
Public Investment Appraisal Course: Shadow Prices, Social Discounting and Risk

5 – 9 September 2027
Kuala Lumpur





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Programme Summary

Public investment appraisal, combining financial analysis with economic cost-benefit analysis, shadow prices and social discounting, is the subject of this one-week training course for planning and investment leaders at advanced level, culminating in an appraisal report for a project from their own pipeline. Projects are often approved on financial returns or urgency alone, leaving wider costs and fiscal burdens unexamined. The approach moves from the case for intervention to financial and economic analysis, distribution, risk and the funding decision. Mars Training Centre UK delivers this programme in public investment appraisal.

The Business Case

Scarce public capital must go to projects that create most value for society, not only those that pay back in cash. A consistent method lets ministries and lenders compare roads, utilities and hospitals on one footing and expose optimism in estimates.

- Quality of the Investment Pipeline: Improves as weak projects are filtered out before design spending.
- Fiscal Exposure: Becomes visible as subsidies and guarantees are quantified at approval.
- Cost and Benefit Overruns: Narrow as switching values test the assumptions that drive results.

Principles and Evidence Base

- Cost-Benefit Analysis With and Without the Project: The incremental comparison frames every calculation from Session 1.
- Shadow Pricing and Conversion Factors: Adjusting market prices to economic values drives Session 3.
- Social Discount Rate and Economic Net Present Value: Discounting economic flows at a social rate underpins Sessions 3 and 4.
- Sensitivity, Switching Values and Monte Carlo Simulation: Testing how far key variables can move before the decision changes structures Session 4.

Intended Participants

- Leaders who decide which projects enter the national or sector investment programme.
- Managers responsible for the appraisal units that prepare or review investment cases.
- Officials who negotiate project financing with lenders and development partners.

The programme serves planning and finance ministries, infrastructure agencies, development lenders and health authorities.



Learning Outcomes

1. Participants will be able to define the problem, options and with-and-without comparison for a public investment.
2. Participants will be able to construct a financial analysis of returns and sustainability for the implementing entity.
3. Participants will be able to convert financial flows into economic values using shadow prices and conversion factors.
4. Participants will be able to evaluate non-market benefits, externalities and the distribution of gains and losses.
5. Participants will be able to diagnose appraisal risk using sensitivity analysis, switching values and simulation.
6. Participants will be able to justify a funding recommendation with its fiscal impact to an approval committee.

Programme Structure

Day 1: Framing the Public Investment Decision

Is there a case for public intervention, and which options deserve appraisal?

- Rationale for Public Investment: Market Failure and Policy Objectives
- Problem Definition, Option Identification and Long-List Screening
- The With-and-Without Project Comparison
- Demand Forecasting and Optimism Bias in Estimates
- Appraisal Stages From Concept Note to Final Approval

Day 2: Financial Analysis of the Project

Can the implementing entity build, run and sustain the project?

- Investment, Operating and Replacement Cost Schedules
- Revenue, Tariff and Cost Recovery Assumptions
- Financial Net Present Value and Financial Internal Rate of Return
- Financing Plan, Debt Service and Financial Sustainability Tests
- Inflation, Real and Nominal Prices and Working Capital

Day 3: Economic Cost-Benefit Analysis

Is the project worth it to the economy as a whole?

- From Financial to Economic Flows: Transfers, Taxes and Subsidies
- Shadow Prices for Traded and Non-Traded Goods
- Conversion Factors for Labour and Foreign Exchange
- Valuing Time Savings, Health Gains and Environmental Externalities
- Social Discount Rate, Economic Net Present Value and Economic Internal Rate of Return



Day 4: Distribution, Fiscal Impact and Risk

Who gains, who pays and how robust is the result?

- Distribution Analysis: Gains and Losses by Stakeholder Group
- Fiscal Impact on Government Budgets and Contingent Liabilities
- Sensitivity Analysis and Switching Values
- Monte Carlo Simulation of Key Appraisal Variables
- Risk Mitigation and Allocation in Project Design

Day 5: Applying Public Investment Appraisal

Is the appraisal report ready for the funding decision?

- Combining Session 2 Financial Results With Session 3 Economic Results
- Using Session 4 Switching Values to Set Approval Conditions
- Ranking Competing Projects Within a Capital Budget
- Peer Review of Appraisal Reports and Committee Presentation
- Public Investment Appraisal Report Completion

Methodology

The programme relies on a data workshop built around a spreadsheet model of a public project. Participants move one case from option screening to risk testing, then defend their recommendation. Cases from transport, water and health show how methods adapt across sectors.

- Suggested activity: Converting a road project's cash flows into economic flows.
- Suggested activity: Calculating switching values for demand, capital cost and time savings.
- Suggested activity: Presenting a funding recommendation to a mock investment committee.

Capstone Output

Each participant completes a public investment appraisal report for a project from their own pipeline. It contains options, financial and economic results, distribution and fiscal tables, risk analysis and a recommendation with conditions. It supports the next submission to a funding committee.

Frequently Asked Questions

Is the public investment appraisal course suitable for senior officials without an economics background?

Yes. It is set at advanced level for those who commission or approve appraisals, and assumes familiarity with budgets and discounted cash flow, not formal economics training.



Which methods does public investment appraisal training rest on?

It rests on cost-benefit analysis using the with-and-without comparison, shadow pricing and conversion factors, the social discount rate, and sensitivity, switching-value and Monte Carlo risk analysis.

How is the report from the public investment appraisal course used at work?

You can submit it, or use it as a template, for the next project put to a funding committee.

How does public investment appraisal differ from corporate capital budgeting training?

Capital budgeting judges returns to the company. Public investment appraisal also measures effects on the economy, social groups and the budget.