CONCEPT

AI for Strategic Analysis: Scenario Modelling, Simulation and Option Testing

13 – 17 December 2026
Riyadh - KAFD district five-star



AI for Strategic Analysis: Scenario Modelling, Simulation and Option Testing

Ref: 1275_16582 **Date:** 13 – 17 December 2026 **Location:** Riyadh - KAFD district five-star **Fees:** 20000 SAR

Technical depth: Practitioner · **Practical mode:** Modelling build

Introduction

Strategy teams are expected to test more options against more uncertainty in less time, yet much scenario work still rests on a few hand-built narratives and static spreadsheets. Generative AI and machine learning can widen the scan and speed up modelling, but only when their outputs are checked, sourced and governed. This Core Concept course equips strategy and planning professionals to combine established scenario methods with AI tools and quantitative models. Participants build an AI-Assisted Scenario Model and Strategic Options Brief for a live strategic question in their own organisation.

Course Objectives

- Frame a strategic question and assemble an evidence base using PESTLE, Porter's Five Forces and AI-assisted horizon scanning with source verification
- Apply structured scenario methods, including the intuitive logics 2x2 matrix and cross-impact analysis, with generative AI as a drafting and challenge partner
- Build quantitative scenario models in a spreadsheet or Python using driver trees, sensitivity analysis and Monte Carlo simulation
- Evaluate strategic options across scenarios using robustness and regret analysis, real options and signpost indicators
- Control AI use in analysis by checking for hallucination, bias and data leakage in line with ISO/IEC 42001, ISO/IEC 23894 and the NIST AI RMF
- Produce an AI-Assisted Scenario Model and Strategic Options Brief ready for leadership review

Target Audience

- Strategy and corporate planning professionals preparing strategic plans, reviews and investment cases
- Business and market analysts supplying the evidence behind leadership decisions
- Financial planning and analysis managers responsible for forecasts and sensitivity cases
- Transformation and portfolio office managers assessing initiatives under uncertainty
- Risk managers responsible for emerging-risk and stress-testing work
- Policy and research managers producing futures studies for public and non-profit bodies

Course Outline

Day 1: Strategic Analysis and AI in the Planning Cycle

- Strategic Question Framing with the Issue Tree Method
- PESTLE Driver Scan Using AI-Assisted Horizon Scanning
- Porter's Five Forces Assessment with LLM Research Assistants
- Generative AI Limits: Hallucination, Recency and Source Grounding
- Current-State Review of the Planning Cycle and Its Data Sources

Day 2: Scenario Methods and AI Governance Standards

- Intuitive Logics Scenario Method and the 2x2 Uncertainty Matrix
- Three Horizons Framework for Mapping Emerging Change
- Cross-Impact Analysis and Morphological Box for Scenario Consistency
- Retrieval-Augmented Generation RAG for Evidence-Grounded Analysis
- ISO/IEC 42001, ISO/IEC 23894 and NIST AI 600-1 Controls for Analytical AI Use

Day 3: Building the Scenario Model

- Prompt Patterns for Scenario Narrative Drafting and Red-Teaming
- Driver Tree Construction Linking Uncertainties to Financial Outcomes
- Sensitivity Analysis with Tornado Charts and Data Tables
- Monte Carlo Simulation in Excel or Python with Probability Distributions
- Baseline Time-Series Forecasts Using Exponential Smoothing and Gradient Boosting

Day 4: Option Evaluation, Model Risk and Bias

- Robust Decision-Making and Regret Analysis Across Scenarios
- Real Options Valuation for Staged Strategic Commitments
- Signpost and Early-Warning Indicator Dashboard Design
- Model Risk Checks: Validation, Back-Testing and Assumption Logs
- Cognitive and Algorithmic Bias Review Using a Pre-Mortem

Day 5: Modelling Build and the Strategic Options Brief

- Energy Transition Case: Four-Scenario Demand Model Build
- Healthcare Capacity Case: Stress-Testing an Expansion Plan
- Scenario Model Build for an Own Strategic Question
- Strategic Options Brief Drafting with Recommended Signposts
- Leadership Review Panel and Model Defence

Skills You Will Gain

- Horizon Scanning
- Scenario Design
- Driver-Based Modelling
- Probabilistic Simulation
- Prompt Engineering for Analysis
- Decision Analysis Under Uncertainty
- AI Output Verification
- Strategic Insight Communication

Why Attend This Course

- Return to work with an AI-Assisted Scenario Model and Strategic Options Brief built around a question your leadership is already asking
- Cut the time spent on research and first drafts while keeping every claim traceable to a checked source
- Show decision-makers how an option performs across several futures rather than against a single forecast
- Compare prompts, models and governance practices with analysts from other sectors and countries

Conclusion

Scenario work earns its place when it changes a decision, and AI tools earn theirs when their outputs can be trusted. This course moves from framing the strategic question and scanning drivers, through established scenario methods and AI governance standards, to driver-based and Monte Carlo models, option evaluation and model risk. The final day brings these together in an AI-Assisted Scenario Model and Strategic Options Brief that participants take back for leadership review, with signposts that show when the future is moving.