Is the Effectiveness of your Equipment Assets your Weakest Link? And can TPM strengthen your Supply Chain?

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The ‘Pinch-Point’ Solution for Delivering Operational Excellence

1.0 Overview and Scene setting

Over the coming weeks we would like to share with you how TPM is a key enabling tool to unlock the installed productive capacity of your physical assets by unlocking the potential of your people. We plan to do this through a series of 8 monthly blogs which will include practical interactive exercises and videos.

Two of the key outputs of this intention will be to equip you:

- To gain a better appreciation that TPM is often a fundamental foundation of Operational Excellence and as such, is a key enabler to deliver the principles underpinning your own Company’s vision and aspirations, or for example- helping to deliver the principles embedded in the Shingo model.

- To be better able to assimilate the likely resource commitments of People, Money and Time of running your own in-house TPM Program & how to prepare a compelling Cost/Benefit business case.

Our planned schedule is as follows:

- **January - Overview & Scene setting.** The Changing Perceptions of Maintenance including a 10 pt Assessment as an ‘honesty’ check exercise to position ‘Where are we now with our Maintenance delivery?’

- **February - What can TPM Best Practice bring to the Operational Excellence table + Dispelling some of the Myths and Realities around TPM**: Including, Is TPM a hidden Agenda…? Is an OEE of 85% ‘World Class’? – How to explain the OEE from the Operator’s perspective.

- **March - Delivering Sustainable TPM - the 3 x P’s** starting with **Purpose** + The Scoping Study & Securing Management Commitment & How to prepare a compelling Business case. plus a 28 perceptions exercise to gauge the ‘readiness’ cultural temperature.

- **April - The 11 step TPM Process** - Covering the 4x Day Practitioners workshop, Initial Pilots & Roll-out + Motor Car Criticality Exercise and how to ‘Spot the Rot…& then **Stop** the Rot.

- **May - The People perspective** - Program Governance, Pillar Champion’s, Steering Group, policy deployment. The 4 x Milestone Journey of Top Down & Bottom Up evidence-based Audits - including a 30pt interactive Exercise.

- **June - Summary of Must Do’s / Must Avoids + Case studies** applications from the complete spectrum of industry-Adopt or Adapt? but don’t Corrupt !! + also **TPM v. RCM** - complementary or competing?

- **July - The Shingo model** and the **TPM** enabling tool to help deliver the foundations.

- **August - Other Tools in the TPM toolbox**. Including - **5S, SMED, EEM & TPA + Questionnaire** on what would you like to know more about?
2.0 The Perception and Challenges facing the Maintenance Function

In the Manufacturing sense, Operational Excellence is about striving to eliminate waste in all its forms in order to maximise value–adding activity. It is about the speed or velocity with which we can convert a customer’s order into money in our Company’s bank account. This is surely sound common-sense and as such we need to be excellent at it!!

The resultant drive and focus on most of our Manufacturing Processes is highlighting what we’ve probably always known:-namely that the concept of Operational Excellence and therefore ‘Manufacturing Velocity’ is only as good as the Reliability and Predictability of our strategic Manufacturing physical Assets.

Low levels of Overall Equipment Effectiveness (OEE) often results in those critical Manufacturing Assets becoming the Pinch-Point in the Supply Chain.

As a Maintenance Manager you will be under continuing pressure to cut the Direct Costs of the Maintenance Function NOW in order to be more efficient

As a Maintenance Professional you will still be striving to increase the Effectiveness of the Maintenance Delivery- The bottom line is that you will almost certainly need to do more with less... and, whichever way we look at it-that is the reality and therefore the challenge.

In the Maintenance sense, this all has to be achieved in parallel with yet more pressure and demands on increasing environmental conformity, increasing energy costs and of course, zero accidents.

First a Health Warning!.....

Before developing the above themes further around Operational Excellence we expect that many of your in house Continuous Improvement programs will be tagged –(some might say ‘lumbered’) - with the term ‘Lean’-As in Lean Thinking, Lean Manufacturing, Lean Maintenance and so on..

Whilst you will know that Lean is NOT about doing the same with Less people, money or time-It’s about doing MORE ‘Value adding’ with LESS waste - whether that is a waste of material, energy, space or time, or personal intellect. However, to the uninitiated, If we start off by sending out the wrong message we are not going to get too far with our Lean Transformation journey!!

3.0 Operational Excellence and Maintenance Best Practice

3.1 Perception of Maintenance

Before we start to dig deep into the TPM philosophy and enabling tool, it might be worthwhile to look back (and even sideways!!) before we look forward....
One of biggest problems still facing many of today’s Maintenance Functions - and hence its Managers and professionals- is still one of poor image and perception and-as the cartoon in figure 1 below suggests- it has been the case for some while now.Let’s imagine for a moment that you are the Engineering Director of a significant ‘Manufacturing Plant’, You go into the Boardroom for the monthly Site Leadership Team meeting and mention the word ‘Maintenance’. Does the Chairman look at his watch and tell you that you have just three minutes to talk about this (frankly boring ) subject?

Does the Sales and Marketing Director simply look out of the window, because it’s nothing to do with him or her? Does the Finance Director scowl at you as he or she sees it as an unnecessary evil and damaging cost burden, and does the Production Director get ready for a slanging match because he or she sees Maintenance (or the lack of it) as the root cause of most of the Company’s production problems?

Is this an exaggeration? Well may be so, but sadly in far too many cases it may still ring some bells.

Is Maintenance still the Poor Relation ?

So why is there this poor perception?

Maybe it’s because the ‘Engineering Director’ have never sat down with his Maintenance Manager and thought long and hard enough about:

- who is our Customer?
- who are our Key Influencers-both positive and negative?
• How should we go about changing these existing poor perceptions? The first two questions are relatively easy to answer:

The customer is Production (or Manufacturing) and the key influencers are your ultimate sponsors - the Production Director and the Finance Director - and ultimately the Managing Director.

The essential first step to change these perceptions is for the Maintenance Function itself to reflect and define its own purpose / objective and hence contribution to the Business Drivers of the particular plant within that Plant's Operational Excellence journey (or Lean Transformation Intentions).

These outputs then need to be clearly articulated to the above 3x key 'Influencers' - NOT just in terms of Maintenance Efficiency (Cost Down) but also Maintenance Effectiveness in terms of what it can deliver via the elimination of waste in all its forms (typically the OEE's classic 6x equipment based losses, plus Energy, Environment and Safety Performance) to the BUSINESS (By aligning Maintenance's contribution to the Company's Operational Excellence Model).

The key point is that you can be apparently very efficient in your Maintenance Revenue Budget (cost management) but totally ineffective in its relevance to delivering the business drivers (where waste elimination in all its forms should be high on the agenda) - You have to be excellent at both!!

4.0 Where are you now with your Maintenance Practices?

In order to position where you are now in your Maintenance Practices it may be a useful exercise to complete the following exercise as a joint evaluation with Operations - namely your internal 'customer'.

Maintenance Assessment Exercise

Whilst we have developed structured, detailed and apparently, cost effective, approaches to our Maintenance Programmes here at our Plant, we still suffer from significant backlogs and resultant unacceptable performance, risks, losses and costs. Why is this the case? Maybe the ten statements on the link below can give you an insight.

By way of background and context, we developed this list of 10 check points as the result of a one day workshop we ran a few years ago for the Offshore Oil & Gas Industry in Aberdeen. The focus of the Workshop was ‘Is TPM relevant / appropriate for the Offshore O&G Industry?’ Towards the end of the session we asked the 50 or so delegates - mainly Maintenance & Reliability professionals - to list out and discuss the ‘top 10’ reasons for gaps / omissions / weaknesses in their existing Maintenance Strategy and Delivery and the attached 10 statements is what emerged. On the firm basis that the Offshore O&G industry is regarded as being in the upper quartile for well-defined and executed Maintenance strategies-driven by the huge safety implications of ‘getting it wrong’ or the significant costs of, for example not having the correct spares on the platform, we have regarded the above list of having substance and significance to Industry as a whole.
The point is that TPM addresses each one of these ten fundamental reasons for the gaps in our existing Maintenance practices and recognises that it is the person carrying out the tasks who is the key, and the way in which he or she is supported is vital to achieve true cost effectiveness. Please click on this link and see how you are doing via this simple but effective ‘honesty check’


We invite you to complete this exercise and send in your results to us via this link

**The cumulative results will be shared back to you as part of our April article**

Meanwhile, what was your Benchmark Score?

In our experience, many companies initially fall into the top 2 ranges if they conduct the exercise with real honesty and healthy debate with both the Maintenance representatives and their internal customer colleagues representing Production / Operations.

Over the years we have also accumulated strong evidence that revisiting the same exercise 2 to 3 years down the road of pursuing a robust and relevant TPM programme that their scores drop into the 5 to 11 range and even one or two in the 1 to 4 range. We have yet to come across a string of ten zero scores—which is good, because we suspect that they are being delusional if such perfection was achieved!

Also, on the basis that this Honesty Check or Health Check has whetted your appetite, then you can look forward to our **February’s** article around **What TPM can bring to the Operational Excellence table + Some Myths and Realities** around TPM. For example Is TPM a hidden Agenda to get the Operator to do the Maintainer’s job? And, is an OEE of 85% ‘World Class’?