

Assets & The active Life Cycle - TPM

The benefits of asset management can include, but are not limited to the following:

- improved financial performance: improving the return on investments and reducing costs can be achieved, while preserving asset value and without sacrificing the short or long-term realization of organizational objectives;
- informed asset investment decisions: enabling the organization to improve its decision making and effectively balance costs, risks, opportunities and performance;
- managed risk: reducing financial losses, improving health and safety, good will and reputation, minimizing environmental and social impact, can result in reduced liabilities such as insurance premiums, fines and penalties;
- improved services and outputs: assuring the performance of assets can lead to improved services or products that consistently meet or exceed the expectations of customers and stakeholders;
- demonstrated social responsibility: improving the organization's ability to, for example, reduce emissions, conserve resources and adapt to climate change, enables it to demonstrate socially responsible and ethical business practices and stewardship;
- demonstrated compliance: transparently conforming with legal, statutory and regulatory requirements, as well as adhering to asset management standards, policies and processes, can enable demonstration of compliance;
- enhanced reputation: through improved customer satisfaction, stakeholder awareness and confidence;
- improved organizational sustainability: effectively managing short and long-term effects, expenditures and performance, can improve the sustainability of operations and the organization;
- Improved efficiency and effectiveness: reviewing and improving processes, procedures and asset performance can improve efficiency and effectiveness, and the achievement of organizational objectives.

How can executives optimize the performance of thousands of different assets for the benefit of the organization as a whole? How can they be better prepared for whatever comes next?

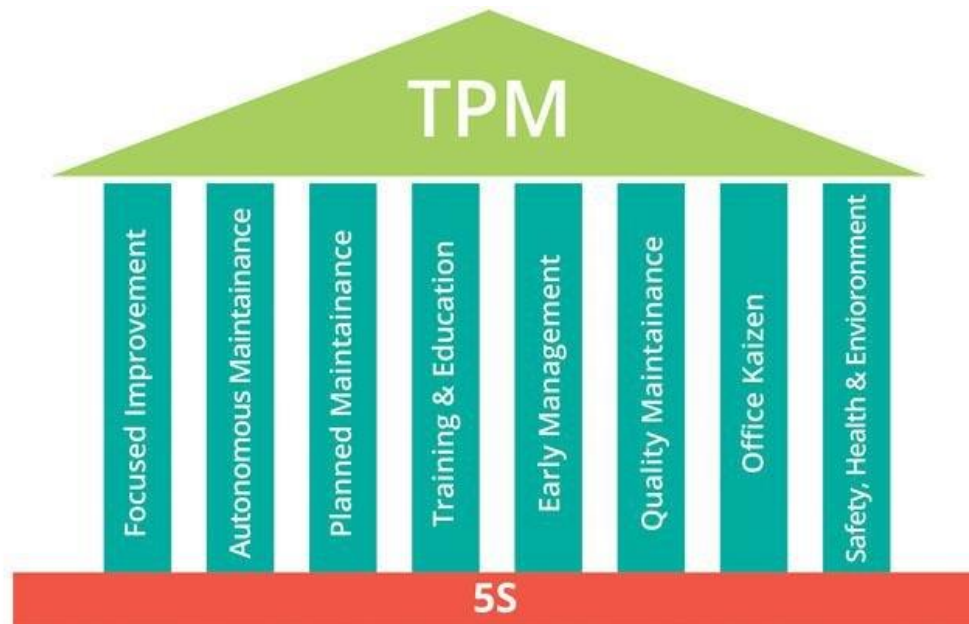
These assets need maintenance, repair or replacement more than ever. Many variations of reliability-centered maintenance (RCM), total productive maintenance (TPM), predictive maintenance (PdM), and plant maintenance optimization (PMO) are being employed primarily to ensure the right work is done, by the right people and at the right time.

TPM (Total Productive Maintenance) is a holistic approach to equipment maintenance that strives to achieve perfect production (Increased equipment efficiency):

- No Breakdowns
- No Small Stops or Slow Running
- No Defects

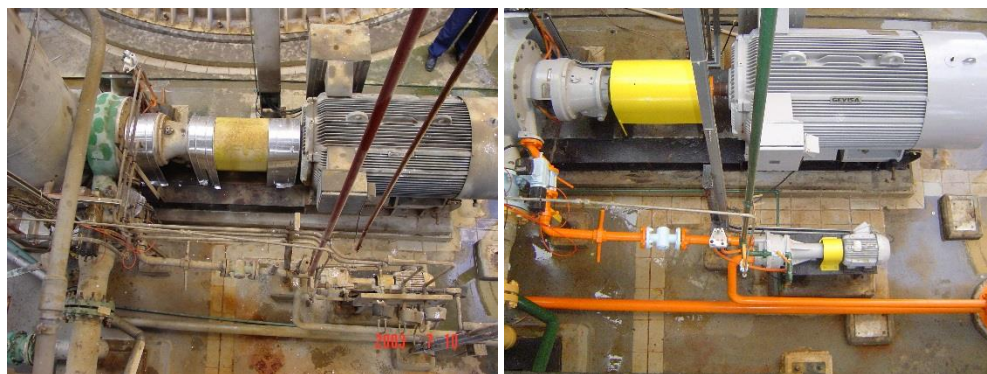
In addition, it values a safe working environment:

- No Accidents



The traditional approach to TPM was developed in the 1960s and consists of 5S as a foundation and eight supporting activities (sometimes referred to as pillars).

Below we can identify from the photos the condition of the operating plant before and after the TPM implementation.



TPM emphasizes proactive and preventative maintenance to maximize the operational efficiency of equipment. It blurs the distinction between the roles of production and

maintenance by placing a strong emphasis on empowering operators to help maintain their equipment.

The implementation of a TPM program creates a shared responsibility for equipment that encourages greater involvement by plant floor workers. In the right environment this can be very effective in improving productivity (increasing up time, reducing cycle times, and eliminating defects).



At the executive officer level, the CFO in particular needs to understand the role of asset management in driving financial performance, including revenue generation, cost structure and ROA.

This person must make educated allocation decisions among multiple asset investment options. Only with information that includes historical maintenance expenses, projected costs, current asset values and replacement costs can the CFO make knowledgeable investment choices that will optimize performance of the enterprise as a whole, not just individual LOBs.

Effective control and governance of assets by organizations is essential to realize value through managing risk and opportunity, in order to achieve the desired balance of cost, risk and performance. The regulatory and legislative environment in which organizations operate is increasingly challenging and the inherent risks that many assets present are constantly evolving.