Cost a project

AHCBUS402

Overview

By the end of this topic, you should be able to:

- Determine resources required for the project
- Calculate individual itemised costs of the project
- Prepare a summary of the cost of the project

What is a project?

- A project is a planned set of interrelated tasks to be executed over a fixed period – within certain cost and other limitations
- Projects are developed to achieve particular outcomes/objectives
- In all phases of project management financial analysis, costing and budgeting need to be considered. This involves:
  - Estimating costs of required work activities
  - Determining the budget, based on available finance
  - Controlling costs to stay within budget

What is a project?

- The main objectives when costing a project are to:
  - Calculate the projected costs involved; and
  - Provide confidence that the project can be completed at a profit

- All project materials and activities need to meet project quality requirements, which are determined by:
  - Client standards
  - Project specifications
  - Standards and tolerances of materials/resource/work

Determining required resources

- There are two types of costs which need to be identified when costing a project:

Direct costs	Indirect costs
• Consultants/contractors • Labour/people • Raw materials/resources • Travel	• Administration (e.g. telephone, printing) • Insurance • Tax • Machinery costs (e.g. registration, fuel, maintenance) • Safety training

- Documents that can be used to identify costs include:
  - Plans and schedules
  - Material schedules
  - Material quality tables
  - Schedules of rates for contractors and consultants
  - Trade-specific material schedules (e.g. electrical or plumbing work)

Determining required resources

- Known factors that may affect resource costs include:
  - Enterprise guidelines (e.g. management policies)
    - These may impact on hiring and purchasing decisions
  - Applicable awards and enterprise agreements
    - These will outline pay rates (e.g. penalty/overtime/casual) and leave loading that should be considered when determining costs for services
    - Search for these at the Fair Work Commission
  - Laws applicable to your workplace, such as:
    - National Employment Standards, which outline ten (10) minimum employment entitlements that have to be provided to all employees
    - National Minimum Wage Orders that set the national minimum wage

Determining required resources

- Unforeseen factors that may affect resource costs include:
  - Inflation of the price level of goods and services
  - External conditions which may increase project time (e.g. weather)
  - Fluctuations of the Australian dollar on importing/exporting resources
  - Project blowouts which require extra labour time or materials

- A contingency, fall-back or buffer is added to project costs to cover risk. This can be calculated in two ways:
  - Using the Consumer Price Index (CPI) in calculations to demonstrate possible cost differences
  - Adding a fixed percentage to the total cost and time (e.g. 10%)

Determining required resources

- There are a range of tools/programs that can be used to calculate and schedule project costs, including:
  - Project-specific software (e.g. Microsoft Project) which aligns resources to each segment of the project, set up as a timeline
  - Spreadsheets (e.g. Microsoft Excel) which lays out data, allowing for calculations and trends to be observed
  - Industry-standard cost management software
  - Enterprise financial reporting systems (e.g. QuickBooks, MYOB)

Calculating individual itemised costs

- To accurately cost a project, each individual item needs to be specified and have a unit of measure or cost placed against it:
  - Breakdown all tasks, identifying individual resources required
  - Obtain resource unit prices (e.g. \$/m, $\$/m^3$, \$/L, \$/km)
    - Consider purchasing in bulk, as prices differ for materials in commercially available quantities
  - Calculate total costs – considering GST, freight costs and taxes (e.g. import tax)
  - Make adjustments to align with project schedules
    - For example, if certain resources need to be have delivery/manufacture expedited
- When costing resources/materials, obtain quotes from various manufacturers or wholesalers
  - Your enterprise may have specific purchasing policies and procedures (e.g. obtain a minimum of two quotes to obtain the best price)

Calculating individual itemised costs

- Human resource costs can be highly technical
  - Refer to the pay scales for each worker
  - Observe the specific chargers of contractors/consultants
    - They may charge based on materials/resources needed and labour chargers at an hourly rate
    - They may work on a retainer, paid a set fee regularly
    - Compare quotes from contractors but putting out a tender
      - Tender applicants will also be required verify their qualifications and management systems

Calculating individual itemised costs

- After you have a total for itemised resource costs, this must be evaluated against the financial schedule for the project (i.e. cash flows, borrowings, funding sources)

- Compare the financial schedule with calculated costs to determine if there will be a surplus or deficit (i.e. profit or loss)

Calculating individual itemised costs

- Where significant differences are round between costs and financial schedule for the project (i.e. cash flows, borrowings, funding sources), adjustments have to be made, for example:
  - Rescheduling work to occur at different times
  - Review work efficiencies and processes to reduce the overall work time
  - Renegotiate with suppliers or seek alternative quotations
  - Ensure quotations have a set contingency amount built into costings

- Keep in mind the following needs:
  - Ensure project quality requirements are maintained
  - Ensure legislative requirements are followed
    - For example, building requirements are met, safety is not compromised

Prepare a summary of costs

- You will be required to summarise your findings and submit them for approval
  - Collate and schedule resource costs (e.g. Gantt chart)
  - Calculate and record total project costs

- Consider your management team and how they interpret and decipher information
  - Are they visual learners who would benefit from graphs and photos to illustrate data?
  - Are they auditory learners who would prefer an oral delivery of project costs?