



OIL AND GAS

Integrated Risk & Uncertainty Analysis for Capital Projects in Oil & Gas

Course code: OG-013

SPARK TRAINING

Professional training courses for leaders, specialists, and organizations seeking practical capability development.

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— Workshop Overview

Capital projects in oil & gas involve large investments, long execution horizons, and multiple layers of technical, commercial, and operational uncertainty. Without an integrated approach, risks are often managed in isolation, leading to incomplete visibility and suboptimal decisions. This course provides a structured, end-to-end approach to identifying, quantifying, and integrating risk and uncertainty across the full project lifecycle. Participants will learn how to connect cost, schedule, technical, and operational risks into a unified decision-support framework.

Why Attend

The program is highly practical and application-focused:

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- Real oil & gas capital project case studies
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- Interactive workshops and group exercises
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Who Should Attend

Project Managers and Project Engineers
Capital Project and Construction Managers
Risk and Planning Professionals
Cost Engineers and Project Controls Specialists
Investment and Portfolio Decision-Makers
Oil & Gas Technical and Operational Leaders

— Learning Objectives

- Apply integrated risk management across capital project phases
- Identify and link multiple sources of project uncertainty
- Quantify and evaluate combined cost, schedule, and performance risks
- Develop risk-integrated project decision frameworks
- Improve capital allocation and investment decisions
- Strengthen governance and reporting of project risks

— Course Outline

DAY
1

Fundamentals of Risk in Capital Projects

- Overview of capital project lifecycle in oil & gas
- Types of risks: technical, financial, operational, and external
- Understanding uncertainty vs. variability in projects
- Risk management frameworks and standards
- Building a structured risk breakdown structure (RBS)
- Qualitative risk identification and prioritization

DAY
2

Quantitative Risk Assessment Techniques

- Introduction to quantitative risk analysis
- Probability concepts and uncertainty modeling
- Cost and schedule risk analysis fundamentals
- Sensitivity analysis and key risk drivers
- Introduction to simulation-based risk modeling concepts
- Interpreting quantitative risk outputs for decision support

DAY
3

Integration of Cost, Schedule & Technical Risks

- Linking cost, schedule, and technical uncertainty
- Dependency and correlation between risks
- Integrated risk modeling approaches
- Scenario analysis for capital projects
- Stress testing project assumptions
- Workshop: building an integrated risk model

DAY
4

Risk-Based Decision Making in Capital Projects

- Decision analysis under uncertainty
- Evaluation of project alternatives using risk-adjusted metrics
- Investment decision frameworks (CAPEX prioritization)
- Risk appetite and tolerance in capital allocation
- Value of information and decision improvement
- Case study: capital project approval decision

DAY

5

Embedding Integrated Risk into Project Governance

- Integrating risk into project controls and governance
- Risk reporting for senior management and boards
- Communicating uncertainty effectively
- Lessons learned from major oil & gas projects
- Best practices in integrated risk management
- Final group case study and presentations

— Upcoming Classroom Dates

DATE	LOCATION	FEE
5 - 9 October 2026	Amsterdam - Netherlands	€2,125
12 - 16 October 2026	London - United Kingdom	€1,925
9 - 13 November 2026	Barcelona - Spain	€2,125
16 - 20 November 2026	Kuala Lumpur - Malaysia	€1,425
7 - 11 December 2026	London - United Kingdom	€1,925
14 - 18 December 2026	Barcelona - Spain	€2,125
21 - 25 December 2026	Vienna - Austria	€2,100
18 - 22 January 2027	Amsterdam - Netherlands	€2,125

— Certificate and Registration

Participants who attend and complete the full programme receive a SPARK Training Certificate of Completion. For registration, in-house delivery, or availability questions, contact info@sparktraining.eu or +31 85 115 0004.