QUEST
Professional Center

PROFESSIONAL TRAINING COURSE

Course No. 1301

Asset Performance Management (APM) Training Course

RELIABILITY & ASSET MANAGEMENT
INDUSTRIAL ENGINEERING, MAINTENANCE & OPERATIONS

DURATION
5 Days

DELIVERY
Classroom

Course Overview

The Asset Performance Management (APM) Training Course provides a comprehensive professional framework for managing asset performance throughout the asset lifecycle. The course equips participants with practical methodologies for improving asset reliability, availability, utilization, maintainability, risk management, and overall operational performance. It focuses on connecting asset-level performance with organizational objectives, enabling informed decisions across engineering, maintenance, operations, and management functions.

Asset Performance Management is essential for organizations that depend on physical assets to deliver safe, reliable, efficient, and sustainable operations. Effective APM enables organizations to move beyond traditional maintenance activities and establish an integrated approach that considers asset health, criticality, risk, performance, lifecycle costs, maintenance effectiveness, and operational requirements. This approach supports better prioritization of resources and stronger alignment between technical asset management and business performance.

The course covers the core principles and practices required to establish and improve an APM framework, including asset criticality assessment, performance measurement, reliability improvement, maintenance optimization, asset health monitoring, risk-based decision making, lifecycle management, performance indicators, and data-driven asset strategies. Participants will explore how asset information can be converted into actionable insights and how performance gaps can be identified, prioritized, and addressed systematically.

Through practical exercises, case studies, performance assessments, and asset management workshops, participants will learn how to evaluate asset performance, identify improvement opportunities, establish meaningful performance indicators, and develop practical action plans. The course also demonstrates how APM can be integrated with reliability engineering, maintenance management, condition monitoring, risk management, and strategic asset management to support operational excellence and sustainable organizational performance.

Objectives

- Analyze the fundamental principles of Asset Performance Management and its relationship with asset reliability, maintenance, risk, and organizational performance.
- Develop a structured Asset Performance Management framework covering asset criticality,

performance, reliability, risk, and lifecycle considerations.

- Evaluate asset performance using appropriate technical, operational, financial, and maintenance performance indicators.
- Apply asset criticality and risk assessment methodologies to prioritize assets and improvement opportunities.
- Assess asset health, reliability, availability, maintainability, and performance trends using relevant operational and maintenance data.
- Design performance improvement strategies that address identified asset performance gaps and operational risks.
- Improve maintenance effectiveness by aligning maintenance strategies with asset criticality, failure behavior, condition, and business requirements.
- Implement data-driven approaches for monitoring asset health, identifying performance deterioration, and supporting maintenance decisions.
- Strengthen the integration of reliability engineering, maintenance, operations, and asset management within an APM framework.
- Develop practical performance indicators and dashboards for monitoring asset effectiveness and improvement progress.
- Evaluate lifecycle risks, costs, and performance requirements to support asset investment, replacement, renewal, and optimization decisions.
- Develop an actionable APM improvement plan that supports continuous performance improvement and organizational objectives.

Who Should Attend

The Asset Performance Management (APM) Training Course is designed for professionals responsible for asset performance, reliability, maintenance, engineering, operations, risk management, and lifecycle decision making. It is particularly suitable for Asset Managers, Asset Performance Managers, Reliability Engineers, Maintenance Engineers, Reliability Managers, Maintenance Managers, Engineering Managers, Plant Engineers, Operations Engineers, Equipment Engineers, Maintenance Planners, Condition Monitoring Specialists, and Asset Management Specialists.

The course is also highly relevant to Operations Managers, Plant Managers, Technical Services Managers, Engineering Directors, Maintenance Superintendents, Reliability Specialists, Performance Improvement Professionals, Risk Managers, Project Managers, and professionals

involved in asset strategy, maintenance optimization, capital planning, operational excellence, and lifecycle management. It is especially valuable for multidisciplinary teams responsible for improving the performance and utilization of critical physical assets.

Executives, senior managers, project leaders, consultants, and technical decision makers will benefit from understanding how APM connects technical asset performance with business priorities, risk exposure, operational continuity, and lifecycle value. The course can be applied across manufacturing, energy, utilities, transportation, mining, infrastructure, petrochemicals, oil and gas, power generation, and other asset-intensive organizations.

Learning Outcomes

- Explain the principles, objectives, components, and organizational value of Asset Performance Management.
- Assess asset performance using reliability, availability, maintainability, utilization, maintenance, risk, and operational indicators.
- Establish asset criticality categories based on operational impact, risk, consequence, and business importance.
- Identify asset performance gaps using maintenance history, operational data, condition information, and performance trends.
- Develop asset performance indicators that provide meaningful insight into reliability, maintenance effectiveness, and operational performance.
- Analyze asset health and deterioration trends to support proactive maintenance and reliability decisions.
- Develop risk-based asset improvement priorities that focus resources on the most critical performance issues.
- Evaluate maintenance strategies against asset criticality, failure behavior, condition, and operational requirements.
- Integrate condition monitoring, reliability analysis, maintenance data, and operational information into asset performance decisions.
- Develop practical strategies for improving asset availability, reliability, maintainability, utilization, and lifecycle performance.
- Evaluate lifecycle performance, risks, and costs to support asset renewal, replacement, modification, and investment decisions.

- Prepare an actionable Asset Performance Management improvement plan with priorities, responsibilities, performance measures, and follow-up mechanisms.

Course Outline

DAY 01

Foundations of Asset Performance Management

- Introduction to Asset Performance Management and its role in organizational performance
- Relationship between asset management, asset performance, reliability, maintenance, operations, and risk
- Asset lifecycle perspective and performance requirements throughout the asset lifecycle
- Asset performance drivers and factors affecting operational effectiveness
- Asset hierarchy, asset registers, equipment structures, and critical asset identification
- Understanding asset health, reliability, availability, maintainability, utilization, and productivity
- Strategic versus operational Asset Performance Management
- Roles and responsibilities of asset, maintenance, reliability, engineering, and operations teams
- Establishing an integrated APM operating framework

> PRACTICAL APPLICATION
>
> Develop a basic APM framework for a representative asset-intensive organization

DAY 02

Asset Criticality, Risk and Performance Assessment

- Principles of asset criticality assessment
- Identifying critical assets and defining criticality criteria
- Operational, safety, environmental, financial, and reputational consequences of asset failure
- Risk-based asset prioritization and decision making
- Asset performance assessment methodologies
- Reliability, availability, maintainability, utilization, and effectiveness indicators
- Identifying asset performance gaps and operational constraints

DAY 02 — CONTINUED

- Analyzing asset failure history, maintenance history, and operational trends
- Establishing asset health and performance categories

PRACTICAL APPLICATION

Conduct an asset criticality and performance assessment and establish improvement priorities

DAY 03

Reliability, Maintenance and Asset Health Management

- Integrating reliability engineering with Asset Performance Management
- Reliability improvement principles and failure behavior analysis
- Connecting asset failure modes with maintenance strategies
- Preventive, predictive, condition-based, and corrective maintenance within APM
- Condition monitoring and asset health assessment
- Using inspection, monitoring, maintenance, and operational data to identify deterioration
- Maintenance effectiveness and maintenance strategy optimization
- Reliability-Centered Maintenance and its relationship with APM
- Root Cause Analysis, FMEA, FMECA, and criticality analysis as supporting methodologies

PRACTICAL APPLICATION

Evaluate the performance of a critical asset and develop an integrated reliability and maintenance improvement strategy

DAY 04

Performance Measurement, Data and Decision Support

- Designing Asset Performance Management indicators and measurement frameworks
- Leading and lagging performance indicators for asset management
- Key indicators for reliability, availability, maintenance, downtime, utilization, and asset health
- Asset performance dashboards and management reporting
- Data quality, asset information, maintenance records, and operational data integration

DAY 04 — CONTINUED

- Using historical and real-time information to support asset performance decisions
- Identifying performance trends, deterioration patterns, and emerging risks
- Data-driven prioritization of maintenance and improvement activities
- Evaluating lifecycle cost, risk, performance, and value considerations

PRACTICAL APPLICATION

Develop an APM performance dashboard and use asset data to identify improvement opportunities

DAY 05

APM Strategy, Lifecycle Optimization and Implementation

- Developing an organizational Asset Performance Management strategy
- Aligning asset performance objectives with business and operational priorities
- Lifecycle decision making: operate, maintain, modify, refurbish, replace, or retire
- Integrating APM with strategic asset management and capital planning
- Developing asset improvement programs and investment priorities
- Establishing governance, accountability, review mechanisms, and performance ownership
- Managing APM implementation and organizational change
- Developing continuous improvement processes based on asset performance results
- Establishing APM roadmaps, priorities, performance targets, and action plans

FINAL WORKSHOP

Complete an end-to-end APM assessment and develop a practical Asset Performance Management improvement roadmap

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Register or Request More Information

Course page: https://quest-training.com/courses/asset-performance-management-apm-training-course
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