant and author - *'What gets measured gets managed'* - are incredibly important when it comes to maintenance. And measurement is often the missing piece of the puzzle, that can slowly but surely help maintenance teams make that change.

"It's like running long distance - if you don't know what your time is each time, then you don't know if you're getting better or worse.

"**Continuous performance measurement is absolutely key to knowing if you're working on the right maintenance, following your plan, and achieving your budget,** and will help you make that shift from a predominantly corrective and reactive maintenance plan, to a more planned and proactive plan."

TIPS AND CONSIDERATIONS

→ **Risk assess all rotating and fixed plant equipment with solid risk-based inspection (RBI) and reliability-centered maintenance (RCM) programs**

"By doing this, you will be able to set your inspection and planned maintenance intervals accordingly."

→ **Track and trend all repair histories**

"All Maintenance Managers know the bad actors - those assets that constantly break down or fail unexpectedly, resulting in losses. But I haven't met one Maintenance Manager that knows what the next bad actor is going to be. By keeping track of repair histories, you can trend failures and potentially predict the next bad actor."

→ **Focus on your most important maintenance KPIs**

"For starters, consider tracking preventative versus corrective maintenance work orders, plotted against downtime. You will know the planned maintenance program is starting to work when you see a shift from CM to PM, and an increase in stream factors.

"By measuring these KPIs, you have the full picture of your maintenance effectiveness, and can set yourself challenging but achievable goals to continue improving your team's performance.

"We have actually developed a cloud-based collaborative master data build and optimization software called EffioTM which maintenance teams can use to efficiently digitalize key equipment data to deploy a fully optimized maintenance schedule.

→ **Ensure data is being input into your CMMS correctly and consistently**

"If you have bad data in your CMMS, then the tracking your KPIs becomes inaccurate. Take the time to prepare the data behind your KPIs, so that you can have the clearest view of your performance possible."

Challenge 6

Knowing when to carry out inspections and maintenance

"Unexpected rotating or fixed equipment failure can result in significant production losses, or worse, environmental or human losses for a company. Avoiding this type of failure is therefore at the top of the priority list for Maintenance Managers.

"A best in class preventative maintenance and inspection program comes down to intervals. But **when is the right time to conduct routine maintenance?** Is it when the manufacturer says it's time, or when the plant says it's time? And how do we fit routine maintenance into an already busy schedule with reduced staff and Covid restrictions?

TIPS AND CONSIDERATIONS

→ **Plan your maintenance based on risk of equipment failure**

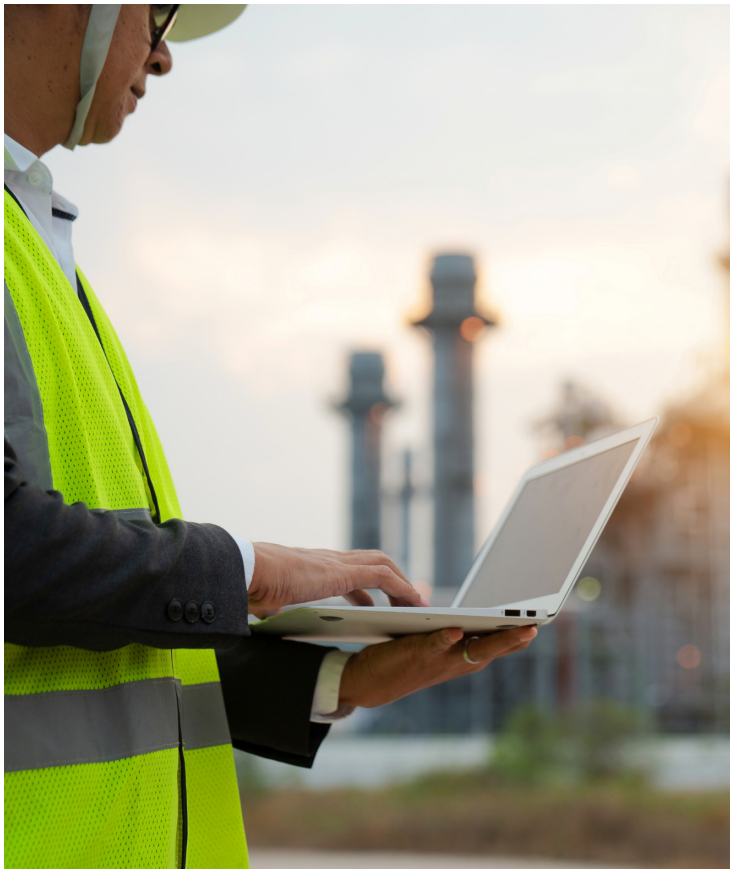
"While the recommended maintenance time intervals provided by the OEM (original equipment manufacturer) can sometimes work, I have found that building an inspection and preventative maintenance program based on risk is far more effective, and results in a drop in unexpected failures and an increase in uptime."

→ **Ensure that the top senior leaders of the facility take ownership, and support your risk-based program through funding and people**

"Planned maintenance programs are expensive and take time - many take as long as 3 - 5 years to design and implement successfully. If senior management doesn't have a long-term view and commitment of people and resources, then your program is set to fail."

→ **Invest time and effort to have an accurate a functional CMMS in place**

"In my experience, when a plant puts in place a fully functional and accurate CMMS, along with conducting the proper criticalities and risk assessments, surprises are minimized and many historical failures are not repeated because the proper timing has been established for the inspections and maintenance."



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