



THE
WOODHOUSE PARTNERSHIP

ASSET MANAGEMENT ACADEMY

Course title	Cost/risk optimization methods and tools
Duration	3 days
Class Size	16
Overview	To provide a comprehensive method for maintenance decision-making, based on quantified costs, benefits and risk justification. This is the definitive world-leading course for risk-based maintenance and covers the full spectrum of performance, reliability, equipment life, safety, environmental and other interactions, evaluating preventive, predictive, condition monitoring, testing and asset replacement strategies.
Objective	<p>At the end of the course students will be able to:</p> <ul style="list-style-type: none">• Demonstrate an understanding of cost/benefit evaluation of preventive, predictive, detective and corrective maintenance• Explain handling methods for reliability concepts and patterns• Demonstrate expertise in use of weak data and range estimates• Show competence in using analysis software tools• Apply corresponding techniques to current delegates' examples
Content	<p>Maintenance cost/risk/performance trade-off. Sources of error in maintenance decisions. The 5 reasons for maintenance, and how to quantify them.</p> <ul style="list-style-type: none">• Optimization software - introduction to spreadsheets, APT tools and others• 'What if?' testing for sensitivity• Evaluation of design alternatives• Reliability patterns: survival, failure density and hazard rate• Relative timescales: a reference condition.• Failure-timescale interaction: restore and continue events.• Block versus age-based maintenance• Evaluation of inspection, condition monitoring and function testing tasks• Optional 'reliability and maintenance mathematics' introduction
Benefit	Engineers, managers, operators and maintenance personnel. Anyone who is involved in justifying maintenance expenditure, setting maintenance strategy, or who wishes to improve the auditable basis for their day-to-day decision-making.
Audience	The course is applicable engineers and analysts, team leaders and operators.
Pre-requisites	Although no pre-qualification is required, a degree-level or HND qualification is recommended
Cross references	See TWPL courses AM16, AM22, AM23, AM24, AM25, AM26.

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