

Sustainable Maintenance and Resource Efficiency Training Course

1 – 5 February 2027
Singapore

AGILE LEADERS
Training Center

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Ref: 1832_237208 **Date:** 1 – 5 February 2027 **Location:** Singapore **Fees:** 6500 Euro

Overview

Sustainable Maintenance and Resource Efficiency Training Course is a one-week intermediate course for maintenance, reliability, asset, facilities, operations, and sustainability functions who leave with a Sustainable Maintenance Action Plan. The course connects asset condition and work selection with energy, materials, water, waste, emissions, equipment life, procurement, and lifecycle trade-offs. Participants use measured environmental and resource outcomes to challenge maintenance decisions without replacing reliability or safety requirements. Agile Leaders Training Center delivers this course on sustainable maintenance and resource efficiency.

Who Should Attend

- Functions responsible for maintenance strategy, work selection, and asset performance
- Teams responsible for reliability evidence, failure prevention, and equipment life
- Groups responsible for energy, materials, water, waste, and environmental performance
- Personnel responsible for facilities engineering, utilities, and operational resource use
- Leaders responsible for lifecycle investment, procurement interfaces, and sustainability targets

The course assumes participants already interpret work orders, equipment condition, resource data, or environmental records and leaves out introductory maintenance methods, detailed carbon accounting, environmental certification audits, and equipment-specific repair procedures.

Departments and Industries

The course supports departments and industries that maintain physical assets while managing environmental and resource outcomes.

- Maintenance, reliability, asset management, and engineering
- Environment, sustainability, energy, and utilities management
- Manufacturing, process industries, and power generation
- Facilities, healthcare estates, and commercial property operations
- Transport, logistics, infrastructure, and municipal services

Learning Objectives

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

- Build an environmental and resource baseline for maintenance work.
- Analyze asset condition against energy, materials, waste, and emissions evidence.
- Apply lifecycle criteria to repair, replace, and defer decisions.
- Prioritize maintenance actions by reliability and sustainability value.
- Evaluate procurement, lubrication, spare-parts, and contractor controls.
- Build measurable sustainable maintenance indicators and action plans.

Course Agenda

Day 1: Frame Sustainable Maintenance

- Asset Lifecycle and Sustainability Boundary Map
- ISO 55000:2024 Value and Sustainability Outcome Review
- Maintenance Environmental Aspect and Impact Register
- Resource Dependency and Operational Risk Matrix
- Reliability, Safety, Cost, and Environment Trade-Off Canvas

Day 2: Measure Resource Performance

- Energy, Water, Materials, and Waste Baseline Worksheet
- ISO 50001:2018 Energy Performance Indicator Map
- Equipment Loss and Resource-Intensity Calculation Sheet
- Leakage, Lubrication, Consumables, and Emissions Evidence Register
- Maintenance Sustainability KPI Definition Record

Day 3: Design Maintenance Controls

- Environmental Work-Order Screening Checklist
- Energy-Efficient Inspection and Servicing Decision Tree
- Parts Reuse, Refurbishment, and Material Recovery Matrix
- Hazardous Material and Maintenance Waste Control Plan
- Contractor Method and Environmental Acceptance Criteria

Day 4: Decide Across the Lifecycle

- Repair, Replace, Upgrade, and Defer Lifecycle Comparator
- Asset Life Extension Evidence and Risk Review
- ISO 14001:2026 Continual Improvement Action Cycle
- Sustainable Procurement and Spare-Parts Specification Sheet
- Maintenance Benefit, Cost, Risk, and Environmental Scorecard

Day 5: Practice Sustainable Maintenance

- Suggested Exercise: Build a Maintenance Resource Baseline
- Suggested Exercise: Screen a Work Order for Environmental Impacts
- Suggested Exercise: Compare Repair and Replacement Lifecycle Options
- Suggested Exercise: Prioritize Sustainability Maintenance Actions
- Capstone Exercise: Build the Sustainable Maintenance Action Plan

Practical Exercises

The course uses suggested activities to connect maintenance evidence with measurable resource and environmental decisions.

- Suggested activity: establish energy, water, material, and waste baselines for a manufacturing line or facility system.
- Suggested activity: review a maintenance work package for leakage, consumables, disposal, contractor, and acceptance controls.
- Suggested activity: compare repair, refurbishment, upgrade, and replacement options using reliability, lifecycle, and environmental evidence.
- Suggested activity: build indicators, owners, targets, and review actions for a maintenance sustainability dashboard.

FAQs

Who suits sustainable maintenance training, and what does it assume?

Sustainable maintenance training suits maintenance, reliability, asset, facilities, operations, energy, and sustainability functions that already use work orders, condition evidence, utility data, material records, or environmental information.

How does sustainable maintenance differ from general preventive maintenance training?

Sustainable maintenance evaluates environmental and resource outcomes alongside reliability, safety, cost, and asset life, while general preventive maintenance training primarily focuses on scheduled work that reduces equipment failure and deterioration.

How does resource efficiency influence maintenance decisions?

Resource efficiency influences maintenance decisions by showing how equipment condition, leaks, friction, fouling, consumables, replacement parts, servicing methods, and operating losses affect energy, water, materials, waste, and emissions.

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How can sustainable maintenance extend equipment life?

Sustainable maintenance can extend equipment life by linking condition evidence to timely servicing, contamination control, lubrication, repair quality, refurbishment, operating limits, and lifecycle decisions that avoid unnecessary replacement.

What indicators support sustainable maintenance performance?

Sustainable maintenance indicators can track resource intensity, leaks, avoidable losses, waste, recovered parts, equipment life, repeat work, environmental incidents, and verified benefits from completed maintenance actions.

Conclusion

Participants take back a Sustainable Maintenance Action Plan. The plan links asset condition, resource baselines, environmental aspects, work controls, lifecycle options, procurement interfaces, indicators, owners, and review actions. It changes sustainability from a general intention into traceable maintenance decisions that protect reliability, control resource use, and guide continual improvement.