

Petroleum Project Economics & Risk Management

Course Objectives

This highly interactive and scenario based training programme is designed to provide you with the ability to apply a structured approach to project justification, investment appraisal and decision making in the upstream petroleum business.

What you will learn

- Apply economic and risk management evaluation tools for oil & gas project proposals
- Identify and quantify key uncertainties during field development and full life cycle economics
- Calculate the economic and financial viability of expenditure proposals projects under risk conditions
- Develop a structured approach to measuring, managing and combating commercial risk
- Assess the ranking of alternative projects
- Prepare convincing project proposals in a way that will win management, partner and government approval.
- Improve project and business outcomes

Who Should Attend

This introductory to intermediate level workshop is aimed at those with little or no previous project investment appraisal experience. Recent attendees who have benefited from this training include:

- Explorationists and petroleum/reservoir engineers
- Asset managers, project managers and facilities engineers
- Information systems managers and project leaders
- Management accountants, finance and contracts specialists
- Government and advisory executives
- Service/supplier companies staff

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Training Method

About 40% of the time is devoted to instruction and about 60% is spent on practical exercises, case studies, and industry based scenarios. You will need to bring with you to the course your own laptop PC with MS Excel™ pre-installed. Prior knowledge of spreadsheet techniques is assumed. At the end of the course, you will be able to retain as electronic copy all project examples created during the course. These are designed to be a helpful reference when you return to the workplace.

Course Content

Basic Concepts

- Identifying project cash flows and sources of information

How to Calculate Project Benefits and Interpret the Answer

- Project payback
- Net Present Value (NPV)
- Internal Rate of Return (IRR) and the cost of capital
- Profitability Index (PI)
- Strengths & limitations of each method

Project Ranking – How to Choose the Best Alternative

- How to optimise expenditure

How to Deal with Inflation and with Exchange Rates

Taking Account of Taxation

Accounting Measures vs Economic Measures

- Understanding other financial criteria for decision making
- Balancing short term vs long term business objectives

Dealing with Risk and Uncertainty

- How to identify and quantify project risks and uncertainties
- Sensitivity analysis

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- How to draw and interpret spider and tornado diagrams
- Calculation of maximum exposure as a risk measure
- Decision trees and the calculation of Expected Monetary Value (EMV)

Economics, Risk & Decisions – Decision Points are Risk Points

- Decision points for oil fields and gas fields
- Risk & probability definitions and concepts
- Risk identification, measurement & management
- Forecasting as risk management
- Assumptions, sensitivities & risk premia

Exploration & Appraisal Decisions, Uncertainty, Risk and Exposure

Monte Carlo Simulation

Economic Models & Spreadsheet Design

Development Decisions

- Work scope definition and options
- Decommissioning economics & risks
- Cost estimating and contingencies
- Financing options
- Construction contracts

Further Development Decisions & Economic Cut Off

Preparing Convincing Project Proposals

Post Project Appraisal



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Testimonials

“Gives a clear structured view of the financials of the oil industry. Well built up material from the first exercise to the final one. Liked that Matilde brings her own stories and experience as examples.” **Zoltan Domonyi, MOL Group**

“It’s been a great opportunity to learn project economics intensively.”

Teppe Hayakawa, Idemitsu Kosan

“I really liked this course, I learned a lot about risk and economics. The trainer was amazing answering all questions. The course was well organised” **Sara Al-Sardi, Kuwait Oil Company**

“This is my second course with MDT, it’s a good experience. The trainer is a very good instructor, he knows how to present the information in an attractive way and has good experience in GCC oil companies which made the discussions very interesting” **Shamma Al Fahad, Kuwait Oil Company**

“The course gave a very holistic overview of most of the key parameters involved/used for project economic determination, which is very helpful for the general petroleum project controlling and management. The underlying field development plan was very helpful in order to understand the industrial project steps.” **Konrad Fischer, Wintershall Holdings GmbH**