

# Quantitative Risk Modelling

2 DAY COURSE

## Course Objectives

### TO ENABLE DELEGATES TO:

- Make practical use of the @RISK for Excel Toolset for Cost and Time forecasts
- Understand risk modelling best practice for project cost and schedule risk analysis
- Approaches to combined cost and schedule risk analysis and other project models
- Understand distribution types and their relationship to estimating strategies
- Model discrete risks, use stochastic branching and statistical dependency
- Integrate qualitative and quantitative risk management processes
- Quantify the value of risk mitigation
- Analyse the results, including sensitivity, criticality and cruciality
- Use reliable risk estimation techniques to develop robust risk models

### FACILITATION

This two-day course provides a powerful set of skills for anyone wishing to learn about Monte Carlo risk analysis. It not only provides delegates with specific software skills, but also illustrates the techniques that conform to industry best practice.

## COURSE DETAILS

### Development of the Risk Model

Basis of the model  
Cost breakdown structures  
Central limit theorem  
Discrete risks  
"What if" analyses  
Variability and uncertainty  
Probability distribution functions  
Monte Carlo analysis

Which distributions to use  
The effect of dependency  
Using correlation  
Sampling types – Latin Hypercube  
Iterations  
Simulation seeding

### Interpreting Results

Statistical theory  
Cumulative probability curves  
Tornado diagrams  
Sensitivity  
Cruciality  
Presentation  
How to use the results

### Schedule Risk Analysis

Programme planning  
Stochastic branching  
Conditional and probabilistic  
Criticality analysis  
Critical and sub-critical paths  
Discrete risk mapping

### Summary

Benefits and shortfalls of QRA  
Setting Contingency  
Understanding the Analysis  
Forecasting  
Qualitative Risk Management

### Advanced Modelling Techniques

Probability density functions  
Discrete vs continuous distributions  
BetaPERT distribution

## Who should attend?

Anyone who needs to use Quantitative Schedule and Cost Risk Analysis as an aid in decision-making. The course provides the skills necessary to produce accurate risk models, conduct simulation, as well as interpret and present the results.

This course is available  
in your company at  
£3,995 for up to 6  
people



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