

€ TRAINING

Conference on Decision Analysis for
Operation and Maintenance Professionals

17 - 28 March 2025
Trabzon (Turkey)





Conference on Decision Analysis for Operation and Maintenance Professionals

REF: C471 DATE: 17 - 28 March 2025 Venue: Trabzon (Turkey) - Fee: 8775 Euro

Introduction:

This conference examines lean thinking and decision analysis techniques, with an emphasis on a lean approach and responsiveness to customer requirements. It provides participants with the skills needed to optimize operational and maintenance decisions.

Conference Objectives:

At the end of this conference, participants will be able to:

- Improve productivity through the use of timely and accurate information.
- Understand how world-class organizations solve common asset management problems.
- Optimize the planning and scheduling of resources.
- Conduct optimized failure analyses.
- Develop asset management budgets that avoid unplanned equipment failures.
- Create actionable strategies for implementing advanced decision analysis in their areas of responsibility.

Target Audience:

- Operations Professionals.
- Maintenance Professionals.
- Reliability Engineers.
- Key Operations Supervisors.
- Internal Improvement Consultants.

Program Outline:

Unit 1:

Introduction to Decision Making in Operations and Maintenance:

- The significance of decision-making in operational contexts.
- Decision-making processes: how they affect outcomes.

- Projecting outcomes for better resource allocation.
- Decision Tree Analysis: evaluating decisions with low-probability, high-impact outcomes.
- Monte Carlo Simulation for risk assessment and decision optimization.

Unit 2:

Implementing Multiple Criteria Decision Analysis MCDA:

- Definition and application of Decision Analysis.
- Understanding why bad decisions occur and how to avoid them.
- Limitations of traditional decision-making approaches.
- Guidelines for effective decision analysis using multiple criteria.

Unit 3:

Analytic Hierarchy Process AHP and Resource Allocation:

- Introduction to the AHP methodology.
- Comparative matrices and consistency analysis.
- Sensitivity analysis for decision validation.
- Applications of AHP in maintenance strategies, resource planning, and case studies.
- Benefit/Cost analysis for effective resource allocation.

Unit 4:

Risk Management through Failure Mode & Effect Analysis FMEA:

- Basics of FMEA for risk management.
- Fault Tree analysis and how it aids in risk mitigation.
- Risk Priority Number RPN and the Criticality Matrix.
- Equipment Criticality Grading in asset management.

Unit 5:

Managing ERP and MRP Systems for Operational Efficiency:

- Evolution of ERP and MRP systems in managing operations.
- The difference between MRP, MRPII, and ERP.
- Role of ERP in planning and control, including the Bill of Materials and production schedules.
- How ERP/MRP systems improve decision-making in maintenance.
- Scope of decisions within ERP systems for operational success.

Unit 6:

Optimum Performance Measures in Maintenance Management:

- The importance of performance measures in continuous improvement.
- Defining and implementing effective performance indicators.
- Identifying desirable and undesirable features of maintenance KPIs.
- Best and worst practices in performance measurement.
- How performance measures drive maintenance strategies.

Unit 7:

Using Overall Equipment Effectiveness OEE for Best Practices:

- Defining OEE and its role in improvement initiatives.
- Applying lean maintenance strategies through OEE.
- Analysis of the Six Big Losses and how to minimize them.
- Integrating OEE into day-to-day maintenance operations.
- Benefits of OEE in long-term asset management.

Unit 8:

House of Quality and Customer-Driven Design Solutions:

- Basics of design evaluation using the House of Quality methodology.
- Converting customer feedback into actionable engineering solutions.
- Practical applications of the House of Quality in optimizing design for better performance.
- Aligning customer needs with operational and maintenance decisions.

- How to use the House of Quality to maintain continuous improvement.

Unit 9:

Optimizing Maintenance Decisions Using Data and CMMS:

- Leveraging computerized maintenance management systems CMMS for better decision-making.
- How CMMS can optimize maintenance scheduling and resource allocation.
- Using data from CMMS to analyze and improve maintenance activities.
- Benefits of integrating CMMS into asset management strategies.
- Future trends in CMMS for maintenance optimization.

Unit 10:

Continuous Improvement in Decision-Making for Operations and Maintenance:

- Importance of continuous improvement in operational decisions.
- Establishing feedback loops for refining decision-making processes.
- Tools for reviewing and enhancing decision frameworks.
- Learning from past decisions to improve future outcomes.
- Long-term strategies for embedding decision analysis into organizational culture.