MAWA EVENTS

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

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PHYSICAL ASSET LIFECYCLE MANAGEMENT (ISO 5500X)

"Integrating Strategy, Risk, and Performance Across the Entire Asset Lifecycle"

Schedule

Date	Venue	Fees (Face-to-Face)
09 – 13 Feb 2026	Istanbul, Turkey	USD 3495 per delegate

Introduction

Effective physical asset lifecycle management is critical for asset-intensive organizations aiming to maximize value from infrastructure, equipment, and facilities over the long term. The ISO 5500X series provides a structured, risk-based framework to optimize asset performance, support financial planning, and ensure safety and sustainability throughout the asset lifecycle.

This intensive 5-day course guides participants through the principles and practices of managing physical assets from acquisition to disposal. Drawing on ISO 55000, ISO 55001, and ISO 55002 standards, the course offers practical tools to align asset decisions with organizational strategy and risk tolerance. Participants will gain the knowledge to implement and sustain a robust lifecycle approach that balances cost, performance, and risk.

Objectives

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

- Understand the structure and objectives of the ISO 5500X series
- Apply lifecycle thinking to asset planning, operation, and renewal
- Develop strategies for acquisition, utilization, maintenance, and disposal
- Integrate risk, cost, and performance into asset-related decisions
- Align asset lifecycle activities with organizational goals and stakeholder needs

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Why Attend

- Gain a complete understanding of ISO 5500X and lifecycle-based asset management
- Improve asset utilization, reliability, and long-term value
- Learn to build and optimize asset lifecycle models and plans
- Reduce total cost of ownership while enhancing service delivery
- Strengthen compliance, sustainability, and risk mitigation efforts

Target Audience

This program is designed for:

- Asset managers, planners, and engineers
- Maintenance, reliability, and operations professionals
- Capital project managers and investment planners
- Risk, compliance, and audit teams
- Anyone responsible for physical assets in energy, infrastructure, manufacturing, or utilities

Individual Benefits

Key competencies that will be developed include:

- Lifecycle cost analysis and planning
- Asset criticality assessment and risk-based prioritization
- Integration of lifecycle decisions into daily operations
- Confidence in applying ISO 5500X standards to real-world assets
- Enhanced ability to align maintenance, renewal, and investment activities

Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Improved asset lifecycle strategies leading to reduced costs and downtime
- More transparent and evidence-based decision-making
- Enhanced alignment between asset management and business strategy
- Strengthened compliance with international standards and regulations
- Greater stakeholder confidence in asset governance and performance

Instructional Methodology

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

- Strategy Briefings – Lifecycle asset management principles and ISO clauses
- Case Studies – Real-world asset lifecycle practices across sectors
- Workshops – Asset lifecycle modeling, criticality scoring, and risk mapping
- Peer Exchange – Discussions on shared challenges and lessons learned
- Tools – Lifecycle costing templates, condition assessment matrices, and planning models

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Course Outline

DETAILED 5-DAY COURSE OUTLINE

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

Day 1: Fundamentals of Asset Lifecycle Management

- Module 1: Introduction to ISO 5500X and Lifecycle Thinking (07:30 – 09:30) • Overview of ISO 55000, 55001, and 55002 • Definition and phases of the asset lifecycle • Why lifecycle management matters
- Module 2: Strategic Asset Management Planning (09:45 – 11:15) • Linking asset planning to organizational objectives • Long-term planning horizons and demand forecasting • Building the Strategic Asset Management Plan (SAMP)
- Module 3: Asset Register and Hierarchy (11:30 – 01:00) • Creating and managing asset hierarchies • Data requirements and integrity • Lifecycle stage classification and transitions
- Module 4: Workshop – Asset Lifecycle Map (02:00 – 03:30) • Participants define and diagram lifecycle stages for selected assets

Day 2: Acquisition, Commissioning, and Utilization

- Module 1: Asset Acquisition Planning (07:30 – 09:30) • CapEx planning and procurement strategies • Whole-of-life costing and business case development • Risk-based justification of new assets
- Module 2: Commissioning and Handover (09:45 – 11:15) • Design-for-maintenance and reliability principles • Acceptance testing and documentation requirements • Transition to operations
- Module 3: Utilization and Operational Performance (11:30 – 01:00) • Measuring asset performance and availability • Condition monitoring and degradation modeling • Feedback loops to improve utilization
- Module 4: Workshop – Asset Commissioning Plan (02:00 – 03:30) • Teams create a commissioning and handover checklist

Day 3: Maintenance, Monitoring, and Mid-Life Interventions

- Module 1: Preventive and Predictive Maintenance (07:30 – 09:30) • Risk-based maintenance planning • Maintenance strategies: TPM, RCM, PdM • Interval optimization and condition-based triggers
- Module 2: Mid-Life Upgrades and Modifications (09:45 – 11:15) • Refurbishment vs. replacement decisions • Asset performance enhancement strategies • Capturing and managing configuration changes
- Module 3: Asset Health and Risk Monitoring (11:30 – 01:00) • KPIs, scorecards, and condition indicators • Leading vs. lagging indicators • Asset risk registers and escalation protocols
- Module 4: Workshop – Maintenance Strategy Design (02:00 – 03:30) • Develop and present maintenance strategies for real assets

Day 4: Renewal, Decommissioning, and Disposal

- Module 1: Planning for Renewal and Replacement (07:30 – 09:30) • Asset renewal triggers and end-of-life analysis • Modeling asset deterioration and failure risk • Investment decision-making
- Module 2: Decommissioning and Asset Retirement (09:45 – 11:15) • Regulatory and environmental considerations • Documentation and stakeholder communication • Safe disposal and sustainability
- Module 3: Capturing Lessons Learned (11:30 – 01:00) • Root cause analysis and failure feedback • Knowledge capture and continuous improvement • Closing the loop on lifecycle performance
- Module 4: Workshop – Renewal Planning Exercise (02:00 – 03:30) • Teams analyze a renewal scenario and recommend next steps

Day 5: Integration, Optimization, and Certification Readiness

- Module 1: Integrated Lifecycle Management Systems (07:30 – 09:30) • Connecting asset data, planning, and performance systems • Use of CMMS, EAM, and digital twins • Role of analytics in lifecycle decision-making
- Module 2: Lifecycle Costing and Financial Planning (09:45 – 11:15) • Total Cost of Ownership (TCO) • Cost-risk-performance trade-offs • Budgeting across asset stages
- Module 3: Preparing for ISO 55001 Certification (11:30 – 01:00) • Implementation gaps and audit expectations • Documentation, KPIs, and readiness checklists • Building a lifecycle-based asset management system
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Module 4: Final Wrap-Up and Certification (02:00 – 03:30) • Participant action plans and team presentations • Trainer feedback and open Q&A • Certification ceremony

Certification

Participants will receive a Certificate of Completion in Physical Asset Lifecycle Management (ISO 5500X), validating their ability to apply internationally recognized lifecycle asset management practices to enhance performance, reduce risk, and support long-term organizational value.

Why Choose MAWA Events

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