

Data-Driven Decision Making — Turning Data into Confident Executive Decisions

DURATION	DELIVERY	LANGUAGE	DATES	LOCATION	INVESTMENT
5 Days (40 Hours)	hybrid - online - in person	english - arabic - bilingual	20 November 2026 - 26 November 2026	Muscat	EUR 5,500

COURSE OVERVIEW

Data-Driven Decision Making develops the executive discipline required to turn data and analytics into clearer, more defensible business decisions. Participants learn to frame decision questions, distinguish useful evidence from noise, interpret descriptive and predictive insights, evaluate uncertainty, and communicate findings effectively. Practical cases connect analytics, visualization, experimentation, and AI-supported analysis to real management decisions while highlighting data quality, cognitive bias, misleading correlations, and the limits of quantitative evidence.

LEARNING OBJECTIVES

- Frame business decisions as clear analytical questions and define the evidence required.
- Interpret descriptive, diagnostic, predictive, and prescriptive analytics in management contexts.
- Evaluate data quality, uncertainty, assumptions, and common sources of analytical error.
- Select appropriate metrics, visualizations, and analytical methods for executive decisions.
- Recognize cognitive biases and distinguish correlation, causation, and credible evidence.
- Combine data, analytics, AI-supported insight, and managerial judgment into defensible decisions.

DETAILED COURSE OUTLINE

Day 1 — Framing Decisions and Building the Evidence Base

- Convert management challenges into clear decision questions.
- Define outcomes, alternatives, constraints, and relevant metrics.
- Identify appropriate internal and external data sources.
- Assess data quality, completeness, representativeness, and timeliness.
- Separate useful evidence from noise and vanity metrics.

Day 2 — Descriptive and Diagnostic Analytics

- Use summaries, distributions, segmentation, and trends to understand performance.
- Select KPIs that reflect business objectives and decision needs.
- Diagnose variation, drivers, and potential root causes.
- Design clear executive visualizations and dashboards.
- Avoid misleading charts, averages, and interpretation traps.

Day 3 — Prediction, Uncertainty and Scenario Thinking

- Interpret forecasts, probabilities, ranges, and model outputs.
- Understand the business meaning of predictive accuracy and uncertainty.
- Compare scenarios and sensitivity to key assumptions.
- Recognize overconfidence, base-rate neglect, and other decision biases.
- Use predictive insight without treating models as certainty machines.

Day 4 — Causality, Experimentation and Decision Quality

- Distinguish correlation from credible causal evidence.
- Understand the logic of controlled experiments and A/B testing.
- Evaluate when experiments are practical and when observational evidence is necessary.
- Combine quantitative findings with operational context and stakeholder knowledge.
- Build a transparent decision rationale that can withstand challenge.

Day 5 — Analytics, AI and Executive Decision Practice

- Examine where AI can augment analysis, forecasting, and decision workflows.
- Evaluate AI-generated insights for assumptions, bias, and evidence quality.
- Integrate analytics with managerial judgment and risk considerations.
- Communicate recommendations, uncertainty, and trade-offs to stakeholders.
- Apply a repeatable data-driven decision framework to a real business case.