

Project Analysis: Tools & Techniques for Managing Risk  
& Uncertainty

*Berlin (Germany)*

*19 - 23 May 2025*

UK Training

**PARTNER**



# Project Analysis: Tools & Techniques for Managing Risk & Uncertainty

Code: LM28 From: 19 - 23 May 2025 City: Berlin (Germany) Fees: 4200 Pound

## INTRODUCTION

Large capital-intensive projects in all major industries require substantial - and mostly risky - investments in the acquisition, exploration, and subsequent operation and maintenance of new organizational assets.

The decision whether or not to invest in new capital projects, starts with critical decisions during the exploration phase of a new development, or the expansion of an existing field. The decision-making tools used to analyze project risk under conditions of uncertainty will help companies to determine the probability of success or loss, and will drive the decision to develop or abandon the well.

Of paramount importance therefore, is the systematic and comprehensive evaluation of potential investments, and the development of detailed cash-flow analyses to determine as accurately as possible, the expected returns to the organization under varying conditions of uncertainty over the expected productive life of the project.

This requires the development of sound, realistic, and carefully structured cash-flow projections, reflecting both the initial capital expenditures required for the acquisition of the asset, as well as the operational expenditures required for successful operation and maintenance of the asset over its anticipated productive life.

World-wide an alarming number of large capital projects fail to meet, or overrun their planned budgets, failing to realize both the financial and strategic goals of the organization - the very reason for their being undertaken in the first place - often with sizable increases in capital and operational expenditures, and with substantial financial losses to the organization. In the majority of cases, this is the inevitable consequence of failing to apply the tools and techniques of modern project decision-making, evaluation, financial planning, capital management and cash flow analysis when considering investment into new capital projects.

## OBJECTIVES

- Understand how to manage organization's investments in large capital-intensive projects
- Identify how to make and understand financial decisions and be able to present these back to the stakeholder community
- Identify how to manage the cash flow of projects and manage and appraise the financial risk mitigation strategies
- Understand proper cash-flow and sensitivity analyses to forecast and control potential future conditions
- Define and manage project success factors and maximize the return on the capital invested in projects
- Understand how to define financial strategies and incorporate these into project risk mitigation strategies

## Course Outline

### DAY 1

A graphic of a chessboard with several chess pieces (a king, a queen, a rook, and a pawn) on it. The board is white and black, and the pieces are gold and silver. The text 'UK Training PARTNER' is overlaid on the board.

UK Training  
**PARTNER**

## Fundamentals of Decision Analysis

- What is project management decision analysis?
- The purpose of the project business case
- The need for systematic risk management for decision-making
- Risk and uncertainty on projects
- Option analysis
- Identifying key decision-making factors

## Measures of Project Profitability

- Fundamental tools of engineering economics
- Time value of money
- Appraisal methods - Discounted Cash Flow Projections
- Time equivalence

## DAY 2

### Cash-Flow Modelling and Project Decision Analysis

- Financial Modelling and Project Evaluation
- Internal Rate of Return computations IRR
- Determining the Internal Rate of Return IRR
- The risk of not understanding IRR

### Analysing Project Specifics

- Understanding the project context to assist in decision-making
- Determine stakeholders and their level of influence
- Capture requirements
- Determine scope of work

## DAY 3

### The Cost of Capital

- Capital & Operating Expenditures CAPEX / OPEX
- Estimating the cost of capital for a project
- Benefit-Cost Ratio BCR
- Dis-benefits

### Risk Modelling in Practice

- Identify Risks
- Forecasting risk impacts & probabilities
- Opportunity costs, sunk costs & salvage value of a project
- Determining the Risk Priorities
- The need for company cash flow

## DAY 4

A graphic of a chessboard with several chess pieces (a king, a queen, a rook, and a pawn) on it. The board is white and black, and the pieces are gold and silver. The text 'UK Training PARTNER' is overlaid on the right side of the board.

UK Training  
**PARTNER**

### Decision Analysis: Expected Value Concept

- Basic Probability Concepts
  - Fundamental probability concepts
  - Mutually & non-mutually exclusive, independent events
- Quantitative Project Risk Analysis
  - Semi-quantitative bow-tie process
  - Detailed risk quantification and prioritisation
  - Expected monetary value
  - Scenario planning
- Sensitivity Analysis Tools
  - Simulation process
  - Tornado diagram
  - Defining the variables - PERT

### DAY 5

### Decision Trees, EMV, Risk Responses and ROI

- Decision Tree Analysis
  - Developing decision trees
  - Solving decision trees
- Risk Responses
  - Developing risk responses
  - Evaluating response relevance
- ROI Analysis
  - Understanding ROI
  - Identifying ROI
  - Evaluating and presenting your project options

UK Training  
**PARTNER**





## Blackbird Training Cities

### Europe



Zurich (Switzerland )



Stockholm (Sweden)



Lyon (France)



Copenhagen (Denmark)



Bordeaux (France)



Annecy (France)



Oslo (Norway)



Edinburgh (UK)



Glasgow (Scotland )



Malaga (Spain)



London (UK)



Istanbul (Turkey)



Amsterdam (Netherlands)  
(Switzerland)



Düsseldorf (Germany)



Paris (France)



Barcelona (Spain)



Munich (Germany)



Geneva



Prague (Czech)



Vienna (Austria)



Rome (Italy)



Brussels (Belgium)



Madrid (Spain)



Berlin (Germany)



Lisbon (Portugal)



Manchester (UK)



Milan (Italy)

### USA & Canada



Los Angeles (USA)



Florida (USA)



Online



Boston (USA)



Washington (USA)



Miami(USA)



New York (USA)



Toronto (Canada)



## Blackbird Training Cities

### Asia



Baku (Azerbaijan)



Maldives (Maldives)



Manila (Philippines)



Bali (Indonesia )



Bangkok (Thailand)



Beijing (China)



Moscow (Russia )  
(Malaysia)



Singapore (Singapore )



Sydney (Australia)



Tokyo (Japan)



Dubai (UAE)



Kuala Lumpur



Jakarta (Indonesia)

### Africa



Kigali (Rwanda)



Cape Town (South Africa)



Accra (Ghana)



Lagos (Nigeria)



Marrakesh (Marocco)



Nairobi (Kenya)



Cairo (Egypt)



Sharm El-Sheikh (Egypt)



Casablanca (Morocco)



Tunis (Tunisia)



## Blackbird Training Clients



UK Training  
**PARTNER**



## Blackbird Training Categories

### Management & Admin

Professional Skills  
Finance, Accounting, Budgeting  
Media & Public Relations  
Project Management  
Human Resources  
Audit & Quality Assurance  
Marketing, Sales, Customer Service  
Secretary & Admin  
Supply Chain & Logistics  
Management & Leadership  
Agile and Refinement

### Technical Courses

Hospital Management  
Public Sector  
Special Workshops  
Oil & Gas Engineering  
Telecom Engineering  
IT & IT Engineering  
Health & Safety  
Law and Contract Management  
Customs & Safety  
Aviation  
C-Suite Training



 International House 185 Tower Bridge  
Road London SE1 2UF United Kingdom

 +44 7401 1773 35  
+44 7480 775526

 [training@blackbird-training.com](mailto:training@blackbird-training.com)

 [www.blackbird-training.com](http://www.blackbird-training.com)

UK Training  
**PARTNER**

