

Project Procurement Management

Study Notes

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Points to Note

- Please read Chapter 12 from Project Management Institute, A Guide to the Project Management Body of Knowledge, (*PMBOK® Guide*) – Fifth Edition, Project Management Institute, Inc., 2013 (pages 355-389).
- The study notes explain topics that are important for PMP® exam preparation, and you can expect several questions from these topics.
- It is very important to understand all the concepts discussed in this chapter, so please pay close attention to all the terms used.
- Try to relate the concepts to real life examples.
- After reading the study notes, please answer the chapter test questions in this Knowledge Area. The chapter questions improve your understanding of the concepts discussed in the study notes.



What is Project Procurement Management

- *Includes the processes necessary to purchase or acquire products, services, or results needed from outside the project team.
- The procurement management processes are:
 - Plan Procurement Management
 - Conduct Procurements
 - Control Procurements
 - Close Procurements

Please refer to figure 12-1, page 356. This provides an overview of the processes in Project Procurement Management.

*This definition is taken from the Glossary of the Project Management Institute, A Guide to the Project Management Body of Knowledge, (*PMBOK® Guide*) – Fifth Edition, Project Management Institute, Inc., 2013



Understanding Terms and Concepts

- Project Procurement Management has several terms and concepts, which need to be studied and properly understood to perform well in the PMP exam.
- Please carefully study the terms and concepts explained in this section (also in the “Terms and Concepts” module of our study materials) to fare well in the PMP exam.



Plan Procurement Management

- *Process of documenting project procurement decisions, specifying the approach, and identifying potential sellers..
- **Determines whether to acquire outside support, and if so, what to acquire, how to acquire it, how much is needed, and when to acquire it.
- Includes evaluating the risks involved with each make-or-buy analysis, reviewing the type of contract planned to be used with respect to avoiding or mitigating risks, sometimes transferring risks to the seller.

*This definition is taken from the Glossary of the Project Management Institute, A Guide to the Project Management Body of Knowledge, (*PMBOK® Guide*) – Fifth Edition, Project Management Institute, Inc., 2013

**Project Management Institute, A Guide to the Project Management Body of Knowledge, (*PMBOK® Guide*)– Fifth Edition, Project Management Institute, Inc., 2013, Page 358



Make or Buy Analysis

- *Process of gathering and organizing data about product requirements and analyzing them against available alternatives including the purchase or internal manufacture of the product.
- Analysis should include:
 - Both indirect and direct costs
 - Prospective as well as the immediate needs of the performing organization.

For example:

- Whether a capital goods item can be used for other current or future projects of the organization (ongoing need of the item)
 - Additional capacity is available for use within the organization
 - Proprietary or business critical activity, which is core business for the company (e.g., designing of chips in a chip manufacturing company)
- Available contract types should also be considered during the buy analysis.

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Make or Buy Analysis (continued)

1. Comparing the cost of Make or Buy

Question: You are considering whether to buy or make a software product:

- If you buy, the cost is \$ 80,000, and the cost of procurement and integrating in your company is \$ 1,000
- If you want to make it yourself, the product will require seven software engineers working three months. Salary of each software engineer is \$ 4,000 per month. The overhead costs apportioned to the project will be \$ 2,000.

Which option will you choose—make or buy?

Answer: If you buy, cost will be: $\$ 80,000 + \$ 1,000 = \$ 81,000$

If you make, cost will be: $\$ 4,000 \times 7 \times 3 + \$ 2,000 = \$ 86,000$

So, it is better for you to buy.



Make or Buy Analysis (continued)

2. Comparing the cost of Lease or Buy:

Question: You are considering whether to buy or lease a machine for your heavy engineering plant. How will the duration of the project influence your decision?

- If you buy, the cost is \$ 29,000, and the one-time cost of procurement and integrating in your company is \$ 1,000
- If you lease, you have to pay \$ 10,000 as down payment and \$ 5,000 per month

Answer: If you buy, cost is: $\$ 29,000 + \$ 1,000 = \$ 30,000$

Assuming the lease is for M months, the cost is: $\$ 10,000 + \$ 5,000 \times M$

The cost of buy = cost of lease, if : $\$ 30,000 = \$ 10,000 + \$ 5,000 \times M$

$M = 20,000/5,000 = \text{four months}$

So, if the duration of the project is less than four months, you should lease—otherwise, you should buy.



Contract Type Selection

	Fixed Price	Cost Reimbursable	Time and Material
Definition of product	Well Defined	Not well defined	Not well defined
Risk of buyer	Low	High	High
Risk of seller	High	Low	Low
Type of payment	Fixed total price	Payment for actual costs + a fee toward seller profit	Unit rates for payment fixed, but the cost increases with time

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Types of Contracts

- Types of contracts include:
 - Cost-plus percentage fee
 - Cost-plus fixed fee
 - Cost-plus guaranteed maximum
 - Cost-plus guaranteed maximum and shared savings
 - Cost-plus incentive (award fee)
 - Cost and cost sharing
 - Fixed price or lump sum
 - Fixed price with redetermination
 - Fixed price incentive fee
 - Fixed price with economic price adjustment
 - Fixed price incentive with successive targets
 - Fixed price for services, material, and labor at cost (purchase orders, blanket agreements)
 - Time and material/labor hours only
 - Bonus-penalty
 - Combinations
 - Joint venture

Reference: Project Management - A Systems Approach To Planning, Scheduling, And Controlling, Pages 1147-1151



Important Fixed Price Contracts

- Fixed price or lump sum:
 - Contractor performs the work for negotiated value.
 - If estimated target cost is low, profit for seller may be low or even nil.
 - Lowest risk to the buyer, highest risk to the seller
 - Usually requires a long period for preparation of bids; also buyers include many contingency provisions to protect their interests
 - Done only when the product is very well-defined; subsequent changes made might lead to trouble and sometimes considerable expenses
- Fixed price incentive fee:
 - Allows for adjustment of the total profit by a formula that depends on the final total cost at the completion of the project.
 - There is an incentive to the seller to decrease costs.
- Fixed price with redetermination:
 - Prospective: allows for future negotiations of some fixed prices contracts at specified times
 - Retroactive: allows for adjustment of contract price after performance has been completed
- Fixed price with economic price adjustment:
 - Allows for price increases, if the contract is for multiple years (for example, to account for inflation)

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Important Cost Reimbursable Contracts

- All cost reimbursable contracts require that the seller's books be audited.
- Cost plus fixed fee:
 - Cost may vary, but the fee remains the same
 - Provides incentive to the contractor for early completion of the job
- Cost plus percentage of costs:
 - Not preferred, because there is no incentive for the seller to control costs
 - Is illegal in several companies and countries
- Cost plus incentive fee:
 - Same as cost plus contracts, except that these have provision for adjustment of the fee that compares the total project cost to the target cost.
 - Usually used for long-term (e.g., R&D) contracts

Reference: Project Management - A Systems Approach To Planning, Scheduling, And Controlling, Pages 1147-1151



Procurement Management Plan

- *A component of the project or program management plan that describes how a project team will acquire goods and services from outside the performing organization.
- Can be formal/informal, highly detailed/broadly framed and it is based on the needs of each project.
- Describes how the remaining procurement processes (from developing procurement documents through contract closure) will be managed and includes:
 - Types of contracts to be used
 - Persons who prepare independent estimates and when
 - Actions taken by the procurement department and the project team
 - Sources of standardized procurement documents
 - Methods to manage multiple providers
 - Ways to coordinate procurements with the other aspects of the project

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Conduct Procurements

- *Process of obtaining seller responses, selecting a seller, and awarding a contract.
- Provides alignment of internal and external stakeholder expectations through established agreements.
- Tools and Techniques used are:
 - Bidder conferences
 - Proposal evaluation techniques
 - Independent estimates
 - Expert judgment
 - Advertising
 - Analytical techniques
 - Procurement negotiations
- Important outputs are:
 - Selected sellers
 - Agreements

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Control Procurements

- *Process of managing procurement relationships, monitoring contract performance, and making changes and corrections to contracts as appropriate.
- **Ensures that both the seller's and buyer's performance meets procurement requirements according to the terms of the legal agreement.
- Includes application of appropriate project management processes to the contractual relationship(s) and integration of the outputs from these processes into the overall management of the project
- Important Tools and Techniques:
 - Contract change control system
 - Monitoring performance (procurement performance reviews, inspections, and audits, performance reporting)
 - Managing payments (payment systems, claims administration, and records management system)
- Outputs are:
 - Work performance information
 - Change requests
 - Updates to project management plan, project documents, and organizational process assets

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**Project Management Institute, A Guide to the Project Management Body of Knowledge, (*PMBOK® Guide*)– Fifth Edition, Project Management Institute, Inc., 2013, Page 379



Close Procurements

- *Process of completing each procurement.
- Documents agreements and related documentation for future reference.
- Verifies that all work and deliverables from the contract are acceptable
- Early termination of the contract is a special case of procurement closure
- Tools and Techniques used are:
 - Procurement audits
 - Procurement negotiations
 - Records management system
- Outputs are:
 - Closed procurements
 - Organizational process assets updates

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