Project Risk Management: Risk Registers, Issue Control and Quantitative Analysis

22 – 26 November 2026
Dammam - Eastern Province five-star



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Introduction

Uncertainty during project delivery frequently transforms anticipated delivery risks into active operational issues when projects lack systematic tracking and decision thresholds. While project teams often record threats within static spreadsheets, unassigned actions and ambiguous escalation paths leave project schedules and budgets vulnerable to disruption. Systematic project risk management establishes explicit risk ownership, quantitative exposure modeling, and disciplined issue escalation mechanisms across the project lifecycle. To address these delivery challenges, this one-week course is delivered by Core Concept.

Course Objectives

- Establish a project risk and issue management framework aligned with ISO 31000:2018 and tailored to project scale and governance thresholds.
- Identify delivery threats and opportunities, formulate cause-event-effect statements, and rank exposure using a probability-impact matrix.
- Assign designated risk owners and track mitigation actions and residual exposure using an operational project risk register.
- Log, evaluate, and resolve project issues through defined tolerance boundaries and formal change control workflows.
- Quantify cost and schedule uncertainty and determine contingency reserves using Monte Carlo simulation and expected monetary value.
- Construct a Project Risk and Issue Management Plan incorporating an active risk register and issue log.

Target Audience

- Project managers responsible for risk registers, issue control, and delivery performance on active projects.
- Programme managers aggregating risk exposure and issue dependencies across multiple related project workstreams.
- PMO leaders establishing risk management templates, reporting standards, and governance escalation protocols.
- Project controls managers overseeing cost forecasting, schedule integrity, and contingency allocation.
- Risk managers advising project boards on investment exposure, tolerance boundaries, and quantitative contingency models.
- Engineering and technical workstream leads accountable for managing technical risks and operational constraints.

Course Outline

Day 1: Risk and Issue Foundations

- Distinctions Between Risks, Issues, Assumptions, and Dependencies in a Project RAID Log
- ISO 31000:2018 Risk Management Principles, Leadership Framework, and Process Architecture
- Uncertainty Performance Domain Guidelines Within the PMBOK Guide Seventh Edition
- Project Risk Appetite Definition, Threshold Setting, and Stakeholder Tolerance Statements
- Project Risk Maturity Assessment Against Structured Process Capability Benchmarks

Day 2: Risk Management Frameworks and Standards

- M_o_R 4 Core Principles and Integrated Risk Management Governance Practice
- PMI Standard for Risk Management in Portfolios, Programs, and Projects Application
- IEC 31010:2019 Assessment Method Selection for Qualitative and Quantitative Scenarios
- Project Risk Management Plan Structuring, Calibration, and Scope Tailoring
- Risk Breakdown Structure Development and Workstream Categorisation Methods

Day 3: Identifying, Assessing and Responding

- Risk Identification Workshops Using Pre-Mortem Exercises, Assumptions Analysis, and SWOT Analysis
- Drafting Defensible Risk Statements in Structured Cause-Event-Effect Formats
- Probability-Impact Matrix Scoring, Severity Ranking, and Priority Banding
- Threat and Opportunity Response Strategies and Risk Owner Assignment Protocols
- Issue Log Administration, Issue Escalation Thresholds, and Change Control Procedure Integration

Day 4: Quantitative Analysis, Controls and Reporting

- Bow-Tie Analysis Application for Preventative Controls and Recovery Safeguards
- Quantitative Cost Risk Analysis Modeling Using Monte Carlo Simulation Methods
- Contingency Sizing and Management Reserve Allocation at P50 and P80 Confidence Levels
- Decision Tree Analysis and Expected Monetary Value Calculations for Project Trade-Offs
- Project Risk Reporting Dashboards, Trend Tracking, and Early Warning Indicators

Day 5: Case Work and the Risk and Issue Management Plan

- Infrastructure and Construction Project Case: Risk Register Evaluation and Mitigation Review
- Technology Implementation Case: Issue Escalation Response and Delivery Recovery Strategy
- Individual Project Risk Register and Active Issue Log Construction Exercise
- Drafting the Project Risk and Issue Management Plan for Operational Deployment
- Facilitated Peer Review Panel and Defense of Risk Mitigation Plans

Skills You Will Gain

- Risk Identification
- Risk Assessment and Prioritisation
- Risk Response Planning
- Issue Control and Escalation
- Contingency Sizing
- Quantitative Risk Analysis
- Project Risk Reporting
- Opportunity Management

Why Attend This Course

- Construct an actionable Project Risk and Issue Management Plan, risk register, and issue log tested through peer review.
- Differentiate emerging risks from active issues and direct each to defined owners and decision-making tiers.
- Justify contingency budgets to project sponsors using statistical confidence levels rather than arbitrary percentages.
- Exchange project governance insights with professionals managing complex projects across technology, construction, and public sectors.

Conclusion

Effective risk and issue governance safeguards project objectives by ensuring uncertainty is identified, quantified, and actively managed before operational schedules or budgets are compromised. By mastering standard frameworks, cause-and-effect risk registers, quantitative contingency sizing, and rigorous issue escalation protocols, practitioners transform administrative logging into an active project control system. The practical outputs developed throughout the week equip professionals to defend delivery baselines, communicate transparently with executive sponsors, and preserve project value under uncertain conditions.