MAWA EVENTS

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

Phone: +601116373203 | **Email:** info@mawaevents.net

ASSET RISK, RELIABILITY ENGINEERING & MANAGEMENT

"Maximize Asset Performance Through Advanced Risk and Reliability Strategies"

Schedule

Date	Venue	Fees (Face-to-Face)
06 – 10 Jul 2026	London, UK	USD 3495 per delegate

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

Introduction

This comprehensive 5-day training equips asset management professionals with advanced knowledge in risk assessment, reliability engineering, and management strategies. Participants will explore how to optimize asset performance, minimize failures, and extend asset life using proven reliability techniques and risk-based decision-making frameworks.

Through a blend of theoretical insights and practical tools, the course empowers attendees to identify critical assets, assess operational risks, and implement effective reliability-centered maintenance (RCM) and asset management systems aligned with global standards.

Objectives

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

- Understand asset management frameworks and global best practices
- Apply risk assessment techniques to prioritize asset interventions
- Use reliability engineering methods to improve system performance
- Develop and implement reliability-centered maintenance strategies
- Enhance decision-making through data-driven asset management

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Why Attend

- Gain cutting-edge skills in risk and reliability management
- Improve asset performance, availability, and lifespan
- Reduce unplanned downtime and operational costs
- Apply global standards like ISO 55000 and RCM frameworks
- Work with expert instructors and learn from industry examples

Target Audience

This program is designed for:

- Asset managers and engineers
- Reliability and maintenance professionals
- Risk managers and operations managers
- Plant managers and production supervisors
- Anyone involved in asset performance and lifecycle management

Individual Benefits

Key competencies that will be developed include:

- Advanced understanding of asset risk and reliability principles
- Practical skills in reliability-centered maintenance
- Ability to apply risk-based decision-making
- Enhanced use of data analytics for asset performance improvement
- Strengthened leadership in asset management programs

Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Improved asset reliability and reduced failures
- Optimized maintenance strategies and resource allocation
- Stronger alignment with organizational performance goals
- Increased cost savings through efficient asset management
- Enhanced compliance with industry standards and best practices

Instructional Methodology

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

- Strategy Briefings – Deep dive into asset risk, reliability engineering, and management frameworks
- Case Studies – Real-world examples of asset failures, risk analysis, and reliability improvements
- Workshops – Hands-on exercises for risk assessments, failure mode analysis, and maintenance strategies
- Peer Exchange – Group discussions on common challenges and shared lessons in asset management
- Tools – Templates for risk registers, FMEA (Failure Mode and Effects Analysis), and RCM plans

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Course Outline

Detailed 5-Day Course Outline

Training Hours: 7:30 AM – 3:30 PM **Daily Format:** 3–4 Learning Modules | Coffee breaks: 09:30 & 11:15 | Lunch Buffet: 01:00 – 02:00

Day 1: Introduction to Asset Management and Reliability Engineering

Module 1: Asset Management Fundamentals (07:30 – 09:30)

- Overview of asset management principles and ISO 55000
- The role of reliability in asset performance
- Key challenges in modern asset management

Module 2: Introduction to Reliability Engineering (09:45 – 11:15)

- Definitions and concepts in reliability
- Failure patterns and reliability metrics
- Data collection and analysis for reliability

Module 3: Risk Management in Asset Operations (11:30 – 01:00)

- Identifying and assessing asset-related risks
- Risk registers and prioritization techniques
- Integrating risk management into asset planning

Day 2: Reliability-Centered Maintenance (RCM)

Module 4: Principles of RCM (07:30 – 09:30)

- Introduction to RCM methodologies
- Identifying critical assets and failure modes
- Developing an RCM program

Module 5: Failure Mode and Effects Analysis (FMEA) (09:45 – 11:15)

- Conducting FMEA for asset risk analysis
- Using FMEA results for maintenance planning
- Case studies of successful FMEA applications

Module 6: Preventive and Predictive Maintenance (11:30 – 01:00)

- Designing preventive maintenance schedules
- Implementing predictive maintenance techniques
- Leveraging condition monitoring technologies

Day 3: Advanced Reliability Tools and Techniques

Module 7: Root Cause Analysis (07:30 – 09:30)

- Investigating asset failures
- Tools and methods for root cause analysis
- Corrective and preventive actions

Module 8: Reliability Modeling and Simulation (09:45 – 11:15)

- Introduction to reliability block diagrams and modeling
- Monte Carlo simulation for asset reliability
- Using software tools for reliability analysis

Module 9: Life Cycle Costing (LCC) (11:30 – 01:00)

- Understanding LCC concepts and applications
- Calculating and comparing asset life cycle costs
- Using LCC for investment and replacement decisions

Day 4: Performance Optimization and Continuous Improvement

Module 10: Performance Measurement (07:30 – 09:30)

- Setting KPIs for asset performance
- Analyzing performance data and trends
- Driving improvement with performance metrics

Module 11: Continuous Improvement Strategies (09:45 – 11:15)

- Applying Lean and Six Sigma in asset management
- Engaging teams in continuous improvement
- Case studies of successful optimization programs

Module 12: Digital Transformation in Asset Management (11:30 – 01:00)

- Role of digital technologies and IoT
- Using data analytics and AI for reliability
- Preparing for Industry 4.0 in asset management

Day 5: Integration and Final Planning

Module 13: Developing an Asset Management Strategy (07:30 – 09:30)

- Aligning asset management with business goals
- Creating an integrated strategy roadmap
- Assigning roles and responsibilities

Module 14: Group Workshop and Presentation (09:45 – 11:15)

- Group project on risk and reliability improvement
- Presenting solutions and receiving peer feedback
- Actionable takeaways for participants

Module 15: Course Review and Next Steps (11:30 – 01:00)

- Recap of key concepts and tools
- Individual action planning for implementation
- Final Q&A and wrap-up

Certification

Participants will receive a **Certificate of Completion in Asset Risk, Reliability Engineering & Management**, validating their advanced expertise in optimizing asset performance, applying risk-based strategies, and implementing reliability-centered maintenance aligned with industry standards.

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Why Choose MAWA Events

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- **Industry-Leading Faculty:** Courses delivered by seasoned professionals with hands-on experience.
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