

Oil and Gas Project Decision Support and Analysis Training Course

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Overview

Oil and Gas Project Decision Support and Analysis Training Course is a one-week course for project, economics, planning, technical, risk, portfolio, and assurance functions who leave with an Oil and Gas Project Decision Support File. Participants connect decision framing, alternatives, values, uncertainty, models, portfolio choices, and governance. The course replaces unsupported recommendations with traceable assumptions, probability judgments, sensitivity evidence, and decision records. Agile Leaders Training Center presents oil and gas project decision support and analysis.

Who Should Attend

- Project leadership functions responsible for investment recommendations and decision gates
- Project economics functions responsible for value measures and uncertainty cases
- Planning functions responsible for assumptions, scenarios, options, and evidence
- Subsurface and facilities functions responsible for technical ranges and trade-offs
- Risk and portfolio functions responsible for uncertainty, ranking, and capital choices
- Decision-assurance functions responsible for challenge, records, and governance

The course assumes participants already contribute to project evaluations, business cases, technical studies, risk reviews, or investment decisions, and it leaves out generic project execution, schedule and cost control, credit analysis, lending, accounting, detailed reservoir simulation, software programming, and AI development.

Departments and Industries

The course supports departments and industries that select, shape, rank, or assure capital projects under uncertainty.

- Upstream exploration, appraisal, and field development
- Midstream pipelines, storage, and export infrastructure
- Refining, petrochemicals, and process facilities
- Project development and investment planning
- Corporate strategy and capital portfolio management
- Technical assurance, risk, and project economics

Learning Objectives

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

- Build a decision frame, objectives hierarchy, and decision-rights map
- Analyze alternatives with influence diagrams and decision trees
- Apply probability, expected-value, sensitivity, scenario, and simulation evidence
- Evaluate alternatives through multicriteria and real-options thinking
- Prioritize projects through portfolio value, constraints, and interdependencies
- Use bias challenge, stage-gate evidence, recommendations, and decision records

Course Agenda

Day 1: Frame the Project Decision

- Decision Quality Frame, Alternatives, Information, Values, Logic, and Commitment Check
- Project Decision Statement and Scope Boundary
- Objectives Hierarchy and Value-Measure Register
- Stakeholder, Decision-Right, and Governance Map
- Alternative Generation and Screening Log

Day 2: Model Choices and Uncertainty

- Influence Diagram and Dependency Map
- Decision Tree, Chance Node, and Outcome Structure
- Probability Assessment and Uncertainty Range Sheet
- Expected Value and Value-of-Information Calculation
- Assumption, Correlation, and Model-Limit Register

Day 3: Analyze Value and Robustness

- One-Way Sensitivity and Tornado Diagram
- Scenario Definition and Breakpoint Analysis
- Monte Carlo Output and Probability Distribution Interpretation
- Multicriteria Decision Matrix and Weighting Check
- Real-Options Defer, Stage, Expand, or Abandon Logic

Day 4: Govern Portfolio Decisions

- Project Portfolio Scoring and Ranking Matrix
- Capital, Resource, Constraint, and Interdependency Map
- Stage-Gate Evidence and Readiness Checklist
- Bias, Overconfidence, Anchoring, and Challenge Protocol
- Decision Recommendation, Rationale, and Record Template

Day 5: Practice Decision Assurance

- Suggested Exercise: Frame a Field-Development Decision and Generate Alternatives
- Suggested Exercise: Build a Decision Tree and Reconcile Uncertainty
- Suggested Exercise: Interpret Sensitivity, Scenario, and Simulation Evidence
- Suggested Exercise: Rank a Constrained Project Portfolio
- Capstone Exercise: Complete the Oil and Gas Project Decision Support File

Practical Exercises

The course uses suggested activities to convert project choices, uncertainty, technical evidence, and stakeholder values into traceable recommendations.

- Suggested activity: frame a project decision, define value measures, and separate decisions from uncertainties.
- Suggested activity: calculate expected value and test how probability and consequence assumptions change the preferred alternative.
- Suggested activity: compare decision-tree, sensitivity, scenario, simulation, and multicriteria evidence for one recommendation.
- Suggested activity: challenge a portfolio ranking for constraints, interdependencies, bias, missing evidence, and decision readiness.

FAQs

Who suits oil and gas project decision support training, and what does it assume?

Oil and gas project decision support training suits project, economics, planning, technical, risk, portfolio, and assurance functions. It assumes experience with project evaluations, business cases, technical studies, risk reviews, or investment decisions.

How does oil and gas project decision support differ from project management training?

Oil and gas project decision support selects and shapes alternatives before or at decision gates through values, uncertainty, models, and evidence. Project management training concentrates on planning, executing, monitoring, and controlling approved work.

When should an oil and gas project use a decision tree?

A decision tree suits sequential choices where uncertain events change later options or outcomes. It makes decisions, chance events, probabilities, consequences, and expected values visible for comparison.

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How does Monte Carlo analysis support oil and gas project decisions?

Monte Carlo analysis represents uncertain inputs as distributions and produces a distribution of project outcomes. Decision teams use it to interpret ranges, downside exposure, likelihoods, sensitivities, and model assumptions rather than relying on one forecast.

How are oil and gas projects ranked when criteria conflict?

Projects are ranked by defining decision criteria and value measures, applying transparent weights and scores, testing sensitivity, recognizing constraints and interdependencies, and recording where judgment changes the result.

Conclusion

Participants take back an Oil and Gas Project Decision Support File linking the frame, alternatives, values, uncertainties, models, portfolio evidence, challenge, recommendation, and decision record. The file changes fragmented studies into one traceable decision basis. It supports clearer trade-offs, more transparent uncertainty, documented governance, and recommendations that decision makers can test.

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