



Develop and Enhance Maintenance Management Strategies

24 – 28 January 2027
Cairo (Egypt)



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Ref: 16186_1009932 **Date:** 24 – 28 January 2027 **Location:** Cairo (Egypt) **Fees:** 4000 Euro

Introduction:

In today's asset-intensive industries, effective maintenance strategies are critical for maximizing operational efficiency and minimizing downtime. The Develop and Enhance Maintenance Management Strategies training course equips professionals with advanced tools and frameworks to manage and optimize maintenance functions.

The Develop and Enhance Maintenance Management Strategies program integrates strategic, operational, and technical elements of maintenance management to align with business performance objectives. Participants will explore modern maintenance practices, develop comprehensive failure management programs, and implement auditing and benchmarking techniques to support continuous improvement.

From condition-based monitoring to predictive maintenance, the Develop and Enhance Maintenance Management Strategies course provides essential methodologies to sustain a competitive advantage. It emphasizes the integration of Computerized Maintenance Management Systems CMMS and aligning maintenance strategies with corporate objectives. Attendees will gain the insights and competencies to lead high-performance maintenance operations.

Targeted Groups:

This Develop and Enhance Maintenance Management Strategies training targets professionals seeking specialized knowledge and skills:

- Maintenance managers and supervisors.
- Reliability and asset management engineers.
- Mechanical and electrical engineers.
- CMMS administrators and planners.
- Plant and operations managers.
- Facilities and infrastructure coordinators.
- Technical consultants and engineering advisors.
- Project managers oversee maintenance functions.
- Professionals transitioning into maintenance leadership roles.
- Auditors and analysts are involved in evaluating maintenance performance.

Course Objectives:

Participants will achieve the following objectives by the Develop and Enhance Maintenance Management Strategies course:

- Understand the evolution and importance of maintenance management.
- Analyze the strategic role of maintenance in achieving business goals.
- Identify, classify, and document equipment by international standards.
- Develop effective maintenance policies aligned with asset criticality.
- Prioritize maintenance tasks and optimize job planning workflows to ensure efficient operations.
- Develop and implement effective failure management programs utilizing root cause analysis.
- Apply condition-based and predictive maintenance techniques.
- Design and implement effective work scheduling and backlog control.
- Evaluate and benchmark maintenance performance using KPIs.
- Conduct maintenance audits and translate findings into improvements.
- Integrate auditing and benchmarking with performance measurement systems.
- Create a maintenance scorecard to ensure strategic alignment and effective tracking.
- Use analytical reports to drive evidence-based maintenance decisions.

Targeted Competencies:

Participants will gain the following competencies during the Develop and Enhance Maintenance Management Strategies program:

- Strategic thinking in maintenance planning.
- Asset classification and CMMS configuration.
- Failure analysis and corrective action planning.
- Maintenance task scheduling and resource allocation.
- Work prioritization and backlog control.
- Performance measurement and reporting.
- Maintenance auditing and benchmarking techniques.
- KPI-driven maintenance improvement strategies.
- Risk-based and predictive maintenance planning.
- Cross-functional communication and coordination.

Course Content:

Unit 1: Modern Maintenance Management Practice in Perspective:

- Understand the role of maintenance in today's asset-intensive industries.
- Define equipment classification and identification principles.
- Explore how maintenance supports core business functions.
- Analyze the evolution of maintenance from a reactive to a predictive approach.
- Identify how maintenance drives profitability and business performance.
- Understand the development cycle of a maintenance strategy.
- Differentiate between business, operational, and maintenance performance areas.
- Establish maintenance objectives that align with the corporate vision.
- Assign clear roles and accountabilities in maintenance systems.
- Learn CMMS data requirements and system architecture.
- Identify equipment by type, function, and criticality.
- Explore the bill of materials BoM and part numbering conventions.
- Define functional locations for hierarchical asset structures.
- Structure and classify documents supporting maintenance planning.

Unit 2: Maintenance Policies and Logistics Planning:

- Develop standardized maintenance management policies.
- Conduct equipment criticality grading to prioritize assets.
- Define policies for job documentation and work order design.
- Identify job information needs for efficient task execution.
- Prioritize maintenance tasks using risk-based methods.
- Plan logistics for spare parts, tools, and consumables.
- Perform logistics support analysis LSA for maintenance activities.
- Prepare detailed maintenance task plans with a defined scope.
- Estimate maintenance work duration and resources.
- Determine appropriate maintenance levels preventive, corrective, overhaul.
- Organize supporting documents and technical manuals.
- Assess the equipment, personnel, and tools required for the planned work.
- Develop organizational structures and competency matrices.
- Plan training and development for maintenance staff.

Unit 3: Failure Management Programme Development:

- Identify functional roles and performance standards of equipment.
- Define functional failures and potential failure modes.
- Understand the effects and consequences of each failure.
- Formulate failure management policies tailored to the criticality of each component.
- Differentiate between age-related and random failure patterns.
- Develop restoration and discard tasks for preventive maintenance.
- Identify and apply various condition-based maintenance techniques.
- Introduce failure-finding tasks for protective systems.
- Use Reliability-Centered Maintenance RCM to guide policy development.
- Propose routine maintenance strategies for different asset classes.
- Structure and categorize routine maintenance into logical formats.
- Create corrective maintenance plans based on failure analysis.
- Forecast logistics requirements for managing failure scenarios.
- Implement policies within organizational workflows and CMMS.

Unit 4: Work Planning, Scheduling, and Control:

- Define defects, deviations, and notifications in maintenance workflows.
- Design notification processes with clear roles and rules.
- Establish priority rules for incoming work requests.
- Develop and refine a weekly master schedule.
- Align the schedule with business and operational constraints.
- Categorize and analyze outstanding maintenance workload.
- Assess technician availability and resource constraints.
- Evaluate equipment utilization windows and access limitations.
- Draft and review the master schedule collaboratively.
- Finalize implementation plans and distribute work packages.
- Manage maintenance backlog efficiently and transparently.
- Coordinate project-based maintenance using CPM tools.
- Prepare detailed project schedules and cost forecasts.
- Allocate resources and materials for complex interventions.

Unit 5: Information and Performance Management:

- Understand the role of information in decision-making for maintenance.
- Differentiate between strategic, operational, and tactical information needs.
- Design information systems supporting multiple management levels.
- Identify workload KPIs: task completion rate, backlog size.
- Evaluate planning KPIs: scheduling compliance, job accuracy.
- Measure effectiveness KPIs: MTBF, availability, reliability.
- Analyze cost KPIs: maintenance cost per asset, budget variance.
- Develop management reports tailored to stakeholders.
- Use dashboards and CMMS reports to monitor real-time performance.
- Drive data-driven improvements across maintenance processes.

Final Insights & Key Takeaways:

Strategic maintenance management is essential for achieving operational excellence and asset longevity. This Develop and Enhance Maintenance Management Strategies course equips professionals with the frameworks, tools, and practices to align maintenance functions with corporate goals. Auditing, benchmarking, and data analytics are key pillars of sustainable maintenance improvement. Participants will leave with the skills to drive reliability, optimize resources, and contribute to organizational success.