

Asset Management Master Planning

The Evolution of Maintenance Master Planning

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Early last year an article was posted entitled “Maintenance Master Planning” where Mike Greenholtz described the implementation approach and benefits of an Asset Management program. Much of the article described Mike’s global implementation experiences, which began nearly a decade ago at a world class Pharmaceutical company. We have had the opportunity over the past several years to introduce Maintenance Master Planning to many of our GenesisSolutions customers. As part of a continuous improvement effort, we have modified the master planning process to include a DMAIC approach, which is a 6 Sigma quality management tool, thus evolving Maintenance Master Planning to a more comprehensive Asset Management Master Planning process.

In a sequential series of articles to be published in this newsletter, we will describe the updated process in detail to provide you with a greater understanding of how this method can bring value to your company. Over the course of this five part series, we will convey how we “**Define**” asset management maturity, “**Measure**” and assess the current state of asset management, “**Analyze**” the assessment to develop a master plan, “**Improve**” asset management through master plan implementation, and finally “**Control**” and sustain the performance improvement.

DEFINE

The DMAIC process begins with defining an Asset Management Maturity Continuum (shown in Figure 1). This should be viewed as a maturity progression curve.

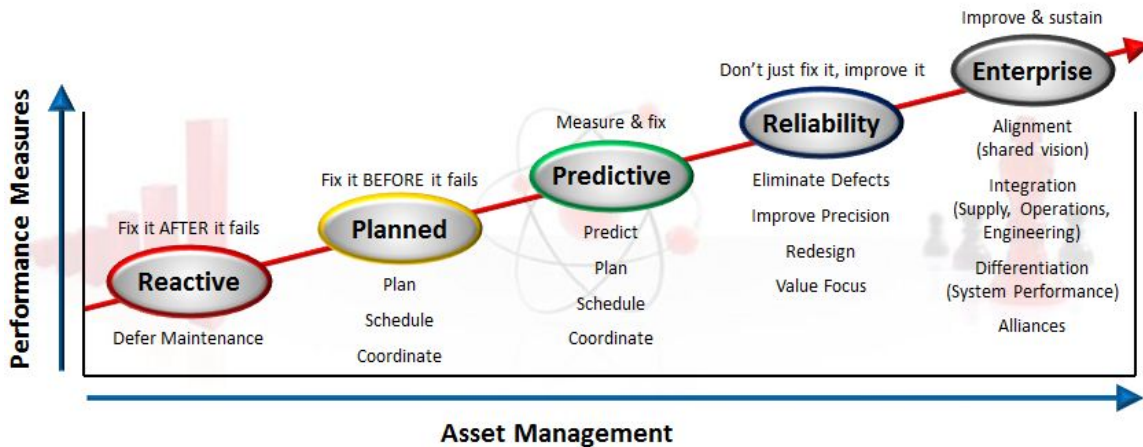


Figure 1: Asset Management Maturity Continuum

The continuum begins with the Maintenance organization operating in a **Reactive** state. The majority of labor hours in this state are reactive in nature and the organization is in a constant firefighting mode. Eventually, the organization strives to improve and begins the improvement process setting the expectation that all work will be **Planned** prior to scheduling.

While some gains are being made through the reduction of expediting parts, labor, and services, the bulk of the proactive work being scheduled stemming from the current reliability strategy is calendar based (fixed time) and condition based maintenance has not yet been implemented. By establishing standards such as a **Predictive** maintenance program and transitioning to condition based maintenance strategies, additional improvements can be realized. Continuing to mature, a Reliability Centered Maintenance process is applied, beginning with the utilization of an Asset Criticality Ranking (“ACR”). This ACR is the basis for an effective **Reliability** maintenance strategy. Key Performance Indicators are leveraged and the Computerized Maintenance Management System (“CMMS”) is supporting good decision making as Mean Time between Failure and Mean Time to Repair are being trended. Job plans, PM’s, and critical spares are routinely updated and Failure Modes and Effects Analysis are being completed. For those companies having multiple sites, there is sharing of knowledge and harmonization of Best Practices, commonly known as Communities of Practice. The CMMS is being applied consistently across the company and a companywide dashboard is reflecting the value that the Maintenance organization is having on Manufacturing, Quality, and Cost of Goods Sold. Asset Management has now reached the **Enterprise** domain.

In the next article, we will discuss the next step in the DMAIC process, providing details on how to Measure where the organization resides on the Asset Management Maturity Continuum.