Advanced FMECA Facilitation and Criticality Analysis Course

21 – 25 February 2027
Langkawi

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Training Center

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Ref: 968_173805 **Date:** 21 – 25 February 2027 **Location:** Langkawi **Fees:** 8000 Euro

Overview

Advanced FMECA Facilitation and Criticality Analysis Course is a 1-week advanced course for reliability engineers, maintenance leaders, risk facilitators, quality engineers, and cross-functional analysis leaders who leave with an Auditable FMECA Facilitation Pack. Participants practice FMECA workshop facilitation, failure mode analysis, criticality analysis, evidence review, scoring calibration, consensus building, and action planning across asset and process contexts. Agile Leaders Training Center delivers this course on advanced FMECA facilitation.

Who Should Attend

- Teams responsible for reliability analysis and asset-risk decisions.
- Functions responsible for maintenance strategy and failure prevention.
- Professionals responsible for quality-risk analysis and control improvement.
- Leaders responsible for multidisciplinary technical review sessions.
- Teams responsible for validating evidence and tracking risk actions.

The course assumes participants contribute to technical risk or reliability decisions and leaves out introductory maintenance concepts and basic meeting skills.

Departments and Industries

The course supports structured FMECA decisions across industrial assets, engineered products, service processes, and safety-critical operations.

- Reliability and asset management
- Maintenance and engineering operations
- Quality and operational risk
- Manufacturing, energy, transportation, and healthcare technology
- Product design and systems engineering

Learning Objectives

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

- Analyze system boundaries, functions, failure modes, causes, and effects.
- Apply qualitative and quantitative criticality analysis methods.
- Build evidence rules and calibrated scoring criteria.
- Use neutral facilitation methods to resolve technical disagreement.
- Prioritize risk actions and assign accountable owners.
- Evaluate an FMECA record for traceability and decision quality.

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Course Agenda

Day 1: FMECA Scope and Structure

- SAE1025 FMEA Lifecycle and Application Map
- System Boundary and Functional Breakdown Method
- Failure Mode, Cause, and Effect Logic Chain
- FMECA Ground Rules and Role Charter
- Analysis Assumption and Evidence Register

Day 2: Criticality and Evidence

- Qualitative Criticality Matrix Design
- Quantitative Failure-Rate Criticality Method
- Severity, Occurrence, and Detection Scale Calibration
- Data Confidence and Evidence Quality Checklist
- Risk Ranking Sensitivity Review

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Day 3: Facilitation and Team Decisions

- FMECA Workshop Facilitation Plan
- Structured Technical Questioning Method
- Round-Robin Failure Mode Elicitation
- Scoring Disagreement Resolution Protocol
- Decision Rationale and Dissent Log

Day 4: Actions and Quality Review

- Risk Treatment Priority Grid
- Recommended Action Ownership Matrix
- Residual Risk Reassessment Method
- FMECA Traceability and Completeness Checklist
- Living Analysis Review Cycle

Day 5: FMECA Facilitation Practice

- Suggested Exercise: Functional Breakdown Facilitation
- Suggested Exercise: Failure Logic and Evidence Challenge
- Suggested Exercise: Criticality Calibration Simulation
- Suggested Exercise: Action Prioritization Review
- Capstone Exercise: Auditable FMECA Facilitation Pack

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Practical Exercises

The course uses suggested activities to integrate analysis discipline with neutral facilitation and accountable decisions.

- Suggested activity: facilitate failure-mode discovery for an industrial pump system and challenge weak cause-effect statements.
- Suggested activity: calibrate criticality scores for a transportation control scenario using stated evidence rules.
- Suggested activity: resolve competing technical judgments while preserving dissent and decision rationale.
- Suggested activity: review a healthcare technology FMECA for traceability, action ownership, and residual risk.

FAQs

Who suits advanced FMECA facilitation training, and what does it assume?

Reliability, maintenance, quality, risk, and systems professionals suit advanced FMECA facilitation training. It assumes experience contributing to technical risk decisions and excludes introductory maintenance concepts and basic meeting skills.

How does FMECA facilitation differ from introductory FMEA training?

FMECA facilitation develops the ability to lead multidisciplinary analysis, calibrate judgments, test evidence, document disagreement, and govern actions; introductory FMEA training usually concentrates on method terminology and worksheet completion.

What makes a defensible criticality analysis?

A defensible criticality analysis uses explicit system boundaries, consistent definitions, traceable evidence, calibrated scales, stated assumptions, reproducible calculations where applicable, and documented reasons for risk rankings.

How should an FMECA facilitator handle scoring disagreement?

An FMECA facilitator should separate evidence from opinion, restate the agreed scale, test assumptions, record dissent, and escalate unresolved technical questions without forcing artificial consensus.

How is FMECA kept current after the facilitated session?

FMECA remains current through assigned ownership, action tracking, residual-risk review, controlled revisions, and scheduled reassessment when designs, processes, operating conditions, or evidence change.

Conclusion

Participants take back an Auditable FMECA Facilitation Pack containing scope controls, evidence rules, calibrated scales, facilitation prompts, decision records, action ownership, and quality checks. It makes technical judgments traceable and meetings more disciplined. It supports repeatable failure-risk decisions across assets, products, processes, and operational services.