

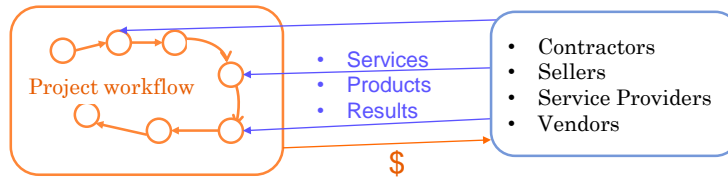
CHAPTER 12: PROJECT PROCUREMENT MANAGEMENT

Information Technology Project Management, Sixth Edition

Note: See the text itself for full citations.

IMPORTANCE OF PROJECT PROCUREMENT MANAGEMENT

- **Procurement** means acquiring goods and/or services from an outside source
- Other terms include purchasing and outsourcing
- People continue to debate whether offshore outsourcing helps their own country or not



How can you be sure the services/products:

- Meeting the **scope** and **quality** requirements as you specified
- To be delivered on **time**
- **Costing** within your expected range

Due to the Agency problem and External dependencies, we rely on a **contract**.

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CONTRACTS

- A **contract** is a mutually binding agreement that obligates the seller to provide the specified products or services and obligates the buyer to pay for them
- Contracts can clarify responsibilities and sharpen focus on key deliverables of a project

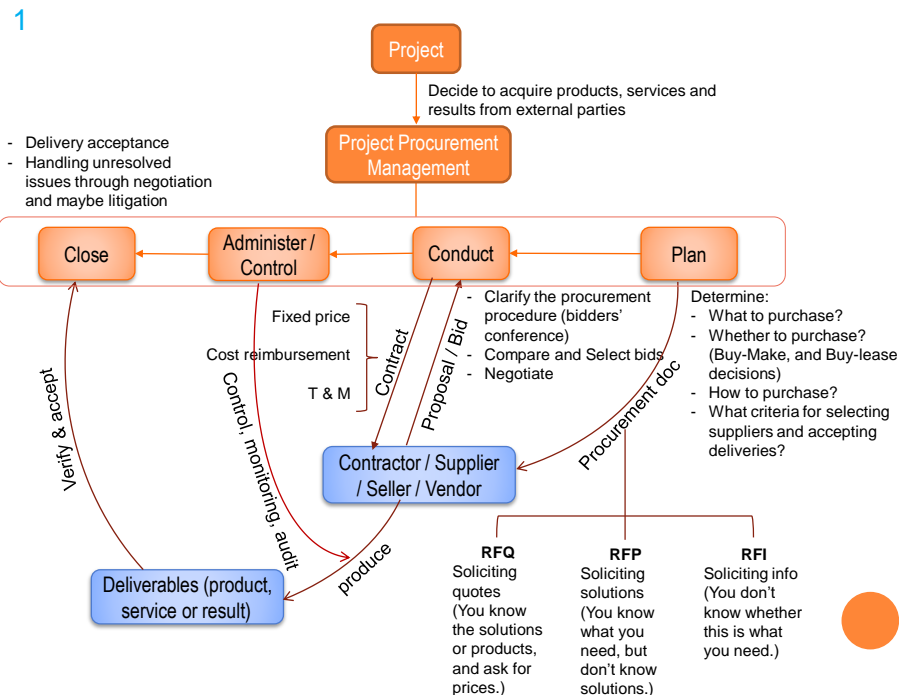


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PROJECT PROCUREMENT MANAGEMENT PROCESSES

- **Project procurement management:** acquiring goods and services for a project from outside the performing organization
- Processes include:
 - **Planning procurements:** determining what to procure, when, and how
 - **Conducting procurements:** obtaining seller responses, selecting sellers, and awarding contracts
 - **Administering/Controlling procurements:** managing relationships with sellers, monitoring contract performance, and making changes as needed
 - **Closing procurements:** completing and settling each contract, including resolving of any open items

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PLANNING PROCUREMENTS

- Identifying which project needs can best be met by using products or services outside the organization
- 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

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TOOLS AND TECHNIQUES FOR PLANNING PURCHASES AND ACQUISITIONS

- **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.
- **Buy-or-lease analysis:** determining the cost-effectiveness between buying some resources and renting them.
- Mainly focusing on financial consideration

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BUY-OR-LEASE EXAMPLE

- Assume you can lease an item you need for a project for \$800/day; to purchase the item, the cost is \$12,000 plus a daily operational cost of \$400/day

How long will it take for the purchase cost to be the same as the lease cost?

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BUY-OR-LEASE SOLUTION

- Set up an equation so both options, purchase and lease, are equal
- In this example, use the following equation; let d be the number of days to use the item:

$$\$12,000 + \$400d = \$800d$$

$$\$12,000 = \$400d$$

$$d = 30$$

- If you need the item for more than 30 days, it is more economical to purchase it

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TYPES OF CONTRACTS

- 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
 - **Cost reimbursable** contracts: involve payment to the seller for direct and indirect costs, plus the contractor's income.
 - **Time and material** contracts: involve a cost calculation on the basis of direct labor hours at a set rate and cost-reimbursable for materials.
 - Outsourcing IT service (hiring a temporary contract IT staff or consultant from supplier for a period of time)

WHEN TO USE THEM

- **Fixed price**
 - Watch out for **quality**
 - Used when buyer knows the details, you have experience
- **Cost reimbursable**
 - Watch out for **Cost**
 - Used when seller knows the details, they have experience, but you should trust them and rely on their experience and morality
- **Time and material (T&M)**
 - Watch out for **Time and Cost**
 - Used when both don't know the details, but you need to monitor to make sure they would not delay the works

Time and Material Pricing

Example (Continued)

Determine a price quote to refurbish a pontoon boat:
Estimated 50 hours of labour
Estimated \$3,600 parts and materials

LAKE HOLIDAY MARINA Time and Material Price Quotation

Job: Marianne Perino, repair of 28-foot pontoon boat

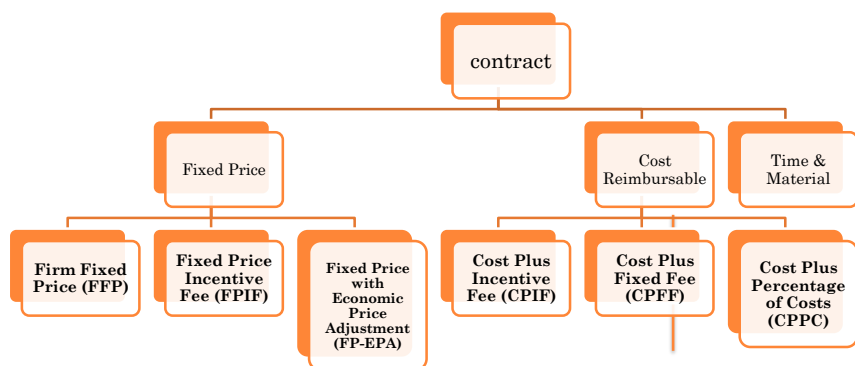
Labor charges: 50 hours @ \$38.20 \$1,910

Material charges

Cost of parts and materials	\$3,600	
Material loading charge ($43.5\% \times \$3,600$)	1,566	5,166

Total price of labor and material		\$7,076
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TYPES OF CONTRACT



FIXED PRICE CONTRACTS

- **Firm Fixed Price Contracts (FFP)**
 - The fee is fixed for the products /services. No incentives are given.
- **Fixed Price Incentive Fee Contracts (FPIF)**
 - On top of fixed fee, incentives are given to the seller in case the pre-defined performance targets are met or exceeded.
- **Fixed Price with Economic Price Adjustment Contracts (FP-EPA)**
 - The fixed fee will be adjusted based on the external economic factors, such as inflation rate, currency exchange rate, during the project implementation.

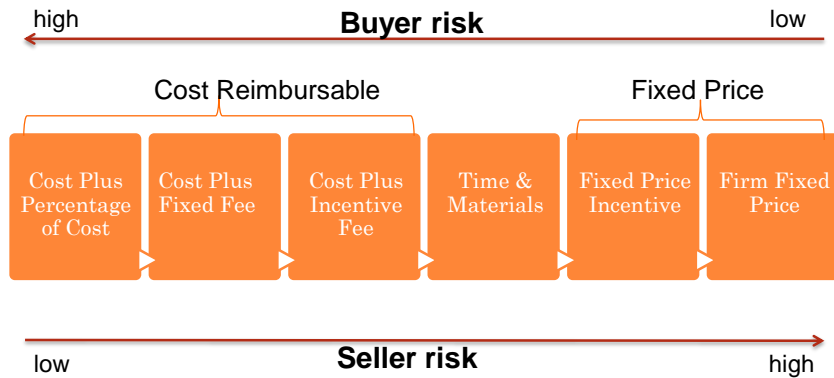
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COST REIMBURSABLE CONTRACTS

- **Cost plus incentive fee (CPIF):** the buyer pays the supplier for allowable performance costs plus a predetermined fee and an incentive bonus
$$\text{Allowable performance costs} + \text{Predetermined fee (income of contractor)} + \text{Incentive bonus}$$
$$(\text{Incentive bonus} = \text{saved amount} \times \text{shared \%})$$
- **Cost plus fixed fee (CPFF):** the buyer pays the supplier for allowable performance costs plus a fixed fee payment usually based on a percentage of estimated costs
$$\text{Allowable performance costs} + \text{Fixed fee}$$
- **Cost plus percentage of costs (CPPC):** the buyer pays the supplier for allowable performance costs plus a predetermined percentage based on total costs
$$\text{Allowable performance costs} + \text{Allowable performance costs} \times \text{predetermined \%}$$

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CONTRACT TYPES VS. RISK



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FIXED PRICE (IN THE VIEWPOINT OF BUYERS)

- Pros
 - Easier to budget
 - Lower risk (higher risk for the sellers)
 - Buyers do not bear the raise of materials and labor costs.
- Cons
 - Rely on the clarity of the scope and requirements
 - Do not allow much change on the planned specifications. (Any change may require the change of contract.)
 - Buyers will not enjoy the benefit of the drop of materials and labor costs.

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COST REIMBURSABLE (IN THE VIEWPOINT OF BUYERS)

- Pros
 - More flexible for changing market needs (or when the scope is uncertain)
- Cons
 - The seller has no incentive to keep cost low
 - More difficult to budget (total cost not known at the start of the project)
 - Higher risk (lower risk for the sellers)

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PROCUREMENT MANAGEMENT PLAN

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

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CONTRACT STATEMENT OF WORK (SOW)

- A **Statement Of Work** 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 SOW is developed from Scope Baseline (Project Scope Statement, WBS, WBS Dictionary).
- A good SOW gives bidders a better understanding of the buyer's expectations

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FIGURE 12-3. STATEMENT OF WORK (SOW) TEMPLATE

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.

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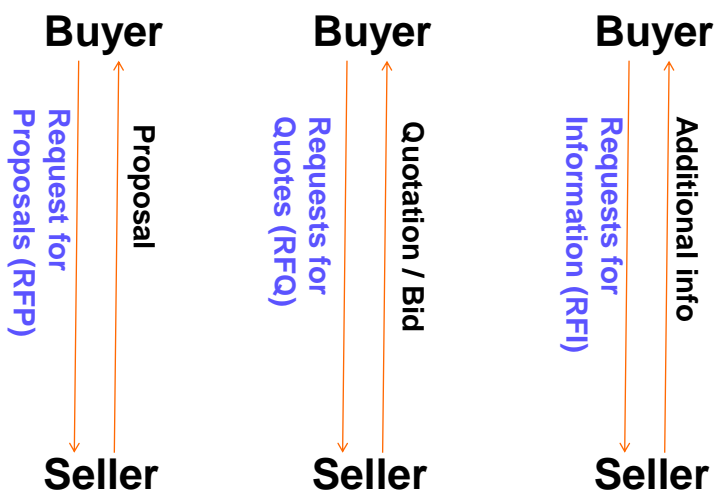
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PROCUREMENT DOCUMENTS

- **Request for Proposals (RFP):** 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 (RFQ):** 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
- **Requests for Information (RFI):** used to solicit more information from prospective suppliers
 - RFI is usually followed by a RFQ or RFP

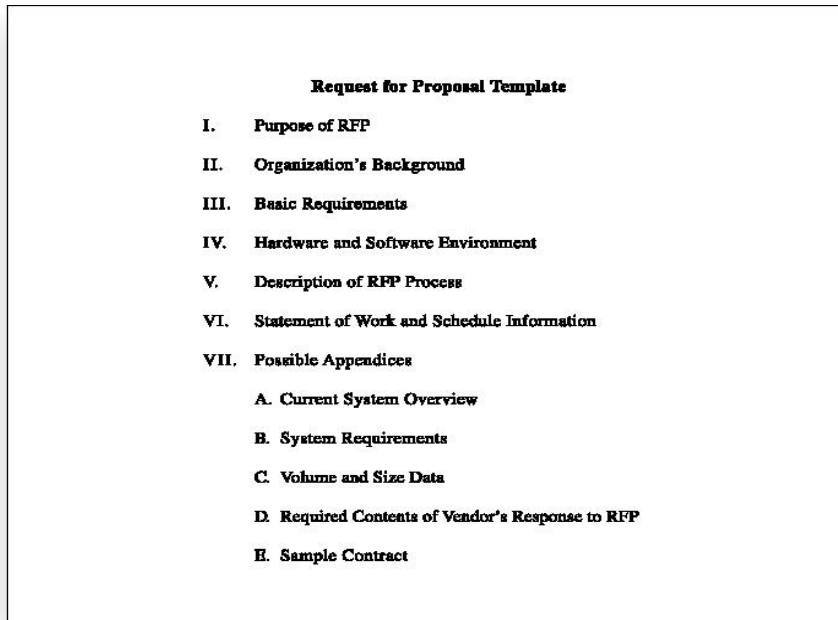
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RFP, RFQ AND RFI



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FIGURE 12-4. REQUEST FOR PROPOSAL (RFP) TEMPLATE



EVALUATION CRITERIA

- It's important to prepare some form of evaluation criteria, preferably before issuing a formal RFP or RFQ
- Beware of proposals that look good on paper; be sure to evaluate factors, such as past performance and management approach
- Can require a technical presentation as part of a proposal

CONDUCTING PROCUREMENTS

- Sending appropriate documentation to potential sellers
- Obtaining proposals or bids
- Selecting a seller
- Awarding a contract

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APPROACHES FOR PROCUREMENT

- Organizations can advertise to procure goods and services in several ways:
 - Approaching the preferred vendor
 - Approaching several potential vendors
 - Advertising to anyone interested
- Bidders' conference
 - It is a meetings with prospective sellers prior to preparation of a bid or proposal
 - It can help clarify the buyer's expectations to the sellers

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SOURCE SELECTION

- Evaluating proposals or bids from sellers
- Choosing the best one
- Negotiating the contract
- Awarding the contract

FIGURE 12-5. SAMPLE PROPOSAL EVALUATION SHEET

		Proposal 1		Proposal 2		Proposal 3, etc.	
Criteria	Weight	Rating	Score	Rating	Score	Rating	Score
Technical approach	30%						
Management approach	30%						
Past performance	20%						
Price	20%						
Total score	100%						

FIGURE 12-5. SAMPLE PROPOSAL
EVALUATION SHEET (WITH FIGURES)

		Proposal 1		Proposal 2		Proposal 3, etc.	
Criteria	Weight	Rating	Score	Rating	Score	Rating	Score
Technical approach	30%	80%	24	70%	21	60%	18
Management approach	30%	80%	24	80%	24	70%	21
Past performance	20%	90%	18	80%	16	70%	14
Price	20%	50%	10	80%	16	90%	18
Total score	100%		76		77		71

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SELLER SELECTION

- Organizations often do an initial evaluation of all proposals and bids and then develop a short list of potential sellers for further evaluation
- 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

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ADMINISTERING/CONTROLLING PROCUREMENTS

- Ensures that 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

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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
 - Archive information for future use
- The contract itself should include requirements for formal acceptance and closure

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