



## Effective Maintenance Management Training



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## Introduction:

Leading industrial organizations are moving away from reactive fix-it-when-it-breaks maintenance into a more strategic, predictive, preventive maintenance approach, a key element of advanced maintenance management systems. This evolution requires well-planned and executed actions on several fronts.

This effective maintenance management training course allows participants to optimize the performance of their assets and maintenance processes to achieve maximum Return On Investment ROI. Maintenance managers can ensure the best utilization of their assets by reducing costs and downtime while maintaining high levels of safety and quality.

Participants in this effective maintenance management course will learn about the essential technologies and methodologies of advanced maintenance management. It will cover the theoretical background of each technology and its practical application to ensure effective maintenance management.

## The Importance of Maintenance Management:

Effective maintenance management is a critical aspect of any organization's operational efficiency. Understanding maintenance management and its definition enables organizations to prevent downtime, extend equipment lifespan, and maintain a competitive advantage.

Advanced maintenance management systems empower organizations to perform detailed analysis, leading to efficient maintenance management solutions and strategies. Maintenance management is important because it can enhance productivity and ensure equipment reliability, translating into company benefits.

## Targeted Groups:

- All Professionals involved in Maintenance Management.
- Professionals involved in Work Planning and Control.
- Maintenance Supervisors.
- Maintenance Engineers.
- Maintenance Team Leaders and Managers.
- Operations Team Leaders and Managers.

## Course Objectives:

Upon completion of this effective maintenance management course, participants will be able to:

- Understand the basic principles of Asset Management as a framework for managing and optimizing maintenance.
- Identify common maintenance Key Performance Indicators KPIs and develop the maintenance department scorecard.
- Assess the organizational Asset Management maturity and develop a roadmap for improvement.
- Examine the organizational and managerial considerations for highly effective Risk-Based Maintenance.
- Understand Life Cycle Management and the significance of Systems Engineering and RAMS in supporting it.
- Determine the Life Cycle Costs of an asset.
- Explore the latest concepts and techniques for Predictive and Smart Maintenance.

## Targeted Competencies:

Upon completion of this effective maintenance management training, target competencies will be able to:

- Asset Management: a business-like approach to Maintenance Management.
- Using KPIs and the balanced scorecard to Measure Performance.
- Assessing Asset Management maturity and determining the roadmap for improvement.
- The business case for Asset Management improvement - cost/benefit thinking.
- Understanding risk and an introduction to a Risk-Based Maintenance approach.
- Life Cycle Management with aspects like Systems Engineering and RAMS requirements.
- Life Cycle Costing.
- The latest concepts and techniques of Predictive and Smart Maintenance.

## Advantages of Effective Maintenance Management:

Implementing effective maintenance management practices promotes reliability and reduces the risk of unexpected breakdowns, translating into significant advantages. Mastering maintenance management involves understanding the elements of effective maintenance management and finding ways to improve maintenance management processes. A robust maintenance management system coupled with a proper maintenance management program ensures the longevity and performance of assets, making maintenance management an investment that yields measurable returns.

This training delves into advanced maintenance management concepts, preparing participants to become specialists. Professionals can substantially improve their organizations' maintenance operations by exploring advanced maintenance management systems and strategies, such as data analysis and predictive maintenance. Industrial maintenance management requires a proactive approach to managing not just the machinery but also the human components of the maintenance team, underscoring the critical role of a maintenance manager.

## **Course Content:**

### **Unit 1: Framework for Managing and Optimizing Maintenance:**

- Asset Management as a Business Process.
- Asset Management Landscape Model.
- Strategy Framework.
- Line of Sight.
- Asset Management Policy, Asset Management Strategy.
- Strategic Asset Management Plan.
- The Position of Maintenance Management.
- Asset Management Roles on Strategic, Tactical, and Operational Levels.
- ISO 550000 - The International Standard on Asset Management.

### **Unit 2: Assessing Asset Management Maturity as A Basis for Maintenance Improvement:**

- Measuring Performance.
- Leading and Lagging Indicators - KPI - Dashboards.
- Assessments and Benchmarking against International Standards.
- Asset Management Maturity Assessments.
- Asset Management Workbench ISO 55000 Gap Analysis.
- SAM-assessment ISO 55000 Self-assessment.
- Determine the Roadmap for Maintenance Improvement.
- The Business Case for Asset Management Improvement - Cost/Benefit Thinking.
- Implementation Aspects.

### **Unit 3: Managing Asset Risks - Risk-Based Maintenance RBM:**

- Not every failure is important - the basic principles of risk.
- Risk on a business level.
- Risk matrix, risk register.
- Risk on asset level.
- Failure behavior of systems.
- Choosing the appropriate maintenance tasks for your assets with a Risk-Based approach.

### **Unit 4: Life Cycle Management:**

- Life Cycle Management.
- The Life Cycle of An Asset.
- Demand Forecasting.
- Creation and Acquisition of Assets.
- Systems Engineering Approach.
- RAMS Reliability, Availability, Maintainability, and Safety Requirements - Methodologies.
- Life Cycle Costing LCC.
- Disposal and Replacement - Life Time Extension Asset Rationalisation.



## **Unit 5: Smart Maintenance:**

- Understanding Principles of Predictive Maintenance PdM.
- What PdM Technologies to Apply? - An overview of relevant PdM technologies.
- Smart Maintenance - Measuring Asset Performance with Modern Data Technology.
- Data Analysis Aspects.
- Optimization Aspects - Optimizing the Maintenance Strategy.
- Using Decision Support Tools.

## **Conclusion:**

Upon completing the effective maintenance management course, participants will receive a Maintenance Management Certificate, endorsing their proficiency in the domain and recognizing their capability to implement best practices in maintenance management.