Procurement and Contract Management

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Project Procurement Management

In this module, we will cover:

- Overview – Procurement Management
- What is a Contract?
- Required elements of the contract.
- Plan Procurement Management
- Procurement documents
- Different Types of Contracts
    - Advantages and Disadvantages of contract types
- Conduct Procurement Management
- Proposal Evaluation Techniques
- Contract Negotiation Techniques
- Control and Close Procurements and Conclusions
- Numercial

Overview – Project Procurement Management

- One of the important responsibility of a project manager is to ensure required resources and services are made available to the project at the **right time**
- Procurement includes purchase or acquisition of products, services or results
- If resources are in the United States – the local, state and federal laws and regulations governing business will apply.
- In case of offshoring – understand the local laws of that country. What is illegal in USA may be legal in the other country.
- Procurement activity involves creation of a SOW – Statement of work subject to legal reviews.
- To avoid dispute – best interest of both buyer and seller to make this document as accurate and detailed as possible.

Overview – Project Procurement Management

- Buyers procure products, services or results and are also called
  - Client
  - Customer
  - Service requestor
  - Purchaser
- Sellers provide products, services or results and are called
  - Contractor
  - Subcontractor
  - Vendor
  - Service provider
  - Supplier

Contract

- A legally enforceable agreement between two or more parties. Contracts are legal documents between a buyer and a seller
- The aim of a procurement contract is to obtain the services or products as agreed in the contract to the satisfaction of all parties to the contract.
- Procurement Management helps ensure that the products and components not made by a company but purchased from outside the project will not negatively impact on the quality of the project's final product.
- The procurement manager or office (contract manager) is normally responsible for creating and managing the procurement contract.
- It is a mutually binding agreement that obligates:
  - the seller to provide specified products
  - the buyer to provide monetary or other valuable consideration
- **Most organizations carry out project procurement through centralized procurement system**
- Proactive involvement of project team in procurement management crucial for project success

Required Elements of the Contract

- All contracts between the buyer and seller must contain the following
  - The **offer** describes the product or service or result the seller may offer the buyer.
  - **Acceptance criteria** - performed from the buyer's point of view
  - **Capacity** – means the seller has the physical and financial capabilities of delivering the product or services
  - **Consideration** – what the seller will receive for preforming the work. Can be monetary or some other form of compensation.
  - **Legal Purpose** – contract must be under legal under the USA law or India law etc

Centralized and De-Centralized Contracting

Centralized	
Advantages	**Disadvantages**
High Levels of expertise	Multiple projects
Standardized company practices	Difficulties in obtaining contract expertise as per your project from project manager
Continuous improvements	
Defined career path in procurement area	

De-Centralized	
Advantages	**Disadvantages**
Expertise obtained easily from Project manager	Duplication of effort
Standardized company practices	Little Standardization
	No career path of Procurement manager

Plan Procurement Management

- Determine what to purchase and how and when
- Procurement management plan is created at this stage - The process of documenting project procurement decisions, specifying the approach, and identifying potential sellers.
- Make or buy decisions
  - Decision to reduce risks
  - Having the workforce
- Contract Type selection
  - Decision is made on the acceptable risk to both buyer and sellers
  - Based on the information available at the time of making the SOW – understanding the requirements

Make or Buy Decisions

Types of Cost	Make in House	Buy from Market	Difference
Deployment	$15,800	$8,000	$7,800
Monthly Operations	$500	$800	$300
Calculate **Break-even point**: $7,800/$300 = **26 months**			
If software will be used **<** 26 months, then "Buy from Market"			
If software will be used **>** 26 months, the "Make in House"			

Procurement Documents

- Some basic types of procurement documents associated with the contract are
  - RFP – Request for proposal – Cost reimbursable
    - Solicitation for a detailed and customized solution with a quotation of total price. Buyer is purchase expert.
  - RFB – Request for Bid – buyer is buying a product which is well understood. – Fixed price
    - Standard design available
    - Requirements to be customized to the needs of the buyer
    - Open invitation for a lump-sum quotation
  - RFQ – Request for Quotation –T&M
    - Used for getting prices from a company for standard goods or services

Document Type	Contract Vehicle	SOW Type
RFP – request for Proposal	Cost Reimbursable	Functional/ Performance
IFB (Invitation for Bid) or RFB (Request for Bid)	Fixed Price	Design
RFQ (Request for Quote)	T&M	Functional/Performance/ Design

Different Types of Contract

Contract Types

- **Fixed Price or Firm Fixed Price (FP or FFP)**
  "Firm fixed price" also called "Lump Sum“. The simplest type of contract. The buyer specifies the work required and the supplier quotes a price. The seller assumes almost all of the risks of this contract.

- **Time and Materials (T&M)**
  Simple billing at pre-negotiated rates for labour and materials on a project. Rates normally include a certain percentage mark-up for overheads or profit. In this arrangement the buyer carries most of the risk.

- **Cost Reimbursable (CR)**
  In this type of contract the buyer agrees to reimburse the seller’s actual costs. Added to that is a fee that typically represents the seller’s profit. In this type of contract the buyer carries most of the risk.

Fixed Price Contracts

Firm Fixed Price Contracts (FFP)

The most used contract type is the FFP. The price for the product or services is set at the beginning and not subject to change unless the scope of work changes

Fixed Price Incentive Fee Contracts (FPIF)

Allows for deviation for superior performance, with financial incentives tied to achieving agreed upon metrics

Fixed Price with Economic Price Adjustment Contracts

Allows for pre-defined final adjustments to the contract price due to changed conditions such as inflation changes, or cost increases etc

Advantages & Disadvantages – Fixed Price Contract FP or FFP

Advantages of fixed price contracts:

- Greatest risk to the vendor / seller
- Less work for the buyer to manage – no need to audit time or resources.
- The seller has a strong incentive to control costs
- Companies normally have experience with this type of contract
- The buyer knows the total price at project start. You are buying – “Just Do It !”

Disadvantages of fixed price contracts include:

- Profit margin of the seller is unknown to the buyer.
- The seller may underprice the work and try to make up profits on change orders – Change requests.
- The seller may not complete some of the contract statement of work once the contract becomes unprofitable
- Can be more expensive than cost reimbursable contracts

Advantages & Disadvantages – Cost Reimbursable Contract

Advantages of cost reimbursable contracts include:

- Simpler contract statement of work
- Usually requires less work to define the scope than fixed price
- Generally lower cost than fixed price because the seller does not have to “add on” for risk

Disadvantages of cost reimbursable contracts include:

- Greater Risk to the buyer
- Require more work for the buyer to manage -Require auditing of the seller's invoices
- Seller has only a moderate incentive to control costs
- Total price is unknown.

Cost-reimbursable contracts

Cost Plus Fixed Fee Contracts (CPFF)

Seller is reimbursed for all allowable costs for performing the contract work, and receives a fixed-fee payment calculated as a percentage of the initial estimated project costs

Cost Plus Incentive Fee Contracts (CPIF)

Seller is reimbursed for all allowable costs for performing the contract work and receives a predetermined incentive fee based upon achieving certain performance objectives

Cost Plus Award Fee Contracts (CPAF)

Seller is reimbursed for all legitimate costs, but most of the fee is earned only based on the satisfaction of certain broad subjective performance criteria. At the whim of the buyer

Advantages & Disadvantages – Time & Materials Contract

Advantages of time & materials contracts include:

- Quick to create
- Staff Augmentation

Disadvantages of time & materials contracts include:

- Seller has no incentive to control cost
- Requires monitoring of daily output
- More suitable for small projects only

Fixed-Price Contracts

- Do not expect many changes in scope of work
- Price set at the outset
- Seller takes the risk for price escalation

Cost-Reimbursable Contracts

- Scope isn't well defined at beginning and you expect many changes
- Seller is reimbursed for allowable cost plus a fee is set for services
- Buyer takes the risk for price escalation

Time and Material Contract

- Hybrid
- Used for staff augmentation

Conduct Procurement Management

- Conduct Procurements is the process of obtaining seller responses, selecting a seller, and awarding a contract. – PMBOK 6th Edition
- Activities
  - Find potential sellers through advertising
  - Use a list of pre-qualified sellers for goods/services
  - Helps in speeding up the procurement process
- Hold pre-bid meeting
  - To align the understanding of all the bidders on the requirements
  - To answer all the queries of the bidders
  - Some sellers may not ask queries in front of competitors
  - Questions and answers should be put in writing and issued to all potential sellers
- Receive seller response
- Prepare comparative statement
- Negotiate to finalize agreement – BAFO – Best and Final Offer

Proposal Evaluation Techniques

- Screening System:
  - It eliminates sellers who do not meet the minimum requirements of source selection criteria
    - For example: Shortlist five sellers based on number of years in business
    - Shortlist three sellers based on price.
- Weighting system:
    - Assign weighting to the seller selection criteria, arrive at scores for each seller, compare the scores and select the seller who scores the highest, or shortlist sellers based on scores.

Criteria	Weight	Rating (1 to 100)	Score
Past performance	20 %	60	12
Total Price	40%	70	28
Financial position	10%	60	6
Ability to complete work on time	20%	20	4
Technical capability	10%	40	4
Total score of supplier A			64

Contract Negotiation Techniques

- Attacks – “If you don’t know the details of your own company, perhaps you should get out of business !”
- Personal Insults – “If you do not understand what you are doing, perhaps you should find another job!”
- Good Guy / Bad Guy – aggressive and handling it with kindness.
- Deadline – “We have a flight leaving at 5 pm today and must finish negotiations before that time”
- Lying – Lying may be obvious or hidden
- Limited Authority – “I can’t agree to shorten schedule by 6 months. I only have authority to offer 3 months.”
- Missing Man – “Only my boss can agree to that request and he isn’t here. Why don’t we agree to do _____ ? ”
- Fair and Reasonable – “Lets be fair and reasonable. Accept this offer as it stands.”
- Delay – “Let us revisit this issue next time we get together”
- Withdrawal – Shows reduced interest
- Fait Accompli – A done deal – “These govt terms and conditions must be in all our contracts”. Standard contract terms are non-negotiable. (In reality ***‘anything’*** is negotiable)

Control Procurements

- Assuring that the performance of both parties meets contractual requirements
- Focus:
  - Managing procurement relationships
  - Monitoring contract performance
    - A contract once signed must be followed, even though the other party commits a breach
    - When a breach is committed, a letter of default needs to be sent out

- Inspections & Audits
    - Evaluates the seller's performance and suggest corrective and preventive actions and request formal changes

- Claims Administration
    - These are items wherein the buyer and seller cannot agree on a change. Settle disputes regarding compensation of changes.

Close Procurements

- Done when either
  - Contract ends
  - Contract is terminated before the work is completed
- Focus:
  - Administrative activities for finalizing open claims , updating records and archiving information
  - Litigation on unsolved claims may continue after closure
- Is mandatory in any condition
- Contract closure occurs before project closure
- Includes Procurement Audit
- Documentation goes into the OPA – Organizational Process Assets
- Lessons Learned are also created

Conclusions

- Conclusion – Why project manager must understand contracts?
  - Contracts can have major impact on the project
  - Contracts are risk mitigation tools – Project manager must be able to contribute to the creation of contract terms and conditions in order to assign and mitigate risk on the project
  - Contract should be a useful tool to help manage the project. The project manager is required to tailor the contract to the needs of the project
  - Relationship between the buyer and the seller is fragile. Project manager must protect the relationship to successfully complete the contract
  - Contracting process takes time. Project manager must be able to fit the contracting process into the project schedule effectively

Numerical

Question : A cost-plus-percentage-cost (CPPC) contract has an estimated cost of $120,000 with an agreed profit of 10% of the costs. The actual cost of the project is $130,000. What is the total reimbursement to the seller?

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Estimated Cost= \$120,000
Actual Cost= \$130,000
Agreed Profit=10%
Reimbursement amount= Actual cost+% profit of actual cost
=\$130,000+(10% of \$130,000)= \$143,000

Numerical

Question : A Cost-plus-incentive-fee (CPIF) contract has an estimated cost of $210,000, a fee of $25,000, and a share ratio of 80/20. The actual cost of the project was $200,000. Calculate the final fee and the final price for seller.

Numerical

Question : A Cost-plus-incentive-fee (CPIF) contract has an estimated cost of $210,000, a fee of $25,000, and a share ratio of 80/20. The actual cost of the project was $200,000. Calculate the final fee and the final price for seller.

Estimated Cost = $210,000
Predetermined fee = $25,000
Share Ratio=80/20(80 is for the Buyer and 20 is for the seller)
Actual Cost= $200,000
Saving = Estimated Cost-Actual cost = $10,000

Final Fee= (Saving * Seller Ratio) + Predetermined fee=($10,000*20%)+$25,000=$2,000+$25,000= $27,000

Final Price=Actual cost+ Final Fee=$200,000+$27,000=$227,000

Reference Books

- Project Management – The System Approach to Planning, Scheduling, and Controlling - Harold Kerzner
- Project Management – The Managerial Process - Clifford F. Gray, Erik W. Larson, Gautam V. Desai
- PMBOK 6th Edition – www.pmi.org
- EdWel Programs – Richard Perrin