

STRATEGIC MAINTENANCE & ASSET MANAGEMENT LEADERSHIP



GENTEX[®]
TRAINING CENTER



Introduction

Strategic Maintenance & Asset Management Leadership Training Course prepares leaders to protect asset value and keep critical operations running. Participants learn how to set maintenance strategy, decide where investment pays back, and lead the teams that deliver reliability. The program combines asset management standards with maintenance engineering practice and lifecycle costing. As a result, learners gain a structured way to cut downtime, control cost, and extend asset life. Furthermore, the course strengthens risk governance, contractor management, and the leadership discipline that sustains performance.

Strategic Maintenance & Asset Management Leadership Course Objectives

- Apply asset management principles and the ISO 55000 framework.
- Build asset registers, criticality rankings, and asset lifecycle plans.
- Apply reliability-centred maintenance (RCM) to prioritise maintenance tasks.
- Evaluate preventive, predictive, and condition-based maintenance strategies.
- Use failure mode and effects analysis (FMEA) and root cause analysis (RCA).
- Apply total productive maintenance (TPM) and operator care practices.
- Plan and execute turnarounds, shutdowns, and major outages.
- Apply lifecycle costing, replacement analysis, and capital planning for assets.
- Manage maintenance KPIs including MTBF, MTTR, OEE, and backlog.
- Govern maintenance risk with risk registers, spares strategy, and contractor control.

Course Methodology

- Interactive sessions built on real maintenance and asset cases.

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- Workshops on criticality ranking, RCM decision logic, and lifecycle costing.
- Group work on maintenance plans, KPI sets, and turnaround schedules.
- Hands-on practice with FMEA, RCA, and reliability data analysis.
- Simulation of outage planning and asset failure response.
- Facilitator feedback and peer review on asset management plans.

Who Should Take This Course

- Maintenance managers and reliability engineers.
- Asset managers and plant engineering leaders.
- Operations directors responsible for asset performance.
- Turnaround, shutdown, and outage planners.
- Engineering and facilities managers in asset-intensive sectors.
- Consultants and specialists supporting asset management improvement.

Strategic Maintenance & Asset Management Leadership Course Outlines

Day 1: Asset Management Strategy and ISO 55000

- Asset management concepts and the ISO 55000 framework.
- Asset registers, hierarchies, and data requirements.
- Asset criticality ranking and risk-based prioritisation.
- Asset lifecycle stages and long-term planning.
- Aligning asset strategy with business objectives.
- Roles, governance, and accountability in asset management.
- Case study: an asset management transformation assessed.





Day 2: Maintenance Strategy and Reliability Engineering

- Reliability-centred maintenance (RCM) and decision logic.
- Preventive, predictive, and condition-based maintenance.
- Condition monitoring: vibration, thermography, and oil analysis.
- Failure mode and effects analysis (FMEA) and FMECA.
- Root cause analysis (RCA) methods and corrective actions.
- Total productive maintenance (TPM) and operator care.
- Workshop: building a maintenance strategy for a critical asset.

Day 3: Planning, Scheduling, and Turnaround Leadership

- Work management: planning, scheduling, and execution.
- Maintenance backlog control and prioritisation.
- Shutdown and turnaround scope definition and estimation.
- Turnaround scheduling with critical path analysis.
- Contractor selection, management, and safety control.
- Spare parts strategy and critical spares management.
- Simulation: planning a major turnaround within budget.

Day 4: Cost, Risk, and Performance Management

- Lifecycle costing and whole-life cost analysis.
- Repair versus replace and capital replacement decisions.

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- Maintenance budgeting and cost control practices.
- Maintenance KPIs: MTBF, MTTR, OEE, and availability.
- Reliability data collection, quality, and Weibull analysis.
- Risk registers and asset risk governance.
- Exercise: preparing an asset performance review.

Day 5: Digital Asset Management and Leadership

- Computerised maintenance management systems (CMMS) and EAM platforms.
- Predictive analytics and condition-based monitoring technology.
- Digital twins and asset data governance.
- Building a reliability culture and capability development.
- Leading change in maintenance organisations.
- Continuous improvement and lessons-learned routines.
- Capstone: presenting a strategic asset management plan.

Conclusion

By successfully completing Strategic Maintenance & Asset Management Leadership, participants will gain a practical command of maintenance strategy, asset lifecycle planning, and reliability leadership. They will acquire skills in criticality ranking, RCM decision-making, turnaround governance, and maintenance performance measurement. Gentex Training Center designs the program to help leaders protect asset value, cut downtime, and extend equipment life.

FAQs





Q1 What is the "Strategic Maintenance & Asset Management Leadership" course about?

It covers how to lead maintenance and asset strategy so equipment and facilities stay reliable and productive. The course spans the ISO 55000 framework, criticality ranking, RCM and maintenance tactics, turnaround planning, lifecycle costing, and asset performance measurement.

Q2 What are the key benefits of the "Strategic Maintenance & Asset Management Leadership" course?

You gain a structured way to reduce downtime and control maintenance cost. The course improves maintenance prioritisation, strengthens turnaround and contractor control, sharpens replacement and lifecycle decisions, and gives you KPIs that show reliability improving over time.

Q3 What skills will I gain from the "Strategic Maintenance & Asset Management Leadership" course?

You will develop four core skills: asset management strategy with the ISO 55000 framework, maintenance strategy and reliability engineering, planning and turnaround leadership, and lifecycle costing with risk and performance management.



Q4 What tools, methods, or standards are covered in the "Strategic Maintenance & Asset Management Leadership" course?

The course covers the ISO 55000 asset management framework, criticality ranking, reliability-centred maintenance (RCM), preventive, predictive, and condition-based maintenance, condition monitoring techniques, FMEA and FMECA, root cause analysis (RCA), total productive maintenance (TPM), critical path analysis for turnarounds, lifecycle costing, MTBF, MTTR, OEE, Weibull analysis, risk registers, CMMS and EAM platforms, and digital twins.

Q5 How is the "Strategic Maintenance & Asset Management Leadership" course applied in real-world practice?

Participants apply it to real work such as ranking equipment criticality, redesigning a maintenance plan around failure data, planning a plant turnaround, and preparing a replacement investment case. The same methods support spares strategy reviews and reliability improvement programs.