MAWA EVENTS

Address: No. 857, Block A2. Leisure Commerce Square - No 9., 46150 Petaling Jaya, Selangor, Malaysia

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MAINTENANCE AND SPARES OPTIMISATION, FAILURE MANAGEMENT & INVESTIGATIONS

""Enhancing Asset Reliability and Operational Uptime through Smart Maintenance, Spares Strategy, and Root Cause Techniques""

Schedule

Date	Venue	Fees (Face-to-Face)
13 – 17 Apr 2026	Istanbul, Turkey	USD 3495 per delegate

► **Available delivery methods:** Face-to-Face & Online Training

Introduction

In today\'s cost-conscious and reliability-focused environments, maintenance and asset managers are under increasing pressure to ensure operational continuity while minimizing downtime and inventory costs. Optimising maintenance practices, aligning spare parts strategy, and conducting effective failure investigations are essential to meeting these demands.

This intensive 5-day course equips professionals with advanced tools and practical approaches to optimize preventive and predictive maintenance, rationalize spare parts inventory, and apply systematic failure analysis techniques. Emphasis is placed on proactive strategies, reliability improvement, and cross-functional integration.

Objectives

By the end of this course, participants will be able to:

- Develop effective maintenance strategies aligned with operational risks and priorities
- Optimize spare parts inventory through criticality, lead time, and usage analysis
- Apply failure management tools such as RCA, FMEA, and defect elimination
- Align maintenance, operations, and supply chain teams for improved asset uptime
- Reduce maintenance cost and increase equipment reliability through data-driven decisions

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Why Attend

- Learn how to balance maintenance performance with cost and resource constraints
- Identify the optimal mix of preventive, predictive, and reactive maintenance
- Improve parts availability while reducing overstock and obsolescence
- Strengthen root cause analysis capabilities for recurring failure prevention
- Enhance collaboration across maintenance, stores, and engineering departments

Target Audience

This program is designed for:

- Maintenance and reliability engineers
- Maintenance planners and supervisors
- Spare parts, warehouse, and inventory controllers
- Asset management and operations personnel
- Failure analysts and continuous improvement teams

Individual Benefits

Key competencies that will be developed include:

- Failure mode identification and investigation techniques
- Maintenance strategy optimization and PM review
- Spare parts criticality ranking and reorder modeling
- Root cause and defect elimination approaches
- Alignment of inventory strategy with maintenance plans

Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Optimized maintenance schedules and reduced unplanned downtime
- Improved asset utilization and spare parts availability
- Streamlined inventory with reduced holding costs and stockouts
- Faster and more accurate failure investigations
- Higher ROI from maintenance and reliability programs

Instructional Methodology

The course follows a blended learning approach combining theory with practice:

- Strategy Briefings – Reliability frameworks, RCM/PMO, and inventory modeling
- Case Studies – Industry failures, parts stockouts, and maintenance waste
- Workshops – RCA, CMMS data analysis, spares planning scenarios
- Peer Exchange – Experience sharing and practical tips
- Tools – Templates for PM review, RCA reports, critical spares analysis

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Course Outline

Training Hours: 07:30 AM – 03:30 PM Daily Format: 3–4 Learning Modules | Coffee Breaks: 09:30 & 11:15 | Lunch Break: 01:00 – 02:00

Day 1: Maintenance Strategy Optimisation

- Module 1: Principles of Maintenance Strategy (07:30 – 09:30) • Breakdown of preventive, predictive, and corrective maintenance • Asset criticality and maintenance task selection
- Module 2: Preventive Maintenance Optimization (09:45 – 11:15) • RCM basics and PMO approaches • Failure modes and criticality-based maintenance
- Module 3: Workshop – PM Task Review (11:30 – 01:00) • Evaluate existing tasks for value and risk mitigation

Day 2: Spares Inventory Optimisation

- Module 4: Spare Parts Classification and Demand Planning (07:30 – 09:30) • ABC, VED, and FSN analysis • Usage patterns, lead time, and stocking logic
- Module 5: Inventory Optimization Techniques (09:45 – 11:15) • Reorder points, EOQ, and safety stock calculations • Reducing obsolescence and emergency orders
- Module 6: Workshop – Critical Spares Analysis (11:30 – 01:00) • Categorize and assign stock levels to parts

Day 3: Failure Analysis and Root Cause Methods

- Module 7: Failure Investigation Approaches (07:30 – 09:30) • Chronic vs sporadic failures • Investigation readiness and evidence capture
- Module 8: Root Cause Analysis (RCA) Tools (09:45 – 11:15) • 5 Whys, Fishbone, Fault Tree, and Apollo RCA • Mapping failure logic
- Module 9: Workshop – Conduct a Root Cause Case (11:30 – 01:00) • Solve a failure scenario using RCA steps

Day 4: Integrating CMMS and Performance Tracking

- Module 10: Using CMMS for Decision Making (07:30 – 09:30) • Data quality, work order history, and maintenance KPIs • Failure coding and analysis
- Module 11: Maintenance & Inventory Alignment (09:45 – 11:15) • Linking spares with work orders • Stock-out prevention and auto-replenishment logic
- Module 12: Workshop – CMMS Data Improvement Plan (11:30 – 01:00) • Analyze existing CMMS reports and recommend actions

Day 5: Defect Elimination and Continuous Improvement

- Module 13: Reliability Improvement Frameworks (07:30 – 09:30) • Defect elimination cycles and feedback loops • KPI dashboards and reliability scorecards
- Module 14: Action Planning for Maintenance Optimization (09:45 – 11:15) • Quick wins vs strategic initiatives • Developing an implementation roadmap
- Module 15: Final Workshop – Maintenance & Spares Action Plan (11:30 – 01:00) • Create a tailored improvement plan for your plant

Certification

Participants will receive a Certificate of Completion in Maintenance and Spares Optimisation, Failure Management & Investigations, validating their ability to enhance asset reliability, manage failure events, and streamline spares inventory management in industrial environments.

Why Choose MAWA Events

- **Global Expertise:** More than 17 years of experience in professional training and consulting.
- **Industry-Leading Faculty:** Courses delivered by seasoned professionals with hands-on experience.
- **Practical Insights:** Learn to turn theory into actionable strategies for real-world business impact.
- **Client-Focused Solutions:** Customized programs designed to achieve your organisation’s unique goals.

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