Assigning Resources

A schedule is not complete until all the resources necessary to complete the project have been committed or assigned.

Factors to Consider
- Availability of other resources
- Depletion of available float time
- Impact on critical path
- Impact on budget

Non-Labor Resources
- Lab time
- Facilities
- Prototype parts/systems
- Equipment
- Materials

Cost Budgeting

- Cost Budgeting involves allocating overall cost estimates to individual work items in order to establish a cost baseline for measuring project performance. Using cost estimates, the WBS, the project schedule, and cost estimating tools, the project team develops a time-phased budget. This budget will be used to measure and monitor cost performance on the project.

Source: PMI
**Types of Budget Estimates**

- **Order of Magnitude (Preliminary)**
  - Supports decisions on project viability
  - Includes historical cost data
  - Actual cost within -25% to +75%

- **Budget Estimate**
  - Supports project planning decisions
  - Includes parametric modeling cost data
  - Actual cost within -10% to +25%

- **Definitive**
  - Supports project implementation
  - Includes cost data for each WBS activity
  - Actual cost within -5% to +10%

**Obtaining Cost Data**

- Experience from past projects
- Functional subject matter experts
- Lessons learned
- Vendor quotes or bids
- Catalogs
- Cost estimating guides
- Buyers

**Major Cost Categories**

- **Capital Costs**
  - Equipment
  - Facility Modifications

- **Expenses**
  - Labor costs
  - Material costs
  - Vendor/consultant costs

**Facilities Modification**

- Line reconfiguration
- Alterations to existing building/structure
- New process flow
- Relocation of utility hook-ups

**Other Cost Components**

- Overhead
- Management or contingency reserve
Project Overhead
- Equipment rental
- Travel
- Consultants
- Contract labor
- Facility support

Contingency Reserve
- Weather delays
- Changes in design
- Unforeseen price increases
- Estimating errors
- Other project risks

Roadmap to Project Management Success

What Is Risk?
Risk can be defined as:
“Any threat to project success.”

Risk Management
“Risk Management is the art and science of identifying, analyzing and responding to risk factors throughout the life of the project and in the best interests of its objectives.”
Source: PMI
Risk Plan Development

- Risk Monitoring
- Risk Identification Methods
  - Brainstorming
  - Subject matter experts
  - Historical data
  - Lessons learned
- Risk Quantification
- Risk Monitoring
- Risk Management

Common Sources of Risk
- Quality requirements
- Schedule constraints
- Cost limitations
- New technology
- Project complexity
- Third-party performance
- Contract terms (legal)

Prioritizing & Planning

- PRIORITY 2 RISKS
  - High Probability
  - Low Impact
  - Reactive Measures
- PRIORITY 1 RISKS
  - High Probability
  - High Impact
  - Proactive and Reactive Measures
- PRIORITY 3 RISKS
  - Low Probability
  - Low Impact
  - Monitor Only
  - Reactive Measures

Risk Worksheet

- Date of Last Review:
- Project Manager: __________
- Project Title: __________
- Risk Description: __________
- Risk Priority: 1 2 3 (Circle the Priority)
- Probability %: __________
- Expected Monetary Value (EMV): __________
- Impact:
  - Quality
  - Schedule
  - Cost
  - Scope
  - Preventative Plan (Proactive Plan): __________
  - Contingency Plan (Reaction Plan): __________
  - Date of Last Review: __________

Team Activity — Risk Management

- Time: 15 Minutes
- Instruction:
  1) Identify at least one priority 1 or 2 risk for your team project.
  2) Complete a risk worksheet for the risk identified.
  3) Use the blank template following this page.
Section 3.0

End of Planning Phase