Chapter 12: Project Procurement Management

Learning Objectives

Explain	Explain the importance of project procurement management and the increasing use of outsourcing for information technology (IT) projects
Describe	Describe the work involved in planning procurements for projects, including determining the proper type of contract to use and preparing a procurement management plan, statement of work, source selection criteria, and make-or-buy analysis
Discuss	Discuss how to conduct procurements and strategies for obtaining seller responses, selecting sellers, and awarding contracts
Describe	Describe the process of controlling procurements by managing procurement relationships and monitoring contract performance
Discuss	Discuss types of software that are available to assist in project procurement management
Discuss	Discuss considerations for agile/adaptive environments

Importance of Project Procurement Management (1 of 2)

Procurement means acquiring goods and/or services from an outside source

Other terms include purchasing and outsourcing

Why outsource?

Access skills and technologies

Reduce both fixed and recurrent costs

Allow the client organization to focus on its core business

Provide flexibility

Increase accountability

**Project procurement management**

Acquiring goods and services for a project from outside the performing organization
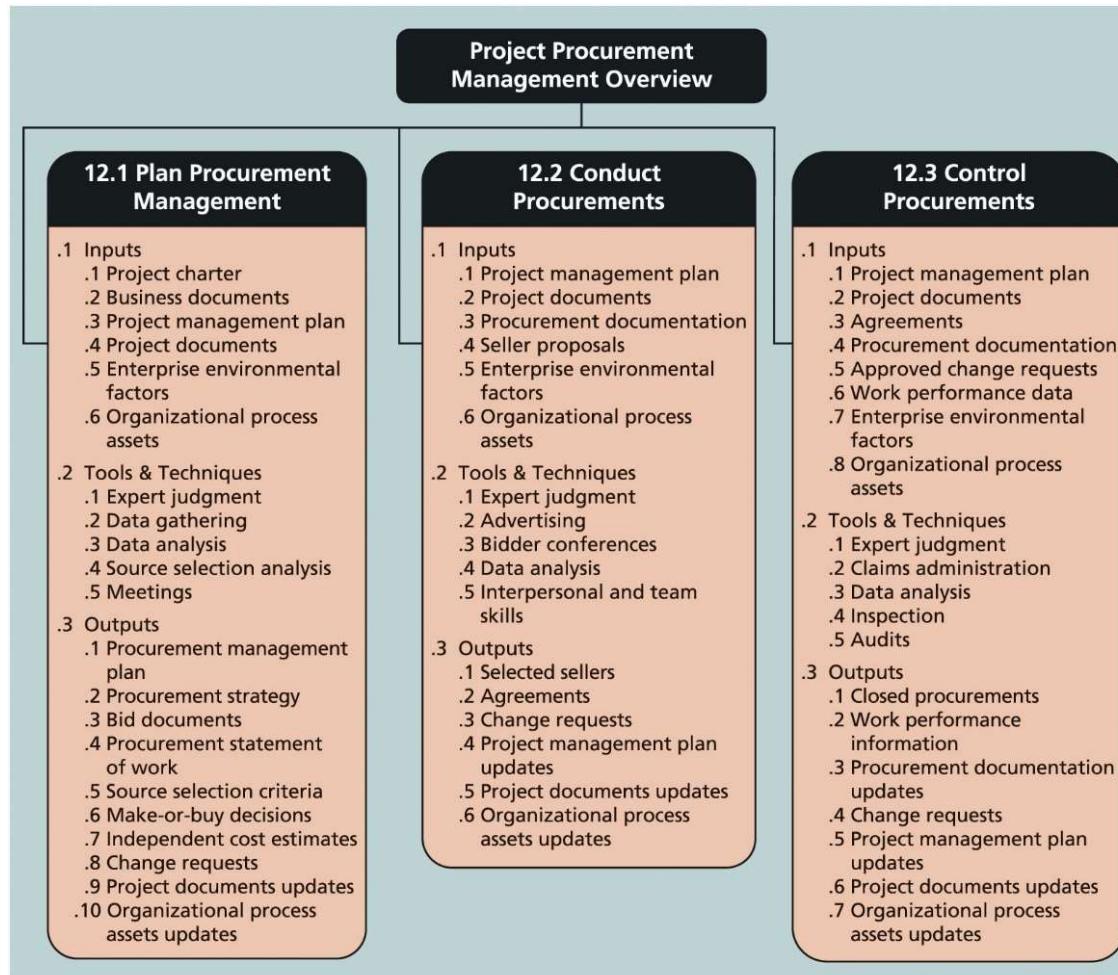
Main processes

Planning procurement management: determining what to procure and when and how to do it

Conducting procurements: obtaining seller responses, selecting sellers, and awarding contracts

Controlling procurements: managing relationships with sellers, monitoring contract performance, making changes as needed, and closing out contracts

Project Procurement Management Overview

12.1 Plan Procurement Management

.1 Inputs
  .1 Project charter
  .2 Business documents
  .3 Project management plan
  .4 Project documents
  .5 Enterprise environmental factors
  .6 Organizational process assets

.2 Tools & Techniques
  .1 Expert judgment
  .2 Data gathering
  .3 Data analysis
  .4 Source selection analysis
  .5 Meetings

.3 Outputs
  .1 Procurement management plan
  .2 Procurement strategy
  .3 Bid documents
  .4 Procurement statement of work
  .5 Source selection criteria
  .6 Make-or-buy decisions
  .7 Independent cost estimates
  .8 Change requests
  .9 Project documents updates
  .10 Organizational process assets updates

12.2 Conduct Procurements

.1 Inputs
  .1 Project management plan
  .2 Project documents
  .3 Procurement documentation
  .4 Seller proposals
  .5 Enterprise environmental factors
  .6 Organizational process assets

.2 Tools & Techniques
  .1 Expert judgment
  .2 Advertising
  .3 Bidder conferences
  .4 Data analysis
  .5 Interpersonal and team skills

.3 Outputs
  .1 Selected sellers
  .2 Agreements
  .3 Change requests
  .4 Project management plan updates
  .5 Project documents updates
  .6 Organizational process assets updates

12.3 Control Procurements

.1 Inputs
  .1 Project management plan
  .2 Project documents
  .3 Agreements
  .4 Procurement documentation
  .5 Approved change requests
  .6 Work performance data
  .7 Enterprise environmental factors
  .8 Organizational process assets

.2 Tools & Techniques
  .1 Expert judgment
  .2 Claims administration
  .3 Data analysis
  .4 Inspection
  .5 Audits

.3 Outputs
  .1 Closed procurements
  .2 Work performance information
  .3 Procurement documentation updates
  .4 Change requests
  .5 Project management plan updates
  .6 Project documents updates
  .7 Organizational process assets updates

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FIGURE 12-1 Project procurement management overview

Planning Procurement Management

- Identifying which project needs can best be met by using products or services outside the organization
  - Involves deciding whether to procure, how to procure, what to procure, how much to procure, and when to procure
  - An important output of this process is the make-or-buy decision
  - If there is no need to buy any products or services from outside the organization, then there is no need to perform any of the other procurement management processes

Types of Contracts (1 of 2)

- Different types of contracts can be used in different situations
  - Fixed price or lump sum contracts: involve a fixed total price for a well-defined product or service
    - Point of Total Assumption (PTA): cost at which the contractor assumes total responsibility for each additional dollar of contract cost
  - Cost-reimbursable contracts: involve payment to the seller for direct and indirect costs
    - Cost plus incentive fee, cost plus fixed fee, and cost plus percentage of costs
  - Time and material contracts: hybrid of both fixed price and cost reimbursable contracts
  - Unit price contracts: require the buyer to pay the seller a predetermined amount per unit of service
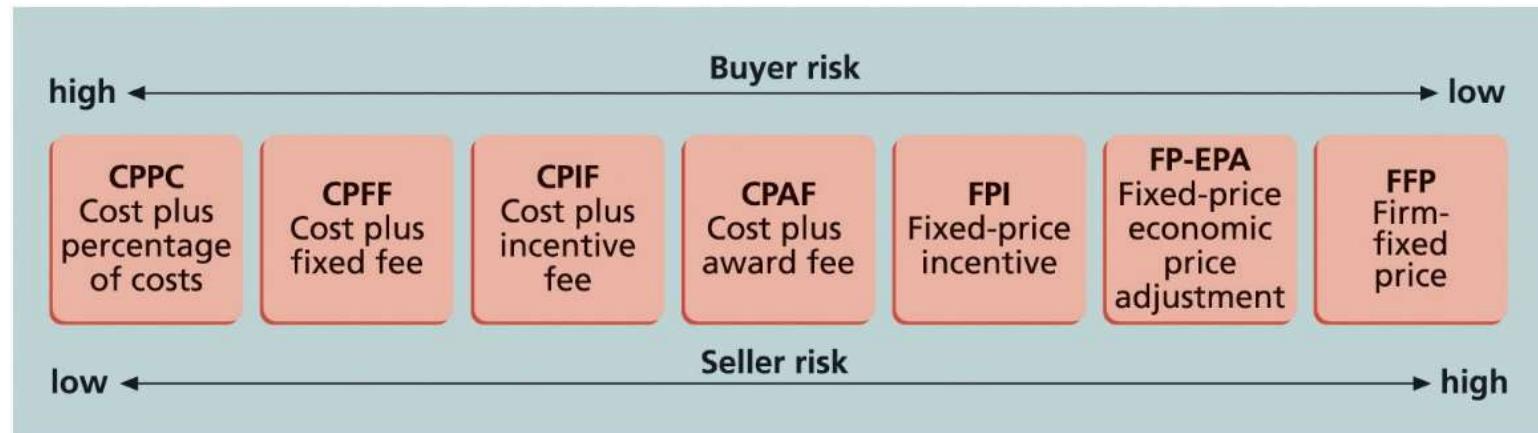
FIGURE 12-2 Contract types versus risk

- Contracts should include specific clauses to take into account issues unique to the project
  - Time and material contracts and unit-price contracts can be high or low risk, depending on the nature of the project and other contract clauses
  - A termination clause allows the buyer or supplier to end the contract

Tools and Techniques for Planning Procurement Management

- Several tools and techniques are available to help project managers and their teams in planning procurement management
  - Make-or-buy analysis
    - General management technique used to determine whether an organization should make or perform a particular product or service inside the organization or buy from someone else
  - Expert judgment
    - Experts both from inside and outside an organization can provide excellent advice in planning purchases and acquisitions
  - Market research
    - Many potential suppliers are often available for goods and services, so the project team must choose suppliers carefully

Procurement Management Plan

- Describes how the procurement processes will be managed, from developing documentation for making outside purchases or acquisitions to contract closure
  - Contents varies based on project needs

Statement of Work

- A statement of work (SOW) is a description of the work required for the procurement
  - If a SOW is used as part of a contract to describe only the work required for that particular contract, it is called a contract statement of work
  - A contract SOW is a type of scope statement
  - A good SOW gives bidders a better understanding of the buyer's expectations

Statement of Work (SOW)

I. **Scope of Work:** Describe the work to be done in detail. Specify the hardware and software involved and the exact nature of the work.

II. **Location of Work:** Describe where the work must be performed. Specify the location of hardware and software and where the people must perform the work.

III. **Period of Performance:** Specify when the work is expected to start and end, working hours, number of hours that can be billed per week, where the work must be performed, and related schedule information.

IV. **Deliverables Schedule:** List specific deliverables, describe them in detail, and specify when they are due.

V. **Applicable Standards:** Specify any company or industry-specific standards that are relevant to performing the work.

VI. **Acceptance Criteria:** Describe how the buyer organization will determine if the work is acceptable.

VII. **Special Requirements:** Specify any special requirements such as hardware or software certifications, minimum degree or experience level of personnel, travel requirements, and so on.

FIGURE 12-3   Statement of work (SOW) template

Procurement or Bid Documents

Request for Proposals: used to solicit proposals from prospective sellers

A proposal is a document prepared by a seller when there are different approaches for meeting buyer needs

Requests for Quotes: used to solicit quotes or bids from prospective suppliers

A bid, also called a tender or quote (short for quotation), is a document prepared by sellers providing pricing for standard items that have been clearly defined by the buyer

Source Selection Criteria

It's important to prepare some form of evaluation criteria, preferably before issuing a formal RFP or RFQ

Organizations use criteria to rate or score proposals, and they often assign a weight to each criterion to indicate its importance

Beware of proposals that look good on paper

Be sure to evaluate factors, such as past performance and management approach

Some IT projects also require potential sellers to deliver a technical presentation as part of their proposal

The proposed project manager should lead the potential seller's presentation team

Conducting Procurements (1 of 4)

Steps after planning for procurement management

- Decide whom to ask to do the work
- Send appropriate documentation to potential sellers
- Obtain proposals or bids
- Select a seller
- Award a contract

Approaches for procurement

- Organizations can advertise to procure goods and services in several ways
  - Approaching the preferred supplier
  - Approaching several potential suppliers and taking bids

A bidders' conference can help clarify expectations

- Meeting with prospective sellers prior to preparation of their proposals or bids

Seller selection

- After developing a short list of possible sellers, organizations often follow a more detailed proposal evaluation process
- It is customary to have contract negotiations during the source selection process
- Sellers on the short list often prepare a best and final offer (BAFO)
- Final output is a contract signed by the buyer and the selected seller

Conducting Procurements (3 of 4)

Criteria	Weight	Proposal 1		Proposal 2		Proposal 3		Etc.	
		Rating	Score	Rating	Score	Rating	Score		
Technical approach	30%	90	27	80	24	70	21		
Management approach	30%	85	25.5	75	22.5	85	25.5		
Past performance	20%	95	19	70	14	75	15		
Price	20%	75	15	95	19	80	16		
Total score	100%		86.5		79.5		77.5		

FIGURE 12-4 Sample proposal evaluation sheet

Controlling Procurements (1 of 2)

Ensures the seller's performance meets contractual requirements

- Contracts are legal relationships, so it is important that legal and contracting professionals be involved in writing and administering contracts
  - Project team members must be aware of potential legal problems they might cause by not understanding a contract

It is critical that project managers and team members watch for constructive change orders

- Oral or written acts or omissions by someone with actual or apparent authority that can be construed to have the same effect as a written change order

Suggestions for change control in contracts

- Changes to any part of the project need to be reviewed, approved, and documented by the same people in the same way that the original part of the plan was approved
- Evaluation of any change should include an impact analysis
- Changes must be documented in writing
- Project managers and teams should stay closely involved to make sure the new system will meet business needs and work in an operational environment
- Have backup plans
- Use tools and techniques, such as a contract change control system, buyer-conducted performance reviews, inspections and audits, etc.

Controlling Procurements (2 of 2)

Closing procurements

- Involves completing and settling contracts and resolving any open items
- The project team should determine if all work was completed correctly and satisfactorily, update records to reflect final results, and archive information for future use
- The contract itself should include requirements for formal acceptance and closure

Tools to assist in contract closure

- Procurement audits identify lessons learned in the procurement process
- A records management system provides the ability to easily organize, find, and archive procurement-related documents
- Ideally, all procurements should end in a negotiated settlement between the buyer and the seller; if negotiation is not possible, then some type of alternate dispute resolution such as mediation or arbitration can be used
- Archiving information for future use is particularly important

Best Practice

- Procurement can be more intelligent
  - Data scientists build predictive models to analyze big date related to finance, marketing, etc.
    - Why not model procurement processes?
  - Behavioral economists know that people do not act rationally
    - Why no apply irrationality to your advantage in negotiations?
  - Quality control/assurance departments encourage employees to suggest quality improvements all the time
    - Why not enable your workers to be on the lookout for additional new and innovative suppliers?
  - Crowdsourcing solicits ideas from a large group of people
    - Can it apply to some of your organization's procurements?

Using Software to Assist in Project Procurement Management

- Word-processing software: write proposals and contracts
- Spreadsheet software: create proposal evaluation worksheets
- Databases: track suppliers
- Presentation software: present procurement-related information
- E-procurement software: electronic procurement functions
- Procure-to-pay suite: provides support for indirect procurements
  - E-purchasing functionality
  - Catalog management capabilities
  - E-invoicing
  - Accounts Payable Invoice Automation

Considerations for Agile/Adaptive Environments

Agile Manifesto values customer collaboration over contract negotiation, setting an important tone for procurement relationships on agile projects

The buyer and seller should work together to create the required products and services throughout the entire procurement process

Another goal of agile/adaptive environments is speed

Several procurements, however, take time

Processes of project procurement management follow a clear, logical sequence

Project managers and their teams must follow good project procurement management

Chapter Summary

- Procurement, purchasing, or outsourcing is the acquisition of goods and services from an outside source
  - Project procurement management includes planning procurement management and then conducting and controlling procurements
    - Involves deciding what to procure or outsource, what type of contract to use, and how to describe the effort in a statement of work
  - Several types of software can assist in project procurement management