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COURSE BROCHURE

# Strategic Thinking and Leadership for Engineers Training Course

20 – 24 June 2027
Dubai

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Registered in the United Kingdom and Saudi Arabia

# Strategic Thinking and Leadership for Engineers Training Course

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Strategic Thinking and Leadership for Engineers is a 1-week training course for engineers and technical leads stepping into leadership roles, and it produces an Engineering Strategy Brief that links one technical decision to business goals. Asset-intensive organisations increasingly need engineers who can explain trade-offs in commercial terms and steer long-range choices beyond the drawing office. Jupiter Prime Training offers Strategic Thinking and Leadership for Engineers as a bridge between technical judgement and executive priorities.

## Why Strategic Thinking and Leadership for Engineers Matters Now

Three pressures are reshaping the engineer's role: capital is scarcer and every asset proposal competes with others for funding, digital and electrification options multiply the alternatives on the table, and boards expect technical leaders to speak the language of risk, return and customer outcome. Organisations whose engineers frame choices strategically avoid stranded assets and win support for sound investments. The course draws on systems thinking, whole-life cost reasoning and structured multi-criteria decision analysis, each explained in plain engineering language.

## Who Gains Most from Strategic Thinking and Leadership for Engineers

- Engineers who prepare capital requests and asset replacement proposals for approval
- Technical leads who set priorities for design, maintenance or project groups
- Specialists asked to brief non-technical executives on options and consequences
- Discipline heads balancing reliability, safety and spending across a portfolio of assets
- Project engineers taking first responsibility for people and budgets

Engineering departments preparing a pipeline of future leaders gain most when several of their senior engineers attend together.

## Strategic Thinking and Leadership for Engineers Capabilities

Participants move from solving the problem in front of them to positioning engineering choices inside the organisation's direction of travel.

- Align a technical proposal with stated business objectives — the approving executive
- Weigh competing options with explicit trade-off criteria — capital allocation decisions
- Map feedback loops and side effects across a technical system — operations and maintenance leads
- Calculate whole-life cost for long-range asset choices — finance partners
- Communicate engineering risk in business language — non-technical board members
- Build a priority list that technical staff can act on — the engineering group

## Key Strategic Thinking and Leadership for Engineers Terms

- Strategic intent — the long-term direction an organisation commits to, against which individual engineering choices are judged.
- Trade-off analysis — comparing options by making explicit what each gains and sacrifices across cost, risk, performance and time.
- Systems thinking — examining how components, people and processes interact, so that fixing one part does not harm another.
- Whole-life cost — the total cost of an asset from acquisition through operation and maintenance to disposal.
- Multi-criteria decision analysis — a structured method that scores options against weighted criteria to support a transparent choice.
- Stakeholder influence map — a chart of who shapes a decision, what each cares about and how to engage them.

## Strategic Thinking and Leadership for Engineers Day by Day

### Day 1: From Technical Expert to Strategic Contributor

- Engineering Role in Business Strategy — Recognising Where Technical Choices Shape Direction
- Reading Strategic Intent and Objectives — Translating Goals Into Engineering Priorities
- External Forces on Asset-Intensive Sectors — Anticipating Technology and Market Shifts
- Value Chain Mapping for Engineers — Locating Where Engineering Creates Value
- Case Contrasts From Utilities and Manufacturing — Seeing Strategy in Engineering Decisions

### Day 2: Systems Thinking for Engineering Leaders

- Causal Loop Diagrams — Revealing Feedback Effects of Technical Changes
- Boundary and Interface Analysis — Preventing Local Fixes With System Harm
- Second-Order Consequence Checks — Testing Proposals Before Approval
- Failure Mode Thinking at System Level — Prioritising Resilience Investments
- Leverage Point Identification — Directing Limited Effort Where It Counts

### Day 3: Trade-Offs and Long-Range Asset Choices

- Multi-Criteria Decision Analysis — Scoring Options Transparently Against Weighted Criteria
- Whole-Life Cost Comparison — Choosing Between Repair, Refurbish and Replace
- Risk-Based Prioritisation Matrix — Ranking Asset Interventions by Consequence
- Scenario Testing of Asset Plans — Checking Choices Against Alternative Futures
- Option Value and Staged Investment — Keeping Future Choices Open

## Day 4: Influencing Non-Technical Executives

- Stakeholder Influence Mapping — Planning Engagement Before the Decision Meeting
- Executive Summary Structuring — Leading With the Decision Required
- Translating Engineering Risk Into Business Impact — Gaining Board Attention
- Handling Objections and Challenge — Defending Proposals Without Defensiveness
- Leading Technical Staff Through Priority Shifts — Sustaining Commitment During Change

## Day 5: Practising the Engineering Strategy Brief

- Objective Alignment Check — Linking a Live Proposal to Strategic Intent
- System Map of the Chosen Decision — Exposing Hidden Dependencies
- Option Scoring and Whole-Life Figures — Selecting the Recommended Path
- Executive Pitch Rehearsal — Testing the Argument With Peer Challenge
- Engineering Strategy Brief Completion — Recommendation, Trade-Offs and Next Steps

## Applying Strategic Thinking and Leadership for Engineers After the Course

- Apply multi-criteria scoring to one pending asset decision.
- Draw a stakeholder influence map before the next capital request.

## Strategic Thinking and Leadership for Engineers Questions FAQ

### What is Strategic Thinking and Leadership for Engineers and why does it matter now?

It is the ability to connect engineering decisions to business direction and to lead others through them. It matters now because capital is contested, technical options are multiplying and executives expect engineers to explain trade-offs in business terms.

### Which roles gain most from Strategic Thinking and Leadership for Engineers?

Engineers and technical leads moving into leadership gain most. Those who prepare capital proposals, set priorities for technical groups or brief executives on asset options will apply the methods directly.

### How does Strategic Thinking and Leadership for Engineers differ from a general first-time manager course?

It centres on strategic engineering decisions rather than on people administration. You practise systems mapping, trade-off scoring and whole-life cost reasoning and executive briefings.

## What do you bring back from Strategic Thinking and Leadership for Engineers?

You bring back a written brief for one real technical decision, showing its strategic link, the options weighed and the recommendation. You also return with scoring and influence-mapping methods ready for the next proposal.

## Strategic Thinking and Leadership for Engineers: The Way Forward

The Engineering Strategy Brief turns one live technical decision into a recommendation executives can act on. Its first use is deciding whether the preferred option deserves funding now or staged investment. Approving managers, finance partners and the engineering group all rely on it. After its first use, the perspective worth revisiting is whether the chosen criteria still reflect the organisation's strategic intent.