

HOW CAN MANUFACTURERS BETTER INTEGRATE SMART MAINTENANCE FOR A FASTER RETURN ON INVESTMENT?

How can manufacturers better integrate Smart Maintenance for a faster return on investment ?

The COVID-19 crisis has put back on the table a question that arises for manufacturing leaders whenever drastic cost reductions are needed : am I getting enough value out of my maintenance organisation?

We will all agree that ensuring maximum asset reliability at the lowest cost is the end goal. But how could I know if I have still potential for improvement in both areas ?

Do the Smart Maintenance new technologies change the game ?

Here are our thoughts on 4 topics that make the foundation of high performing maintenance organisation ready for the digital world.

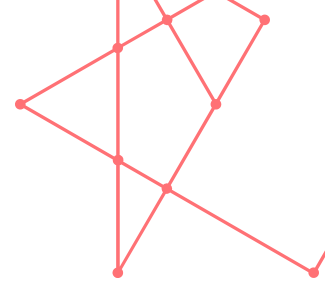
Increasing the predictability and the stability of your organisation will translate on the balance sheet on your cost of goods sold. Operationally, it means increasing the productivity of your technical resources and decreasing the machine downtime.

1. Getting the basics right

We believe that there are some fundamentals to have in terms of processes and organisational capability before more sophisticated approaches can yield results.

Most maintenance organisations operate a Computerized Maintenance Management System (CMMS) that is most of the time well suited to their need. What is often neglected during implementations is the workflow and user experience setup. It needs to be structured, yet lean, to allow zero business process waste and a reliable single source of truth, encapsulating all the information about the assets and work orders history.

This is where the traditional maintenance culture (where technical knowledge is power, transparency becomes a threat) can be a challenge to overcome. That is why it is fundamental to spend the necessary time to upskill the



organisation to be able to operate adequately these processes.

2. Seeing it all

An accurate and real time view on the work to do is gold to seamlessly organize things, in any environment. For the maintenance function, it means having in the CMMS the minimum information about the known backlog : job content, skills, spare parts references, asset, length, due date. This consolidated information will not only allow to see and anticipate needs in machine downtime and resources for the months and years to come, but also to spread evenly the load on resources and machines. What we usually see here is that a big part of the backlog is not known (informal recurring work, requests not entered in the system), adding a lot of avoidable uncertainty in the daily operations.

3. The Schedule and the Continuous Improvement

Only at this stage you should be able to successfully do the so-called scheduling part. Doing a formal scheduling before this maturity stage is very risky and will create a lot of frustration and inefficiencies.

If well executed, the organisation (maintenance, production and other support services) will have significantly lowered the level of uncertainty for the coming week and will be in the best possible conditions to execute work orders with the highest level of safety and efficiency.

Getting to this point will yield your first productivity increase (doing more work with the same amount of people)...And it is just the beginning.

Understanding the deviations of the schedule will allow you to strategically trigger the right improvement projects : spare parts managements, production schedule, technician training, preventive work content, machine design...

Applying all these steps the right way usually triggers a 20% increase in labour productivity and asset downtime in less than a year.

4. The best cases for Smart Maintenance

One of the great recent technological developments in the Maintenance world is the ability to better understand behaviour of our assets remotely and predict its future decrease in performance at a reasonable cost.

Although there is an explanatory aspect on trying new condition monitoring and advanced analytics techniques, it should be initially supported by a business case geared towards savings : resource or asset performances.

In our experience, these 2 situations work well to start a bottom up approach on your Digital Maintenance journey

Case 1 : Downtime shift from unplanned to planned

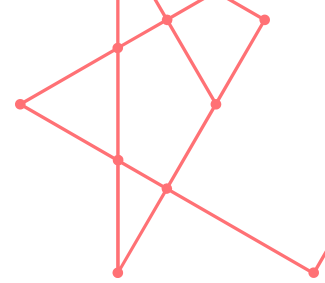
The ideal case is on a strategical piece of equipment that is causing high downtime and technician consumption. Typically, there have been numerous unsuccessful projects to implement a preventive program. Manual inspections are time consuming in labour and downtime.

The remote condition monitoring and applied analytics will allow you to generate a work notification with enough time ahead to plan the repair, thus making it much more efficient as a planned downtime.

Case 2 : Equipment life span increase

You have a preventive maintenance program working on this equipment, but the parts are extremely expensive. Delaying the work up to the limit of wear can mean substantial savings.

Applying the same methodology (condition monitoring and advanced analytics)



will generate the notice to plan the work in advance and will make the part last longer.

Tips for your digital maintenance journey

What is important when you start working on digital maintenance proves of concept (PoC) is that it fits very well in the Maintenance Excellence framework explained in parts 1, 2, 3 above. It cannot be a blank cheque to technology and not serving your overall manufacturing strategy.

Parallely to this performance and technology journey will be the people journey. Going from a traditional maintenance culture to a modern, open, transparent and more predictable require a new set of skills. The systematic use of the CMMS, for documenting the work and relying more on data and less on gut feeling for problem solving will be a first step.

By creating meaningful smart maintenance PoC, you have the possibility step by step to build your own “school” for digital maintenance very much adapted to your business world.

EY can help you make Maintenance a better contributor to your Manufacturing strategy : assessing the maturity of your organisation, crafting a road map making the best use of technology and supporting you in the implementation until tangible and sustainable results are generated.

Summary : Maintenance cost will be scrutinized more than ever. Increasing your level of maturity in the wrong order can be costly. Do build a digital ready organisation around your CMMS with an adequate setup, a relevant content, a rigorous process execution and an integrated continuous improvement cycle. From there you will see concrete returns on digital condition monitoring and advanced analytics.

Making your assets smarter goes hand in hand with making your organisation smarter to reap the benefits of Maintenance 2.0.

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