

ADVANCED MAINTENANCE MANAGEMENT & ASSET PERFORMANCE OPTIMIZATION

London - UK

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\$6,000



GENTEX[®]
TRAINING CENTER



Introduction

Advanced Maintenance Management & Asset Performance Optimization Training Course builds the asset management capability that maintenance leaders, reliability engineers, and asset managers need to move from reactive repair to planned, predictive, and value-driven maintenance. Modern maintenance operates as a business process. It plans work, manages risk, tracks cost across the asset lifecycle, and measures performance against strategy. Weak practice there produces breakdowns that could have been prevented, maintenance budgets that grow without explanation, and assets retired before their useful life ends. This course develops the discipline that prevents those outcomes. It covers asset management frameworks, maturity assessment, risk-based maintenance, lifecycle management, and predictive technology.

Advanced Maintenance Management & Asset Performance Optimization Course Objectives

- Apply the asset management framework and ISO 55000 principles.
- Position maintenance within strategic, tactical, and operational management.
- Design maintenance KPIs, dashboards, and balanced scorecards.
- Assess asset management maturity and build improvement roadmaps.
- Build the cost-benefit business case for maintenance improvement.
- Apply risk-based maintenance and appropriate task selection.
- Apply failure behaviour analysis and criticality assessment.
- Apply lifecycle management, systems engineering, and RAMS requirements.
- Determine lifecycle costs and evaluate replacement and life extension.
- Apply predictive maintenance and smart maintenance technologies.

Course Methodology



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- Interactive lectures with real maintenance and asset management cases.
- Asset management maturity and KPI design workshops.
- Risk-based maintenance and criticality assessment exercises.
- Lifecycle costing, RAMS, and predictive maintenance practice.
- Structured peer review with facilitator feedback on improvement roadmaps.

Who Should Take This Course

- Maintenance managers and asset managers.
- Reliability and maintenance engineers.
- Maintenance supervisors and planners.
- Work planning and control professionals.
- Operations team leaders and managers.
- Consultants advising on maintenance and asset strategy.

Advanced Maintenance Management & Asset Performance Optimization Course Outlines

Day 1: Asset Management as a Framework for Maintenance

- Asset management as a business process.
- Asset management landscape model and strategy framework.
- Line of sight from policy to asset management plan.
- Asset management policy and strategy development.
- Positioning maintenance management within the framework.



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- Asset management roles at strategic, tactical, and operational levels.
- ISO 55000 and the international asset management standard.

Day 2: Maturity Assessment and Performance Measurement

- Leading and lagging indicators, KPIs, and dashboards.
- Benchmarking against international standards.
- Asset management maturity assessments.
- ISO 55000 gap analysis and self-assessment tools.
- Roadmap development for maintenance improvement.
- Cost-benefit business case for improvement.
- Workshop: assessing maturity and building an improvement roadmap.

Day 3: Managing Asset Risk and Risk-Based Maintenance

- Basic principles of risk and why not every failure matters.
- Business-level risk: risk matrix and risk register.
- Asset-level risk and criticality assessment.
- Failure behaviour of systems and failure patterns.
- Selecting appropriate maintenance tasks using risk-based methods.
- RCM principles and failure mode analysis.
- Workshop: applying risk-based maintenance task selection.

Day 4: Life Cycle Management and Life Cycle Costing



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- Lifecycle management and the asset lifecycle stages.
- Demand forecasting and asset acquisition decisions.
- Systems engineering approach to asset creation.
- RAMS requirements: reliability, availability, maintainability, safety.
- Life cycle costing (LCC) methods and application.
- Disposal, replacement, and life extension decisions.
- Workshop: calculating lifecycle cost and evaluating replacement.

Day 5: Predictive and Smart Maintenance

- Principles of predictive maintenance (PdM).
- PdM technologies: vibration, thermography, oil analysis, ultrasound.
- Condition monitoring data and alarm setting.
- Smart maintenance: measuring asset performance with modern data.
- Data analysis, anomaly detection, and decision support tools.
- Optimising maintenance strategy using decision support.
- Course review, assessment, and action planning.





Conclusion

By successfully completing Advanced Maintenance Management & Asset Performance Optimization, participants will gain a thorough understanding of asset management frameworks, maturity assessment and performance measurement, risk-based maintenance, lifecycle management and lifecycle costing, and predictive and smart maintenance. They will also acquire practical skills in asset management framework application and ISO 55000 alignment, maintenance KPI design, maturity assessment and improvement roadmapping, risk-based maintenance and criticality assessment, lifecycle costing, RAMS and replacement decisions, and predictive and smart maintenance implementation. In addition, the course prepares them to optimise asset performance and maintenance cost across the full lifecycle. Gentex Training Center delivers this programme with a strong focus on applied maintenance practice and measurable asset performance improvement.

FAQs for Advanced Maintenance Management & Asset Performance Optimization course

Q1 What is the "Advanced Maintenance Management & Asset Performance Optimization" course about?

It is a five-day programme on managing maintenance as a business process and optimising asset performance. It covers asset management frameworks, maturity assessment and performance measurement, risk-based maintenance, lifecycle management and costing, and predictive and smart maintenance.



Q2 What are the key benefits of the "Advanced Maintenance Management & Asset Performance Optimization" course?

Participants move maintenance from reactive repair to planned, predictive, and value-driven work. The course improves asset management framework alignment, sharpens KPI and dashboard design, strengthens risk-based task selection, improves lifecycle costing and replacement decisions, and raises predictive maintenance implementation quality.

Q3 What skills will I gain from the "Advanced Maintenance Management & Asset Performance Optimization" course?

Participants gain asset management framework application and ISO 55000 alignment, maintenance KPI design, maturity assessment and improvement roadmapping, risk-based maintenance and criticality assessment, lifecycle costing, RAMS and replacement decisions, and predictive and smart maintenance implementation. These four skills cover the practical core of advanced maintenance management.



Q4 What tools, methods, or standards are covered in the "Advanced Maintenance Management & Asset Performance Optimization" course?

The course covers asset management as a business process, the asset management landscape model, strategy framework and line of sight, asset management policy, strategy and plan development, maintenance management positioning, strategic, tactical and operational asset management roles, ISO 55000 and ISO 55001 requirements, leading and lagging indicators, KPI and dashboard design, benchmarking against international standards, asset management maturity assessments, ISO 55000 gap analysis and self-assessment, improvement roadmap development, cost-benefit business case construction, risk matrices and risk registers, asset-level criticality assessment, failure behaviour and failure pattern analysis, risk-based maintenance task selection, reliability centred maintenance principles, failure mode and effects analysis, lifecycle management stages, demand forecasting, systems engineering approach, RAMS requirements covering reliability, availability, maintainability and safety, life cycle costing methods, disposal, replacement and life extension decisions, predictive maintenance principles, vibration analysis, thermography, oil analysis and ultrasound techniques, condition monitoring alarm setting, smart maintenance data platforms, anomaly detection, and decision support tools for maintenance strategy optimisation.



Q5 How is the "Advanced Maintenance Management & Asset Performance Optimization" course applied in real-world practice?

Participants apply the methods to real and simulated asset portfolios. They map the asset management framework and locate maintenance within it, develop policies, strategies and asset management plans, select and design maintenance KPIs and dashboards, run maturity self-assessments and gap analyses, build improvement roadmaps with cost-benefit cases, construct risk matrices and risk registers, assess asset criticality, analyse failure behaviour, select risk-based maintenance tasks with RCM and FMEA, calculate lifecycle costs, evaluate replacement and life extension options against RAMS requirements, and select predictive maintenance technologies with condition monitoring alarm settings and decision support. Many leave with an asset management maturity assessment template, a risk-based maintenance task selection framework, and a lifecycle costing and KPI dashboard structure ready to use.