



PB INSTITUTE OF RESEARCH AND TECHNOLOGY

P.O Box 21457-00100

Nairobi - Kenya

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Smart Project Cost Management: Budgeting, Forecasting & Optimisation

Duration: 5 days

On-Site

01 Who Should Attend

- Quantity Surveyors
- Procurement and Supply Chain Professionals
- Contract Managers
- Engineers and Technical Professionals
- Construction and Infrastructure Professionals
- Operations Managers
- Business Analysts
- Risk Management Professionals
- Government and Public Sector Officials
- NGO and Development Programme Professionals
- Consultants
- Professionals responsible for project budgeting, estimation, and financial control



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02 About the Course

Effective budgeting and cost estimation are essential for ensuring that projects remain financially viable and deliver value within approved constraints. This course provides participants with practical techniques for developing realistic cost estimates, preparing detailed budgets, analysing cost variances, forecasting financial performance, and implementing effective cost-control measures.

Participants will work through practical exercises and project-based scenarios to understand how project scope, resources, schedules, risks, market conditions, and changing requirements influence project costs.

03 Workshop Objectives

- Understand the fundamentals of project budgeting
- Differentiate between cost estimation and budgeting
- Apply various cost estimation techniques
- Create a detailed project budget
- Identify and manage budget risks
- Use budgeting tools and software
- Understand contingency and management reserves
- Track and report on project costs
- Implement earned value management (EVM)
- Learn how to control and adjust a budget

04 Module Topics

Module 1: The Basics of Project Finance



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- The importance of financial control
- Key financial terms and concepts
- The difference between cost and price
- The role of a budget in a project
- Common budgeting myths

Module 2: Types of Costs

- Direct vs. indirect costs
- Fixed vs. variable costs
- The concept of sunk costs
- Understanding overhead and administrative costs
- The importance of a cost breakdown structure

Module 3: Top-Down Estimation

- The concept of analogous estimating
- The benefits of expert judgment
- When to use a top-down approach
- The role of historical data
- The limitations of top-down methods

Module 4: Bottom-Up Estimation

- The concept of detailed task estimation
- The importance of WBS integration
- When to use a bottom-up approach
- The benefits of team involvement
- The precision of a bottom-up estimate

Module 5: Parametric Estimation



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- What is parametric estimating?
- Using historical data and variables
- The importance of a reliable model
- When to apply this method
- The benefits of quick, scalable estimates

Module 6: Finalizing Your Estimate

- The importance of a detailed breakdown
- The role of assumptions and constraints
- Documenting your estimation process
- Gaining approval from stakeholders
- The concept of a budget baseline

Module 7: Creating the Project Budget

- How to use your cost estimate to create a budget
- The role of a budget spreadsheet
- Allocating funds to project activities
- The importance of a formal budget document
- The relationship between budget and schedule

Module 8: Contingency and Reserves

- The difference between contingency and management reserves
- How to calculate contingency
- The purpose of a management reserve
- When to use each reserve
- The importance of a clear reserve policy

Module 9: Budget Reporting



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- The importance of regular financial reports
- Key metrics to track and report on
- Creating simple visual reports
- Communicating budget status to stakeholders
- The role of a dashboard

Module 10: Budget Control

- The importance of monitoring expenses
- The role of a change control process
- How to adjust the budget
- Dealing with unexpected costs
- The importance of fiscal discipline

Module 11: Earned Value Management (EVM)

- What is earned value management?
- Key EVM metrics: PV, EV, and AC
- How to calculate schedule variance (SV) and cost variance (CV)
- The importance of a clear baseline
- Using EVM to predict project performance

Module 12: Forecasting and Trending

- The importance of forecasting
- Using past performance to predict future outcomes
- Techniques for trend analysis
- The role of rolling forecasts
- The benefits of a predictive approach

Module 13: Budgeting Tools and Software



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- An overview of common tools
- The benefits of specialized software
- How to use spreadsheets effectively
- The importance of a centralized system
- The role of collaboration in tools

Module 14: Risk and Budget

- The relationship between risk and budget
- Identifying financial risks
- Developing a financial risk response plan
- The importance of a risk reserve
- The benefits of a proactive approach

Module 15: Auditing and Closing

- The importance of a budget audit
- The role of a final financial report
- The benefits of a lessons learned session
- Archiving financial documents
- The importance of a formal sign-off