
Arabian Institute For Training

Certificate Course in Creating Maintenance Excellence

INTRODUCTION

- Leading industrial organizations are moving away from reactive (“fix-it-when-it-breaks”) maintenance into predictive and preventive maintenance (“anticipating, sophisticated maintenance planning, and fix-it-before-it-breaks”) as part of a life cycle focused Asset Management approach. This evolution to Maintenance Excellence requires well-planned and executed actions on several fronts. Although maintenance planning plays a critical role within the overall physical asset management processes, many organisations are still struggling to get it implemented properly and reap the benefits that it brings.
- Maintenance Excellence provides great opportunities to optimize the performance of your assets and maintenance processes to achieve maximum Return On Investment (ROI). By understanding the fundamental process behind maintenance planning and by reducing costs and downtime through advanced maintenance management, while achieving high levels of safety and quality you will be able to get the best out of your assets.
- This 10-day Certification training course in Creating Maintenance Excellence introduces participants to creating Maintenance Excellence. It demonstrates both the background to several methodologies, and its practical application to achieve the best bottom-line results.
- This Maintenance Engineering certification training course places the emphasis on the key processes and techniques of maintenance planning & maintenance management that are necessary to create Maintenance Excellence.

This Certification training course will highlight:

- Asset Management: a business-like approach of maintenance management
- Using KPI’s and the balanced scorecard to measure performance
- Assessing Asset Management maturity and determine 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
- The building blocks of an efficient planning function
- A fast track programmed maintenance development process
- Planning work for quality and efficiency
- Scheduling work in a manner that ensures the continuity of operations
- Gaining the commitment of operations to the maintenance plan and schedule
- Generating performance indicators that pinpoint problems and opportunities
- Eliminating equipment defects through detection, disclosure, planning, scheduling and execution

OBJECTIVES

By the end of this Certification training 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 way Systems Engineering and RAMS could support this
- Determine the Life Cycle Costs of an asset
- Demonstrate the latest concepts and techniques with regard to Predictive and Smart Maintenance
- Set up master data to support asset maintenance
- Facilitate the development and implementation of programmed maintenance
- Develop task plans and procedures that meet safety, quality and efficiency criteria
- Initiate the acquisition of logistics to enable execution of backlog work
- Compile a work schedule for a forthcoming period in consultation with stakeholders
- Produce performance indicator based reports that expose problem areas

TRAINING METHODOLOGY

- This Certificate Course in Creating Maintenance Excellence training seminar is a combination of instructor lead topic areas and class discussions. This Maintenance Engineering certification training course will be conducted along interactive workshop principles. Experiences from different areas will be discussed. There will be many opportunities for discussion and sharing experiences.

WHO SHOULD ATTEND?

This Certification training course is suitable to a wide range of professionals involved in the area of creating Maintenance Excellence, but will greatly benefit:

- All Professionals involved in Maintenance Management
- Professionals involved in Work Planning & Control (planners, planning engineers)
- Maintenance Supervisors
- Maintenance Engineers
- Maintenance Team Leaders and Managers
- Operations Team Leaders and Managers

Course Outline

Module I – Certificate Course in Advanced Maintenance Management Introduction to Asset Management – A 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 Level
- ISO 550000 – The International Standard on Asset Management

Assessing Asset Management Maturity as A Basis for Maintenance Improvement

- Measuring Performance
- Leading & Lagging Indicators – KPI – Dashboards
- Assessments & 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

Managing Asset Risks – Risk Based Maintenance (RBM)

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

Life Cycle Management

- Life Cycle Management
- The Life Cycle of An Asset
- Demand Forecasting
- Creation & Acquisition of Assets
- Systems Engineering Approach
- RAMS Requirements – Methodologies
- Life Cycle Costing (LCC)
- Disposal and/or Replacement - Life Time Extension (Asset Rationalisation)

Smart Maintenance

- Understanding Principles of Predictive Maintenance (PdM)
- What PdM Technologies to Apply? – A short 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
- Wrap up

Module II – Certificate Course in Maintenance Planning
The Building Blocks of a Modern Maintenance Management System

- The ‘Asset Healthcare Model’
- Asset Master Data
- Organisation Master Data
- Maintenance Logistics Planning
- Practical Exercise and Discussion

Programmed Maintenance Development and Planning

- Criticality Grading
- Failure Modes and Effects Analysis
- Programmed Task Selection Criteria and Tools
- CMMS Task Plans and Work Orders
- Corrective Maintenance Task Procedures
- Practical Exercise and Discussion

Work Management

- Work Management Process Model
- Defect Reporting and Notifications
- Backlog Control
- Capacity Planning and Resourcing
- Schedule with Consensus of Stakeholders
- Practical Exercise and Discussion

Shutdown and Turnaround Management

- Network Planning and Critical Path Scheduling
- Resource Profile
- Resource Leveling and Balancing to Optimise the Schedule and Resource Profile
- Shutdown and Turnaround Progress Tracking and Control
- Practical Exercise and Discussion

Performance Management

- Setting-up Performance Indicators and Data Sources
- Work Management Performance Indicators
- Asset Maintenance Effectiveness Performance Indicators
- Cost Control Performance Indicators
- Planning Performance Indicators


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