

Chapter 14

Pricing and Estimating

Pricing and Estimating

- ❖ Many managers regard this as an art ! Information available to one bidder is generally available to others.
- ❖ This is an essential part of the planning process.
- ❖ Forms the basis for establishing standards for budgets, man-hours, material costs, contingencies, etc.
- ❖ Specific pricing strategies must be developed for each situation.

Two Types Of Acquisition Policies

Type I acquisition:

One-of-a-kind contract with little or no follow-on potential

Objective:

- Win the contract
- Execute it profitably

Type II Acquisition:

- ❖ *One of many contracts*
- ❖ *An entry point to larger follow-up project contracts*

Objective:

- Win the contract
- Perform with excellence

Cost/Hour Estimates

Estimating Method	Generic Type	WBS Relationship	Accuracy	Time to Prepare
Parametric	ROM*	Top Down	-25% to +75%	Days
Analogy	Budget	Top Down	-10% to +25%	Weeks
Engineering (Grass Roots)	Definitive	Bottom Up	-5% to +10%	Months

* Rough Order of Magnitude

TYPES OF ESTIMATES

❖ **Order of magnitude estimates**

- Made without any detailed engineering data
- May use past experience
- Accuracy +/- 35% within the scope of the project

❖ **Approximate (rule of thumb) estimates**

- Made without any detailed engineering data
- May use previous similar projects --
- Accuracy +/- 15%

❖ **Definitive (or detailed) estimates**

- Prepared from well-defined engineering data, vendor quotes, unit prices, etc. Accuracy +/- 5%

❖ **Estimating manual**

- Developed over time
- Use to price out "effort". Accuracy +/- 10%

Additional Estimating Methods

❖ **Direct Estimate**

- Estimate/experienced person
- Requires judgement

❖ **Estimate by analogy**

- Compare with similar activities
- Requires judgement

❖ **Factored method**

- Based on historical data
- Requires equipment lists, sizes
- Starts with equipment quotes

❖ **Gross proration method**

- Based on historical data
- Near duplicate information

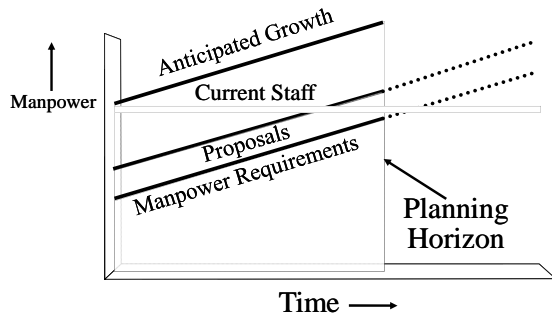
- ❖ *Detailed estimate*
 - *Uses the WBS*
 - *Takes the WBS down several levels*
- ❖ *Quotation method*
 - **Compare three quotations**
 - **Select the best quotation**
- ❖ *Handbook manuals*
- ❖ *Learning curves*

Construction Cost Estimates

Cost Foundations

- ❖ **Actual costs to date and estimates to completion**
- ❖ **Proposal data**
- ❖ **Marketing intelligence**
- ❖ **Management goals**
- ❖ **Past performance and trends**

Capacity Planning



Establishing The Project Budget

PRICING OUT A PROJECT

- ❖ Provide a complete definition of the work to be done.
- ❖ Develop/construct a Logic Network Diagram.
- ❖ Construct the WBS and estimate the activities (time/cost).
- ❖ Review these (time/cost) with the respective functional managers.
- ❖ Decide on a course of action.
- ❖ Establish acceptable costs for each WBS-activity.
- ❖ Review the base costs with your sponsor.
- ❖ Develop the pricing cost report.
- ❖ Document this in the project file.

Pricing Method

- ❖ Work is priced out at the department average, and all work performed is charged to the project at the department average salary, regardless of who accomplished the work.

Pricing Method (Continued)

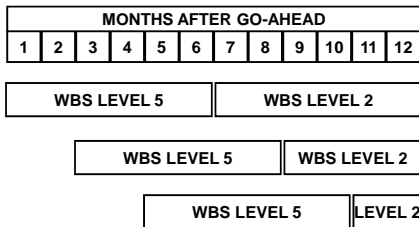
- ❖ Work is priced out at the department average, but all work performed is billed back to the project at the actual salary of those employees who perform the work.

Pricing Method (Continued)

- ❖ The work is priced out at the salary of those employees who will perform the work, and the cost is billed back the same way.

Multinational Project Financing

The Rolling Wave Concept



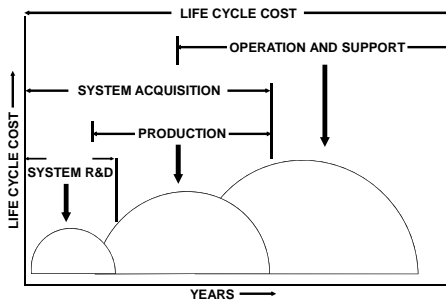
Estimating Pitfalls

- ❖ Misinterpretation of the statement of work
- ❖ Omissions or improperly defined scope
- ❖ Poorly defined or overly optimistic schedule
- ❖ Inaccurate work breakdown structure
- ❖ Applying improper skill levels to tasks
- ❖ Failure to account for risks
- ❖ Failure to understand or account for cost escalation and inflation

Estimating Pitfalls (Continued)

- ❖ Failure to use the correct estimating technique
- ❖ Failure to use forward pricing rates for overhead, general and administrative, and indirect costs

Life Cycle Costing



Capital Budgeting

- ❖ Payback Period
- ❖ Discounted Cash Flow (DCF)
- ❖ Net Present Value (NPV)
- ❖ Internal Rate of Return (IRR)

***Capital Budgeting Must Consider
Taxes And Depreciation***
