

Basic DPL - Building and Analyzing Decision Analysis Models

Overview

This seminar provides the essential skills required to build and analyze Decision Analysis models using DPL and Microsoft Excel. This seminar is intended for those familiar with the basics of Decision Analysis and Excel. No prior experience with DPL is assumed.

In the seminar, you will learn to:

- Build decision models in DPL using influence diagrams and decision trees
- Link DPL models to Excel spreadsheets
- Generate graphical sensitivity analyses to test assumptions and gain insights
- Assign probabilities for interrelated uncertain events
- Compare the risk and return of competing alternatives
- Determine and articulate the optimal decision strategy

At the end of this seminar, you will be able to structure and solve basic decision problems using DPL.

Outline

- 1 DPL/Decision Analysis overview
 - 1.1 The decision analysis process
 - 1.2 DPL's role in the process
 - 1.3 Influence diagrams
 - 1.4 Decision trees
 - 1.5 Essential decision analysis results
- 2 Developing Excel-linked Decision Models
 - 2.1 Creating an influence diagram from a spreadsheet
 - 2.2 Linking nodes to spreadsheets
 - 2.3 Adding nodes to linked models
 - 2.4 Changing node type
- 3 Deterministic Sensitivity Analysis
 - 3.1 Choosing appropriate ranges
 - 3.2 Generating tornado diagrams
 - 3.3 Understanding the results
- 4 Incorporating Uncertainty
 - 4.1 Discrete and continuous chance nodes
 - 4.2 Conditional probabilities
 - 4.3 Flexible spreadsheet modeling
- 5 Decision Analysis Results
 - 5.1 Risk Profiles
 - 5.2 Policy Trees™
 - 5.3 Value of Information and Control

- 6 Managing DPL Projects
 - 6.1 The DPL Project Window
 - 6.2 Saving endpoint data
 - 6.3 Best practices for review and version control
- 7 Strategy Tables
 - 7.1 When to use a strategy table
 - 7.2 Defining strategies
 - 7.3 Adding and removing decisions
- 8 Multi-attribute Decision Models
 - 8.1 Defining attributes
 - 8.2 Defining an objective function
- 9 Introduction to Multi-period Decision Models
 - 9.1 Downstream decisions
 - 9.2 Asymmetric decision trees
 - 9.3 PAYG cash flow models
 - 9.4 Calculating option value
 - 9.5 Policy Summaries™
 - 9.6 Policy Summary Filters
- 10 Accelerating Models with Spreadsheet Conversion
- 11 Introduction to using DPL for Monte Carlo simulation
- 12 Extended case study

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