



Developing Maintenance Strategies: Failure Management & CMMS

1 – 5 August 2027
Dubai (UAE)



Developing Maintenance Strategies: Failure Management & CMMS

Ref: 16186_1010049 **Date:** 1 – 5 August 2027 **Location:** Dubai (UAE) **Fees:** 4900 Euro

Developing Maintenance Strategies: Failure Management, Condition Monitoring and CMMS is a 5-day course for maintenance supervisors, planners and reliability engineers who must turn asset data into a written maintenance strategy. You classify assets, set failure management policies, choose condition-based and predictive tasks, structure the CMMS and pick KPIs, and you leave with a Maintenance Strategy Plan for your own plant. The course is delivered by Mercury Training Center.

About This Course

Many sites run preventive tasks that nobody can justify while critical equipment still fails without warning. This course answers that gap. You should already plan, supervise or analyze maintenance work and read work orders in a CMMS. Each day you apply the method to sample assets, then to equipment from your own site.

Who It Is For

- People who set maintenance policy and budgets for a plant, a fleet or a facility.
- People who plan and schedule maintenance work and keep the CMMS data accurate.
- People who analyze failures and recommend changes to maintenance tasks.
- People who supervise maintenance crews and own the weekly work schedule.
- People who report maintenance performance to operations or asset management.

This course is not for readers new to maintenance, who are better served by an introductory course on maintenance fundamentals, or for readers who need to audit and benchmark an existing maintenance function over two weeks, who are better served by a longer course on maintenance auditing and benchmarking.

Competencies You Will Build

- Asset Criticality Ranking: you rank equipment by consequence of failure and use the ranking to decide where effort goes.
- Failure Policy Design: you match each failure mode to a restoration, discard, condition-based or failure-finding task.
- Condition Monitoring Selection: you choose the monitoring technique and interval that gives warning before a functional failure.
- CMMS Structuring: you build functional locations, equipment records and task lists that planners can use.
- Work Prioritization: you apply clear priority rules to notifications and keep the backlog under control.
- KPI-Based Review: you read workload, planning, effectiveness and cost indicators and act on them.

What You Will Be Able to Do

By the end of the course you will be able to:

- From an equipment list, build a criticality ranking that separates assets needing a full strategy from those run to failure.
- Given the functions and failure modes of a critical asset, write failure management policies based on Reliability-Centered Maintenance logic.
- Using failure patterns and P-F intervals, set condition-based task frequencies that give warning before failure.
- From current CMMS records, design a functional location hierarchy, equipment classes and task lists that support planning.
- Given a week of notifications and resources, prepare a prioritized master schedule and a backlog report.
- Using a set of maintenance KPIs, produce a one-page management report that links maintenance results to business objectives.

Course Content

Day 1: Strategy Foundations and Asset Criticality

- Maintenance Strategy Development Cycle From Business Objectives to Maintenance Objectives
- Business, Operations and Maintenance Key Performance Areas
- Equipment Criticality Grading Using Consequence of Failure
- Roles and Accountabilities in the Maintenance Function
- Evolution From Reactive to Predictive Maintenance Practice

Day 2: Failure Management Policies

- Equipment Functions, Performance Standards and Functional Failures
- Failure Modes, Effects and Consequences Analysis for Critical Assets
- Age-Related and Random Failure Patterns
- Reliability-Centered Maintenance Decision Logic for Policy Selection
- Restoration, Discard and Failure-Finding Tasks for Protective Systems

Day 3: Condition-Based and Predictive Maintenance

- P-F Interval and Inspection Frequency Setting
- Vibration, Thermography, Oil Analysis and Ultrasound Technique Selection
- Root Cause Analysis for Repeat Failures
- Corrective Maintenance Planning From Failure Analysis
- Spare Parts and Logistics Support Analysis for Failure Scenarios

Day 4: CMMS Structure, Planning and Scheduling

- Functional Location Hierarchy and Equipment Classification in the CMMS
- Bill of Materials and Part Numbering Conventions
- Work Order Design and Job Information Requirements
- Notification Priority Rules and Weekly Master Schedule
- Backlog Measurement and Resource Availability Review

Day 5: Practice on Your Own Maintenance Strategy

- Exercise: Criticality Ranking of Your Own Equipment List
- Exercise: Failure Policies for One Critical Asset Using RCM Logic
- Exercise: Condition Monitoring Task Set and Intervals for That Asset
- Workload, Planning, Effectiveness and Cost KPI Selection and Reporting
- Completing and Presenting the Maintenance Strategy Plan

Case Studies and Exercises

These are suggested activities that the trainer adapts to the group.

- Case study: a gas compression station with repeated seal failures; you decide which failure modes need condition-based tasks and which need redesign.
- Case study: a hospital building with chillers, generators and lifts; you rank criticality and choose what to run to failure.
- Exercise: a water treatment plant CMMS with flat equipment lists; you design the functional location hierarchy and task lists.
- Exercise: a food production line with a growing backlog; you apply priority rules and build next week's master schedule.

What You Take Back

You take back a Maintenance Strategy Plan for one area of your site. In your first month back you use it to review existing preventive tasks with your team, adjust CMMS task lists and agree the first KPI report with your manager.

- Criticality ranking of the equipment in scope.
- Failure management policies and condition monitoring tasks for the critical assets.
- CMMS structure changes and priority rules.
- A KPI set with targets and a reporting format.

Quick Answers FAQ

What should I know before a course on developing maintenance strategies?

You should already plan, supervise or analyze maintenance work and be able to read work orders and equipment records in a CMMS. No reliability qualification is needed; failure management and RCM logic are built up from the start.

How does developing maintenance strategies differ from a maintenance auditing and benchmarking course?

Developing maintenance strategies builds the strategy: criticality, failure policies, condition monitoring and CMMS structure. An auditing and benchmarking course measures an existing maintenance function against others and sets improvement targets; it assumes a strategy is already in place.

When is condition-based maintenance better than time-based maintenance?

Condition-based maintenance is better when a failure gives measurable warning and the P-F interval is long enough to act. Time-based tasks suit failures that rise with age. Random failures with no warning call for failure-finding tasks or redesign.

What do I take back from developing maintenance strategies training?

You take back a Maintenance Strategy Plan for one area of your site: a criticality ranking, failure policies, condition monitoring tasks, CMMS structure changes and a KPI set, ready to review with your team.

For Your Manager

After this course the team member can rank assets by criticality, set failure management policies, choose condition monitoring tasks and structure CMMS data so planners can use it. They return with a Maintenance Strategy Plan for one area of the site, first used to review existing preventive tasks and to agree a monthly maintenance KPI report.