

Effective HRM is Critical for effective EAM

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Effective Human Resource Management is critical for effective Asset Management

Introduction

Effective asset maintenance is achieved by implementing well-structured processes that efficiently capture information to be used by a committed team of people. Most organisations recognise the significant role played by Enterprise asset management (EAM) solutions in this endeavour. EAMs have extended the benefits of Computerised Maintenance Management Systems (CMMS) to all types of assets, over their entire lifetimes. Collaborative asset lifecycle management (CALM), a recent trend in the EAM space, unleashes synergies of collaboration amongst functions such as maintenance, operations, purchasing, engineering and accounting. The benefits include higher asset availability, reductions in parts inventories and better decision-making. However, every organisation does not achieve the same results. The reason lies in understanding the way people contribute to the overall effort.

A common anomaly that seems to defy logic is the difference in benefits that different organisations are able to reap from similar EAM solutions. One key differentiator that impacts the probability of success is the number of features of EAM solutions that organisations actually use. Organizations that have implemented more features have clearly gained more.

However, recent studies show that the most important factor determining the success of implementing an EAM solution is the way human resources are managed. Assets like machines are capable of performing as designed; however, reliability and utilization depend on human performance. According to an ARC report, “ In North-America, unscheduled downtime can be three to five times what it should be primarily because of human operational issues.”

It's the person behind the machine that matters

It is useful to take a human capabilities perspective of running an effective asset management programme. There are some things that humans are just not ideally suited to do – capturing, feeding or analyzing huge amounts of data. That is where information technology should be allowed to make its contribution. Technological breakthroughs such as Radio frequency identification tags (RFID), low cost sensors or affordable mobile devices can collect critical information with minimal human interface.

Manual data processing can become a serious bottleneck ending in a feast of data but a famine of information. Modern computing power can take on most processing requirements. On the other hand, decision-making is best left to humans. Decision support

software improves managerial effectiveness while freeing up time for decision making vital for a rapidly evolving business environment. Human intervention for operational control in a mature operating environment should ideally be restricted to exceptional events only.

Let machines do what they do best

Manually entered data is a major source for errors. Wrong or untimely data ends up being processed into unreliable performance parameters. In the real world, it is not unreasonable to expect an employee to understate damages if reporting them can get him into hot water. An inspector may not mention operator negligence on his inspection report.

In one instance, sales staff of an FMCG company would enter sales data just before the last day of the month – which was the stipulated deadline. The plant manager tried to make his production schedule responsive by increasing production in the second fortnight of each month. This led to frequent stock-outs and larger inventories, since in fact; more products were being bought at the beginning of the month, when people received their paychecks. Whatever the degree of automation of a solution, the fact remains that processes have to be run by people.

Taking a cue from maintenance practices in the Aviation Industry

Even though enterprise asset management (EAM) caught the fancy of asset-intensive industries years ago, outside of the aviation industry, focus has mostly been on optimizing the asset's performance and rationalizing the resources expended on doing so. Processes have been put under the microscope. Organisations strive hard to capture asset data that provides decision support, assesses the effectiveness of maintenance work, makes technology replacement decisions and accurately forecasts budgets.

Two factors have contributed towards the evolution of maintenance practices differently in the aircraft industry. The first, of course, is the criticality of the primary asset — the aircraft, which is both expensive and vulnerable to any failure in the air. Thorough enquiries that inevitably follow every incident of equipment failure are the second reason. These enquiries examine all possible causes, tracing each to its logical conclusion. Failures also become subjects of macro-studies undertaken by a plethora of Organisations: regulatory bodies (such as the US Federal Aviation Administration), aircraft manufacturers and airlines. All this attention has made the aviation industry somewhat of a leader in maintenance. Maintenance resource management (MRM), the study of maintenance human factors, is one of the newest tools in the maintenance management arsenal.

HRM improvement programmes boost the effectiveness of EAM initiatives

Total productive maintenance (TPM) is seen as the means to achieve higher levels of operational excellence. TPM addresses some human factors such as operator involvement, a sense of ownership and an understanding of each employee's role in the upkeep of assets. Organisations that have TPM programs in place benefit more from EAM solution implementations. They proactively evaluate the advantages of monitoring performance indicators to reward human effort, track innovation or even to study human factors such as the effects of fatigue or boredom. Ideally, the performance of a machine should be linked to the mechanic's appraisal. Logic used to allocate resources should foster a sense of ownership by allotting machines to specific individuals or teams.

Making people tick

What makes people perform to optimise the effectiveness of asset maintenance programs? People must be given authority and information in a way that helps them perform. Decentralized authority encourages a feeling of ownership and reduces the time required to take decisions at the same time. Equally important is getting the right information to the right person. It is not hard to imagine how much easier it will be to decide on replacing a machine if information about its total cost of ownership is available. Similarly,

maintenance managers can schedule their maintenance tasks much better if they were sure of the production schedule.

Performance intelligence is critical to human performance; as the old maxim goes - what does not get measured does not get done. Machine operators can be spurred on to be more careful if the number of non-defective products made by each was given plant-wide visibility. Information also brings in awareness. People support a change initiative because they understand in real-time how their roles relate to the company's performance. Last, but not the least, information allows seamless collaboration across functional boundaries.

Conclusion

Analysts have the benefit of examining EAM initiatives retrospectively to discover the drivers for success. Human resource management has emerged as a key driver. Organisations that combine the two seem to benefit the most. The human approach must include change management issues before and during implementation as well as performance management issues post implementation. Methods of collecting data that can be manipulated or concealed deserve special attention. On the other hand, EAM products must factor in human aspects such as acceptance. Data integrity can be improved through automation using condition monitoring technologies and RFIDs. Mobile computing devices can capture human inputs

on the fly, eliminating errors that may arise when people have to remember information until they can access a computer. To sum up, EAM solutions are meant to serve people running a plant and not vice versa. Success depends on making this happen.

About the Author

Rohit Banerji is a consultant in the asset management practice of Tata Consultancy Services (TCS). Rohit graduated in mechanical engineering with distinction and won the gold medal at the Indian Institute of Management Kozhikode, where he did a MBA in operations. He has over a decade of experience in Asset Management with the armed forces. He is currently leading an asset management consulting team in the United Kingdom.

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