
CMMS Master Data and Asset Hierarchy Management Training Course

12 – 16 September 2027
Kuala Lumpur





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Programme Summary

CMMS master data and asset hierarchy management is a one-week training course for maintenance and asset managers at advanced level, culminating in a data integrity improvement plan for their own maintenance system. Many sites run a capable CMMS or EAM platform on records that are duplicated, inconsistently named or missing failure history, so reports and reliability studies cannot be trusted. The programme rebuilds the data foundation, from hierarchy and taxonomy to coding, cataloguing and governance, using real system extracts. Mars Training Centre UK delivers this programme in CMMS master data and asset hierarchy management.

The Business Case

Poor maintenance data has a direct operating cost. Technicians lose time searching for the right asset or part, duplicate spares tie up working capital, and failure records too vague to analyse leave recurring defects unresolved. When the asset register, codes and catalogues are structured and governed, planners, reliability engineers and finance teams work from the same version of the truth.

- Spare Parts Inventory Value: Falls as duplicate and obsolete catalogue items are identified and rationalised.
- Reliability Analysis Quality: Improves when failure modes, causes and actions are coded consistently against a defined taxonomy.
- Audit and Asset Information Readiness: Strengthens through documented data standards, ownership and quality measures.

Principles and Evidence Base

- ISO 14224: Provides the equipment taxonomy and failure mode and cause coding structure applied in Sessions 1 and 2.
- ISO 8000 Data Quality: Frames master data quality characteristics and rules for catalogue and asset records in Sessions 3 and 4.
- ISO 55001 Asset Management: Positions asset information as a managed requirement of the asset management system in Session 4.
- Pareto Analysis: Directs cleansing effort towards the critical assets and high-value spares that matter most in Session 3.



Intended Participants

- Managers accountable for maintenance performance who depend on CMMS reports for decisions.
- Owners of a CMMS or EAM platform responsible for its configuration and data standards.
- Reliability leads who need clean failure history for analysis.
- Materials and stores managers responsible for spare parts catalogues.
- Project leads preparing a system implementation, upgrade or data migration.

The programme serves oil and gas, utilities, manufacturing and facilities organisations.

Learning Outcomes

1. Participants will be able to design an asset hierarchy with functional locations and equipment classes suited to their operation.
2. Participants will be able to construct naming conventions and failure, cause and action code libraries aligned with ISO 14224.
3. Participants will be able to diagnose master data defects using profiling and data quality rules.
4. Participants will be able to prioritise and plan data cleansing and migration activity by criticality and value.
5. Participants will be able to assign data ownership, stewardship and approval roles within a governance model.
6. Participants will be able to justify a data integrity improvement plan with measurable quality indicators.

Programme Structure

Day 1: Asset Hierarchy and Taxonomy Design

How should assets be structured so every record has a clear place?

- Functional Locations Versus Physical Equipment
- ISO 14224 Equipment Taxonomy Levels
- Equipment Classes, Attributes and Templates
- Asset Naming and Tagging Conventions
- Criticality Ranking Linked to the Hierarchy

Day 2: Failure Coding and Work Order Data Capture

How is maintenance history recorded so it can be analysed?

- Failure Mode, Cause and Action Code Libraries
- Work Order Types and Mandatory Fields
- Close-Out Discipline and Technician Feedback
- Downtime and Labour Data Capture Standards
- Linking Work History to Reliability Studies



Day 3: Diagnosing CMMS Master Data Quality

Where are the defects, and which ones matter most?

- Data Profiling and Completeness Checks
- ISO 8000 Quality Characteristics and Rule Writing
- Spare Parts Cataloguing and Duplicate Detection
- Bills of Materials Accuracy Review
- Pareto Prioritisation of Cleansing Effort

Day 4: Data Governance and System Migration

Who keeps the data right once it has been fixed?

- Data Owner, Steward and Approver Roles
- Change Request and Approval Workflows
- ISO 55001 Asset Information Requirements
- Cleansing, Mapping and Migration Planning
- Data Quality Indicators and Dashboards

Day 5: Applying CMMS Master Data and Asset Hierarchy Standards

How do the methods combine into a plan for a participant's own system?

- Hierarchy Review of a Participant Site
- Code Library Gap Assessment
- Quality Rule Testing on a Live Extract
- Peer Review of Governance Arrangements
- Data Integrity Improvement Plan Presentation

Methodology

The programme is run as a data workshop. Participants bring anonymised extracts from their own CMMS or work with prepared datasets from process plant, utility and building portfolios. They profile records, redesign hierarchies and code libraries, and test quality rules, with facilitators reviewing each artefact against the standards introduced in earlier sessions.

- Suggested activity: Restructuring a flat equipment list into a functional location hierarchy.
- Suggested activity: Finding duplicate spare parts in a catalogue of several thousand items.
- Suggested activity: Recoding vague work order descriptions into failure, cause and action codes.



Capstone Output

Each participant completes a data integrity improvement plan for their maintenance system. It contains a target hierarchy, naming and coding standards, prioritised cleansing actions, governance roles and approval workflows, and quality indicators with targets. It is used to secure sponsorship and to direct the data team's work over the following months.

Frequently Asked Questions

Is CMMS master data and asset hierarchy management suitable for managers who are not system specialists?

Yes. It suits maintenance, reliability and materials managers who use CMMS outputs, as well as system owners. It assumes working familiarity with maintenance operations but no programming or database skills.

Which standards underpin CMMS master data and asset hierarchy management in this programme?

It rests on ISO 14224 for taxonomy and failure coding, the ISO 8000 data quality series, ISO 55001 for asset information requirements and Pareto analysis for prioritising cleansing work.

How is the CMMS data integrity improvement plan used at work?

You use it to brief sponsors, assign data owners and stewards, sequence cleansing and migration tasks, and track quality indicators until the agreed targets are met.

How does CMMS master data management differ from a maintenance planning and scheduling programme?

It concentrates on the structure and quality of maintenance records, while planning and scheduling programmes focus on organising work, resources and shutdowns using those records.