

# CHAPTER 12

## PROJECT PROCUREMENT MANAGEMENT

Project Procurement Management includes the processes necessary to purchase or acquire products, services, or results needed from outside the project team. The organization can be either the buyer or seller of the products, services, or results of a project.

Project Procurement Management includes the contract management and change control processes required to develop and administer contracts or purchase orders issued by authorized project team members.

Project Procurement Management also includes administering any contract issued by an outside organization (the buyer) that is acquiring the project from the performing organization (the seller), and administering contractual obligations placed on the project team by the contract.

Figure 12-1 provides an overview of the Project Procurement Management processes which include the following:

- 12.1 Plan Procurements**—The process of documenting project purchasing decisions, specifying the approach, and identifying potential sellers.
- 12.2 Conduct Procurements**—The process of obtaining seller responses, selecting a seller, and awarding a contract.
- 12.3 Administer Procurements**—The process of managing procurement relationships, monitoring contract performance, and making changes and corrections as needed.
- 12.4 Close Procurements**—The process of completing each project procurement.

These processes interact with each other and with the processes in the other Knowledge Areas. Each process can involve effort from a group or person, based on the requirements of the project. Each process occurs at least once in every project and occurs in one or more of the project phases, if the project is divided into phases. Although the processes are presented here as discrete components with well-defined interfaces, in practice they overlap and interact in ways not detailed in the *PMBOK® Guide*. Process interactions are discussed in detail in Chapter 3, Project Management Processes.

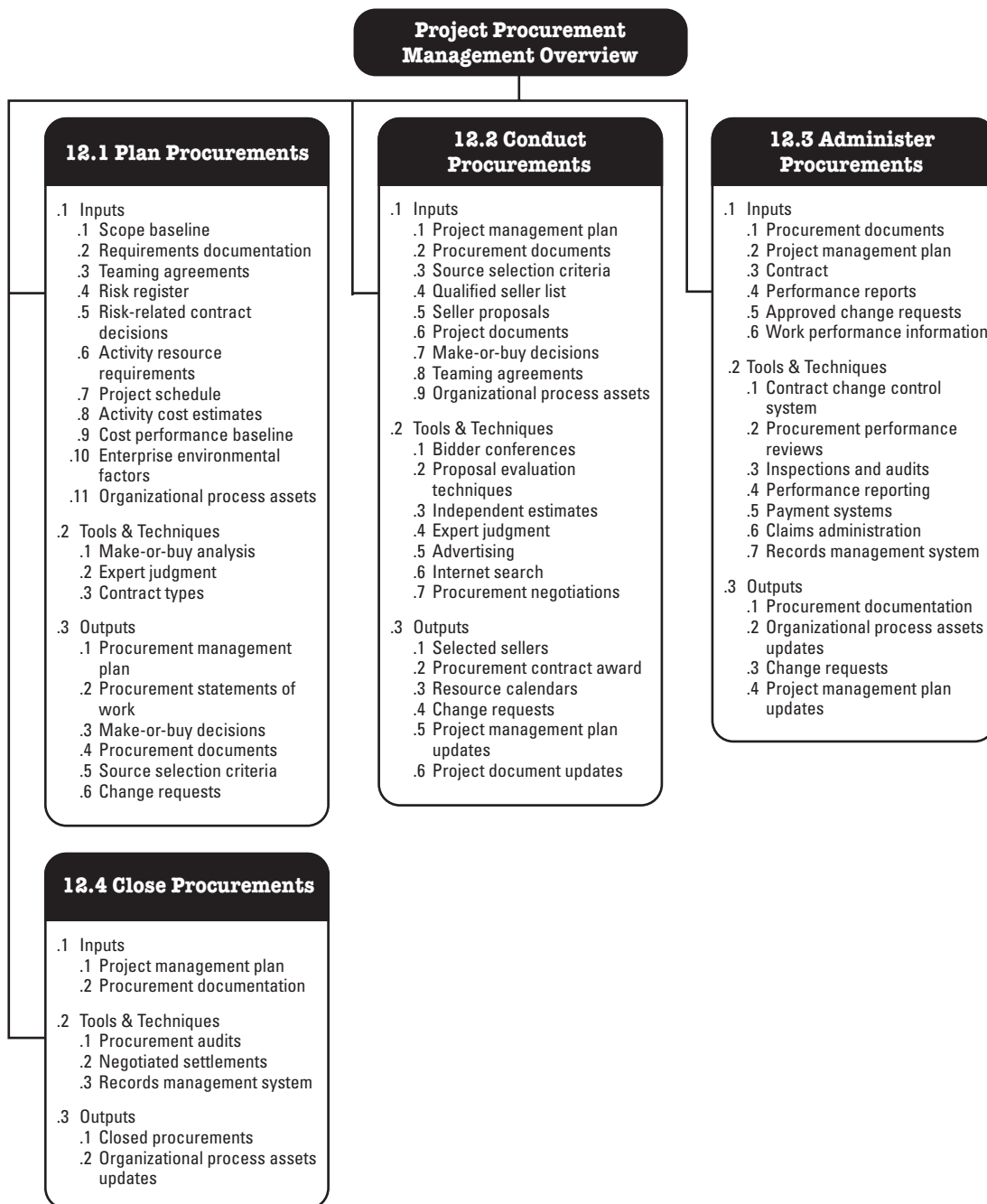


Figure 12-1. Project Procurement Management Overview

The Project Procurement Management processes involve contracts that are legal documents between a buyer and a seller. A contract represents a mutually binding agreement that obligates the seller to provide the specified products, services, or results, and obligates the buyer to provide monetary or other valuable consideration. The agreement can be simple or complex, and can reflect the simplicity or complexity of the deliverables and required effort.

A procurement contract will include terms and conditions, and may incorporate other items that the buyer specifies to establish what the seller is to perform or provide. It is the project management team's responsibility to make certain that all procurements meet the specific needs of the project while adhering to organizational procurement policies. Depending upon the application area, a contract can also be called an agreement, an understanding, a subcontract, or a purchase order. Most organizations will have documented policies and procedures specifically defining the procurement rules and specifying who has authority to sign and administer such agreements on behalf of the organization.

Although all project documents are subject to some form of review and approval, the legally binding nature of a contract usually means that it will be subjected to a more extensive approval process. In all cases, the primary focus of the review and approval process is to ensure that the contract language describes the products, services, or results that will satisfy the identified project need.

The project management team may seek support early from specialists in contracting, purchasing, law, and technical disciplines. Such involvement can be mandated by an organization's policies.

The various activities involved in the Project Procurement Management processes form the life cycle of a contract. By actively managing the contract life cycle and carefully wording the terms and conditions of the procurements, some identifiable project risks can be avoided, mitigated, or transferred to a seller. Entering into a contract for products or services is one method of allocating the responsibility for managing or sharing potential risks.

A complex project can involve managing multiple contracts or subcontracts simultaneously or in sequence. In such cases, each contract life cycle can end during any phase of the project life cycle. Project Procurement Management is discussed within the perspective of the buyer-seller relationship. The buyer-seller relationship can exist at many levels on any one project, and between organizations internal to and external to the acquiring organization.

Depending on the application area, the seller can be called a contractor, subcontractor, vendor, service provider, or supplier. Depending on the buyer's position in the project acquisition cycle, the buyer can be called a client, customer, prime contractor, contractor, acquiring organization, governmental agency, service requestor, or purchaser. The seller can be viewed during the contract life cycle first as a bidder, then as the selected source, and then as the contracted supplier or vendor.

The seller will typically manage the work as a project if the acquisition is not just for shelf material, goods, or common products. In such cases:

- The buyer becomes the customer, and is thus a key project stakeholder for the seller.
- The seller's project management team is concerned with all the processes of project management, not just with those of this Knowledge Area.
- Terms and conditions of the contract become key inputs to many of the seller's management processes. The contract can actually contain the inputs (e.g., major deliverables, key milestones, cost objectives), or it can limit the project team's options (e.g., buyer approval of staffing decisions is often required on design projects).

This chapter assumes that the buyer of items for the project is assigned to the project team and that the sellers are organizationally external to the project team.

It also assumes that a formal contractual relationship will be developed and exist between the buyer and the seller. However, most of the discussion in this chapter is equally applicable to non-contractual intradivisional work, entered into with other units of the project team's organization.

## 12.1 Plan Procurements

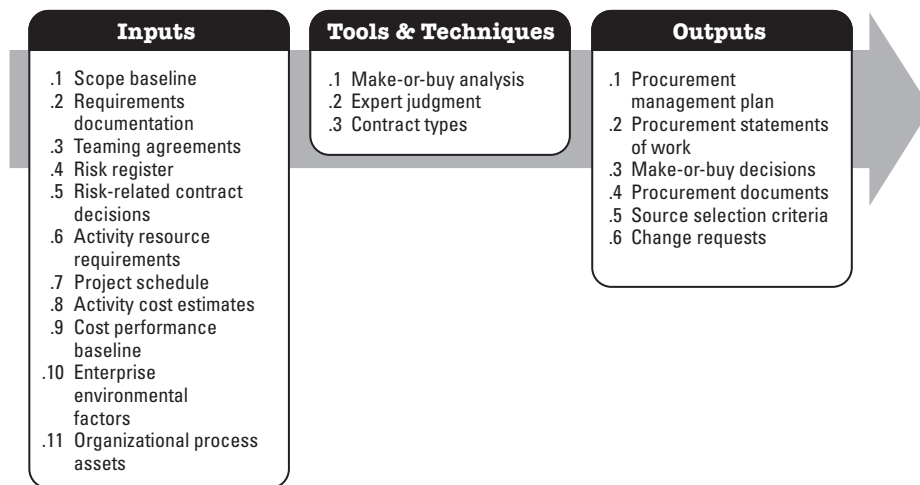
Plan Procurements is the process of documenting project purchasing decisions, specifying the approach, and identifying potential sellers (see Figures 12-2 and 12-3). It identifies those project needs which can best be, or must be, met by acquiring products, services, or results outside of the project organization, versus those project needs which can be accomplished by the project team.

This process involves determining whether to acquire outside support and, if so what to acquire, how to acquire it, how much is needed, and when to acquire it. When the project obtains products, services, and results required for project performance from outside the performing organization, the processes from Plan Procurements through Close Procurements are performed for each item to be acquired.

The Plan Procurements process also includes consideration of potential sellers, particularly if the buyer wishes to exercise some degree of influence or control over acquisition decisions. Consideration should also be given to who is responsible for obtaining or holding any relevant permits and professional licenses that may be required by legislation, regulation, or organizational policy in executing the project.

The requirements of the project schedule can significantly influence the strategy during the Plan Procurements process. Decisions made in developing the procurement management plan can also influence the project schedule and are integrated with Develop Schedule (Section 6.5), Estimate Activity Resources (Section 6.3), and make-or-buy decisions (Section 12.1.3.3).

The Plan Procurements process includes consideration of the risks involved with each make-or-buy decision. It also includes reviewing the type of contract planned to be used with respect to mitigating risks, sometimes transferring risks to the seller.



**Figure 12-2. Plan Procurements: Inputs, Tools and Techniques, and Outputs**

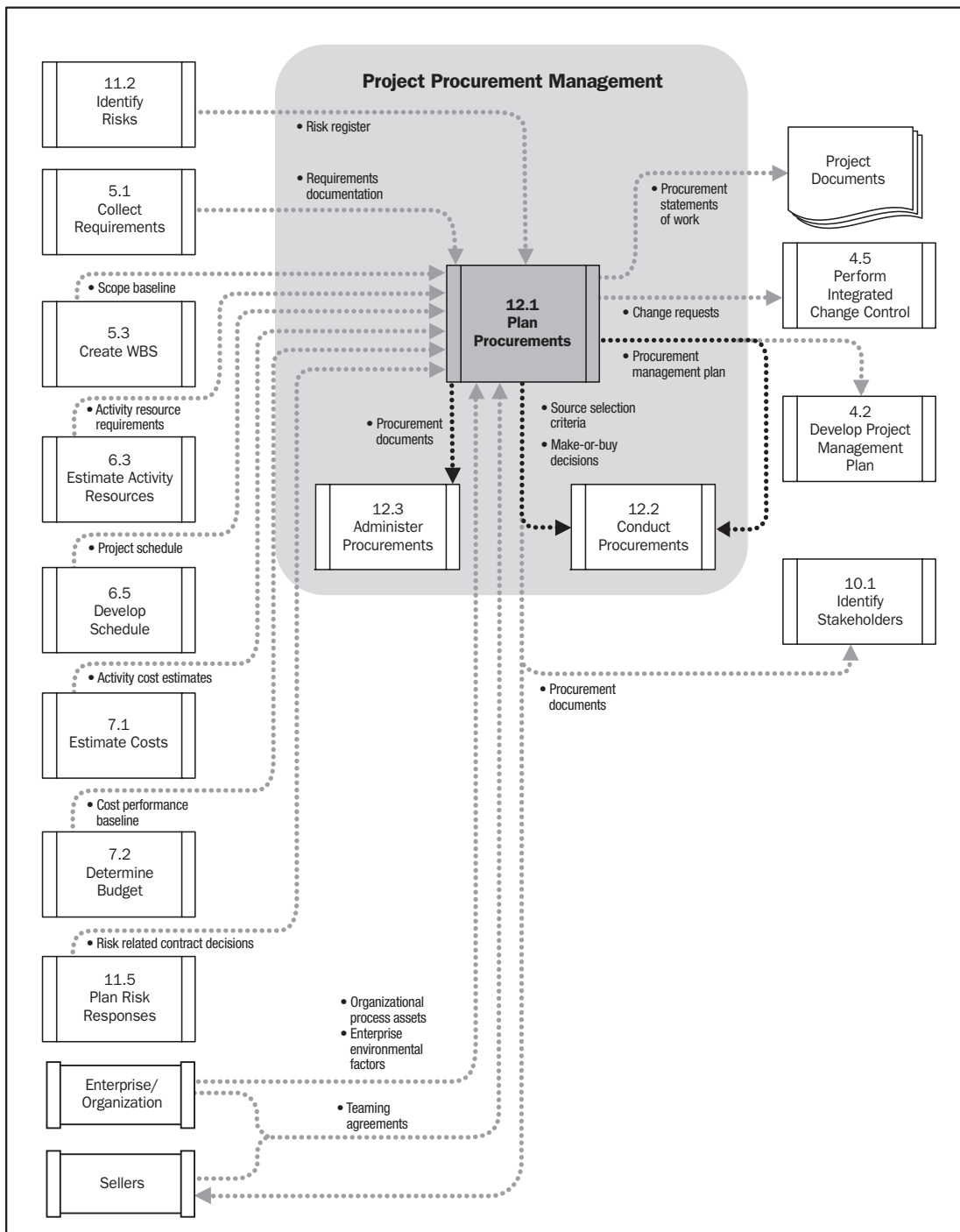


Figure 12-3. Plan Procurements Data Flow Diagram

### 12.1.1 Plan Procurements: Inputs

#### .1 Scope Baseline

The scope baseline (Section 5.3.3.3) describes the need, justification, requirements, and current boundaries for the project. It consists of the following components:

- **Scope statement.** The project scope statement contains the product scope description, service description and result description, the list of deliverables, and acceptance criteria, as well as important information regarding technical issues or concerns that could impact cost estimating. Examples of constraints are required delivery dates, available skilled resources, and organizational policies.
- **WBS.** (Section 5.3.3.1).
- **WBS dictionary.** The WBS dictionary (Section 5.3.3.2) and related detailed statements of work provide an identification of the deliverables and a description of the work in each WBS component required to produce each deliverable.

#### .2 Requirements Documentation

Requirements documentation may include:

- Important information about project requirements that is considered during planning for procurements.
- Requirements with contractual and legal implications that may include health, safety, security, performance, environmental, insurance, intellectual property rights, equal employment opportunity, licenses, and permits—all of which are considered when planning for procurements.

#### .3 Teaming Agreements

Teaming agreements are legal contractual agreements between two or more entities to form a partnership or joint venture, or some other arrangement as defined by the parties. The agreement defines buyer-seller roles for each party. Whenever the new business opportunity ends, the teaming agreement also ends. Whenever a teaming agreement is in effect, the planning process for the project is significantly impacted. Thus whenever a teaming agreement is in place on a project, the roles of buyer and seller are predetermined, and such issues as scope of work, competition requirements, and other critical issues are generally predefined.

#### **.4 Risk Register**

The risk register includes risk-related information such as the identified risks, risk owners, and risk responses (Section 11.2.3.1).

#### **.5 Risk-Related Contract Decisions**

Risk-related contract decisions include agreements including insurance, bonding, services, and other items as appropriate, that are prepared to specify each party's responsibility for specific risks (Section 11.5.3.2).

#### **.6 Activity Resource Requirements**

Activity resource requirements contain information on specific needs such as people, equipment, or location (Section 6.3.3.1).

#### **.7 Project Schedule**

Project schedule contains information on required timelines or mandated deliverable dates (Section 6.5.3.1).

#### **.8 Activity Cost Estimates**

Cost estimates developed by the procuring activity are used to evaluate the reasonableness of the bids or proposals received from potential sellers (Section 7.1.3.1).

#### **.9 Cost Performance Baseline**

The cost performance baseline provides detail on the planned budget over time (Section 7.2.3.1).

#### **.10 Enterprise Environmental Factors**

The enterprise environmental factors that can influence the Plan Procurements process include, but are not limited to:

- Marketplace conditions;
- Products, services, and results that are available in the marketplace;
- Suppliers, including past performance or reputation;
- Typical terms and conditions for products, services, and results or for the specific industry; and
- Unique local requirements.

### **.11 Organizational Process Assets**

The organizational process assets that influence the Plan Procurement process include, but are not limited to:

- Formal procurement policies, procedures, and guidelines. Most organizations have formal procurement policies and buying organizations. When such procurement support is not available, the project team will have to supply both the resources and the expertise to perform such procurement activities.
- Management systems that are considered in developing the procurement management plan and selecting the contract types to be used.
- An established multi-tier supplier system of pre-qualified sellers based on prior experience.

## **12.1.2 Plan Procurements: Tools and Techniques**

### **.1 Make-or-Buy Analysis**

A make-or-buy analysis is a general management technique used to determine whether particular work can best be accomplished by the project team or must be purchased from outside sources. Sometimes a capability may exist within the project organization, but may be committed to working on other projects, in which case the project may need to source such effort from outside the organization in order to meet its schedule commitments.

Budget constraints may influence make-or-buy decisions. If a buy decision is to be made, then a further decision of whether to purchase or lease is also made. A make-or-buy analysis should consider all related costs; both direct costs as well as indirect support costs. For example, the buy-side of the analysis includes both the actual out-of-pocket costs to purchase the product, as well as the indirect costs of supporting the purchasing process and purchased item.

### **.2 Expert Judgment**

Expert technical judgment will often be used to assess the inputs to and outputs from this process. Expert purchasing judgment can also be used to develop or modify the criteria that will be used to evaluate seller proposals. Expert legal judgment may involve the services of legal staff to assist with unique procurement issues, terms, and conditions. Such judgment, including business and technical expertise, can be applied to both the technical details of the acquired products, services, or results and to various aspects of the procurement management processes.

### .3 Contract Types

The risk shared between the buyer and seller is determined by the contract type. Although the firm-fixed-price type of contractual arrangement is typically the preferred type which is encouraged and often demanded by most organizations, there are times when another contract form may be in the best interests of the project. If a contract type other than fixed-price is intended, it is incumbent on the project team to justify its use. The type of contract to be used and the specific contract terms and conditions fix the degree of risk being assumed by the buyer and seller.

All legal contractual relationships generally fall into one of two broad families, either fixed-price or cost reimbursable. Also, there is a third hybrid-type commonly in use called the time and materials contract. The more popular of the contract types in use are discussed below as discrete types, but in practice it is not unusual to combine one or more types into a single procurement.

- **Fixed-price contracts.** This category of contracts involves setting a fixed total price for a defined product or service to be provided. Fixed-price contracts may also incorporate financial incentives for achieving or exceeding selected project objectives, such as schedule delivery dates, cost and technical performance, or anything that can be quantified and subsequently measured. Sellers under fixed-price contracts are legally obligated to complete such contracts, with possible financial damages if they do not. Under the fixed-price arrangement, buyers must precisely specify the product or services being procured. Changes in scope can be accommodated, but generally at an increase in contract price.
  - **Firm Fixed Price Contracts (FFP).** The most commonly used contract type is the FFP. It is favored by most buying organizations because the price for goods is set at the outset and not subject to change unless the scope of work changes. Any cost increase due to adverse performance is the responsibility of the seller, who is obligated to complete the effort. Under the FFP contract, the buyer must precisely specify the product or services to be procured, and any changes to the procurement specification can increase the costs to the buyer.
  - **Fixed Price Incentive Fee Contracts (FPIF).** This fixed-price arrangement gives the buyer and seller some flexibility in that it allows for deviation from performance, with financial incentives tied to achieving agreed to metrics. Typically such financial incentives are related to cost, schedule, or technical performance of the seller. Performance targets are established at the outset, and the final contract price is determined after completion of all work based on the seller's performance. Under FPIF contracts, a price ceiling is set, and all costs above the price ceiling are the responsibility of the seller, who is obligated to complete the work.

- **Fixed Price with Economic Price Adjustment Contracts (FP-EPA).** This contract type is used whenever the seller's performance period spans a considerable period of years, as is desired with many long-term relationships. It is a fixed-price contract, but with a special provision allowing for pre-defined final adjustments to the contract price due to changed conditions, such as inflation changes, or cost increases (or decreases) for specific commodities. The EPA clause must relate to some reliable financial index which is used to precisely adjust the final price. The FP-EPA contract is intended to protect both buyer and seller from external conditions beyond their control.
- **Cost-reimbursable contracts.** This category of contract involves payments (cost reimbursements) to the seller for all legitimate actual costs incurred for completed work, plus a fee representing seller profit. Cost-reimbursable contracts may also include financial incentive clauses whenever the seller exceeds, or falls below, defined objectives such as costs, schedule, or technical performance targets. Three of the more common types of cost-reimbursable contracts in use are Cost Plus Fixed Fee (CPFF), Cost Plus Incentive Fee (CPIF), and Cost Plus Award Fee (CPAF).

A cost-reimbursable contract gives the project flexibility to redirect a seller whenever the scope of work cannot be precisely defined at the start and needs to be altered, or when high risks may exist in the effort.

- **Cost Plus Fixed Fee Contracts (CPFF).** The 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. Fee is paid only for completed work and does not change due to seller performance. Fee amounts do not change unless the project scope changes.
- **Cost Plus Incentive Fee Contracts (CPIF).** The seller is reimbursed for all allowable costs for performing the contract work and receives a predetermined incentive fee based upon achieving certain performance objectives as set forth in the contract. In CPIF contracts, if the final costs are less or greater than the original estimated costs, then both the buyer and seller share costs from the departures based upon a prenegotiated cost sharing formula, e.g., an 80/20 split over/under target costs based on the actual performance of the seller.

- **Cost Plus Award Fee Contracts (CPAF).** The seller is reimbursed for all legitimate costs, but the majority of the fee is only earned based on the satisfaction of certain broad subjective performance criteria defined and incorporated into the contract. The determination of fee is based solely on the subjective determination of seller performance by the buyer, and is generally not subject to appeals.
- **Time and Material Contracts (T&M).** Time and material contracts are a hybrid type of contractual arrangement that contain aspects of both cost-reimbursable and fixed-price contracts. They are often used for staff augmentation, acquisition of experts, and any outside support when a precise statement of work cannot be quickly prescribed.

These types of contracts resemble cost-reimbursable contracts in that they can be left open ended and may be subject to a cost increase for the buyer. The full value of the agreement and the exact quantity of items to be delivered may not be defined by the buyer at the time of the contract award. Thus, T&M contracts can increase in contract value as if they were cost-reimbursable contracts. Many organizations require not-to-exceed values and time limits placed in all T&M contracts to prevent unlimited cost growth. Conversely, T&M contracts can also resemble fixed unit price arrangements when certain parameters are specified in the contract. Unit labor or material rates can be preset by the buyer and seller, including seller profit, when both parties agree on the values for specific resource categories, such as senior engineers at specified rates per hour, or categories of materials at specified rates per unit.

### 12.1.3 Plan Procurements: Outputs

#### .1 Procurement Management Plan

The procurement management plan describes how the procurement processes will be managed from developing procurement documents through contract closure. The procurement management plan can include guidance for:

- Types of contracts to be used;
- Risk management issues;
- Whether independent estimates will be used and if they are needed as evaluation criteria;
- Those actions the project management team can take unilaterally, if the performing organization has a prescribed procurement, contracting, or purchasing department;

- Standardized procurement documents, if they are needed;
- Managing multiple suppliers;
- Coordinating procurement with other project aspects, such as scheduling and performance reporting;
- Any constraints and assumptions that could affect planned procurements;
- Handling the required lead times to purchase items from sellers and coordinating them with the project schedule development;
- Handling the make-or-buy decisions and linking them into the Estimate Activity Resource and Develop Schedule processes;
- Setting the scheduled dates in each contract for the contract deliverables and coordinating with the schedule development and control processes;
- Identifying requirements for performance bonds or insurance contracts to mitigate some forms of project risk;
- Establishing the direction to be provided to the sellers on developing and maintaining a work breakdown structure (WBS);
- Establishing the form and format to be used for the procurement/contract statements of work;
- Identifying prequalified sellers, if any, to be used; and
- Procurement metrics to be used to manage contracts and evaluate sellers.

A procurement management plan can be formal or informal, can be highly detailed or broadly framed, and is based upon the needs of each project. The procurement management plan is a subsidiary component of the project management plan (Section 4.2.3.1).

## **.2 Procurement Statements of Work**

The statement of work (SOW) for each procurement is developed from the project scope baseline and defines only that portion of the project scope that is to be included within the related contract. The procurement SOW describes the procurement item in sufficient detail to allow prospective sellers to determine if they are capable of providing the products, services, or results. Sufficient detail can vary based on the nature of the item, the needs of the buyer, or the expected contract form. Information included in a SOW can include specifications, quantity desired, quality levels, performance data, period of performance, work location, and other requirements.

The procurement SOW is written to be clear, complete, and concise. It includes a description of any collateral services required, such as performance reporting or post-project operational support for the procured item. In some application areas, there are specific content and format requirements for a procurement SOW. Each individual procurement item requires a SOW. However, multiple products or services can be grouped as one procurement item within a single SOW.

The procurement SOW can be revised and refined as required as it moves through the procurement process until incorporated into a signed contract award.

### **.3 Make-or-Buy Decisions**

Make-or-buy decisions document the conclusions reached regarding what project products, services, or results will be acquired from outside the project organization, or will be performed internally by the project team. This may also include decisions to require insurance policies or performance bond contracts to address some of the identified risks. The make-or-buy decisions document can be as simple as a listing that includes a short justification for the decisions. These decisions can be altered as subsequent procurement activities indicate a requirement for a different approach.

### **.4 Procurement Documents**

Procurement documents are used to solicit proposals from prospective sellers. Terms such as bid, tender, or quotation are generally used when the seller selection decision will be based on price (as when buying commercial or standard items), while a term such as proposal is generally used when other considerations, such as technical capability or technical approach are paramount. Common terms are in use for different types of procurement documents and may include request for information (RFI), invitation for bid (IFB), request for proposal (RFP), request for quotation (RFQ), tender notice, invitation for negotiation, and invitation for seller's initial response. Specific procurement terminology used may vary by industry and location of the procurement.

The buyer structures procurement documents to facilitate an accurate and complete response from each prospective seller and to facilitate easy evaluation of the responses. These documents include a description of the desired form of the response, the relevant procurement statement of work (SOW) and any required contractual provisions. With government contracting, some or all of the content and structure of procurement documents can be defined by regulation.

The complexity and level of detail of the procurement documents should be consistent with the value of, and risks associated with, the planned procurement. Procurement documents must be sufficient to ensure consistent, appropriate responses, but flexible enough to allow consideration of any seller suggestions for better ways to satisfy the same requirements.

Issuing a procurement request to potential sellers to submit a proposal or bid is normally done in accordance with the policies of the buyer's organization, which can include publication of the request in public newspapers, in trade journals, in public registries, or on the internet.

### .5 Source Selection Criteria

Selection criteria are often included as a part of the procurement documents. Such criteria are developed and used to rate or score seller proposals, and can be objective or subjective.

Selection criteria can be limited to purchase price if the procurement item is readily available from a number of acceptable sellers. Purchase price in this context includes both the cost of the item and all ancillary expenses such as delivery.

Other selection criteria can be identified and documented to support an assessment for more complex products, services, or results. Some examples are shown below.

- **Understanding of need.** How well does the seller's proposal address the procurement statement of work?
- **Overall or life-cycle cost.** Will the selected seller produce the lowest total cost of ownership (purchase cost plus operating cost)?
- **Technical capability.** Does the seller have, or can the seller be reasonably expected to acquire, the technical skills and knowledge needed?
- **Risk.** How much risk is embedded in the statement of work, how much risk will be assigned to the selected seller and how does the seller mitigate risk?
- **Management approach.** Does the seller have, or can the seller be reasonably expected to develop, management processes and procedures to ensure a successful project?
- **Technical approach.** Do the seller's proposed technical methodologies, techniques, solutions, and services meet the procurement documents requirements or are they likely to provide more or less than the expected results?

- **Warranty.** What does the seller propose to warrant for the final product, and through what time period?
- **Financial capacity.** Does the seller have, or can the seller reasonably be expected to obtain, the necessary financial resources?
- **Production capacity and interest.** Does the seller have the capacity and interest to meet potential future requirements?
- **Business size and type.** Does the seller's enterprise meet a specific category of business such as small, women-owned, or disadvantaged small business, as defined by the buyer or established by governmental agency and set forth as a condition of the contract award?
- **Past performance of sellers.** What has been the past experience with selected sellers?
- **References.** Can the seller provide references from prior customers verifying the seller's work experience and compliance with contractual requirements?
- **Intellectual property rights.** Does the seller assert intellectual property rights in the work processes or services they will use or in the products they will produce for the project?
- **Proprietary rights.** Does the seller assert proprietary rights in the work processes or services they will use or in the products they will produce for the project?

#### .6 Change Requests

Change requests (Section 4.3.3.3) to the project management plan, its subsidiary plans and other components may result from the Plan Procurements process. Change requests are processed for review and disposition through the Perform Integrated Change Control process (Section 4.5).

## 12.2 Conduct Procurements

Conduct Procurements is the process of obtaining seller responses, selecting a seller, and awarding a contract (see Figures 12-4 and 12-5). In this process, the team will receive bids or proposals and will apply previously defined selection criteria to select one or more sellers who are qualified to perform the work and acceptable as a seller.

On major procurement items, the overall process of requesting responses from sellers and evaluating those responses can be repeated. A short list of qualified sellers can be established based on a preliminary proposal. A more detailed evaluation can then be conducted based on a more specific and comprehensive requirements document requested from the sellers on the short list. In addition, tools and techniques described here can be used alone or in combination to select sellers. For example, a weighting system can be used to:

- Select a single seller that will be asked to sign a standard contract, and
- Establish a negotiating sequence by ranking all proposals by the weighed evaluation scores assigned to each proposal.

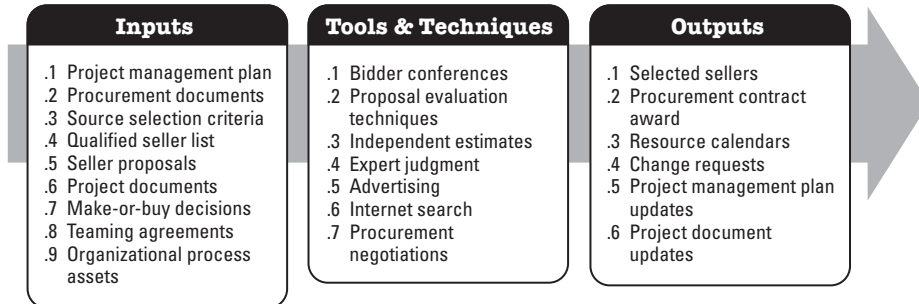


Figure 12-4. Conduct Procurements: Inputs, Tools &amp; Techniques, and Outputs

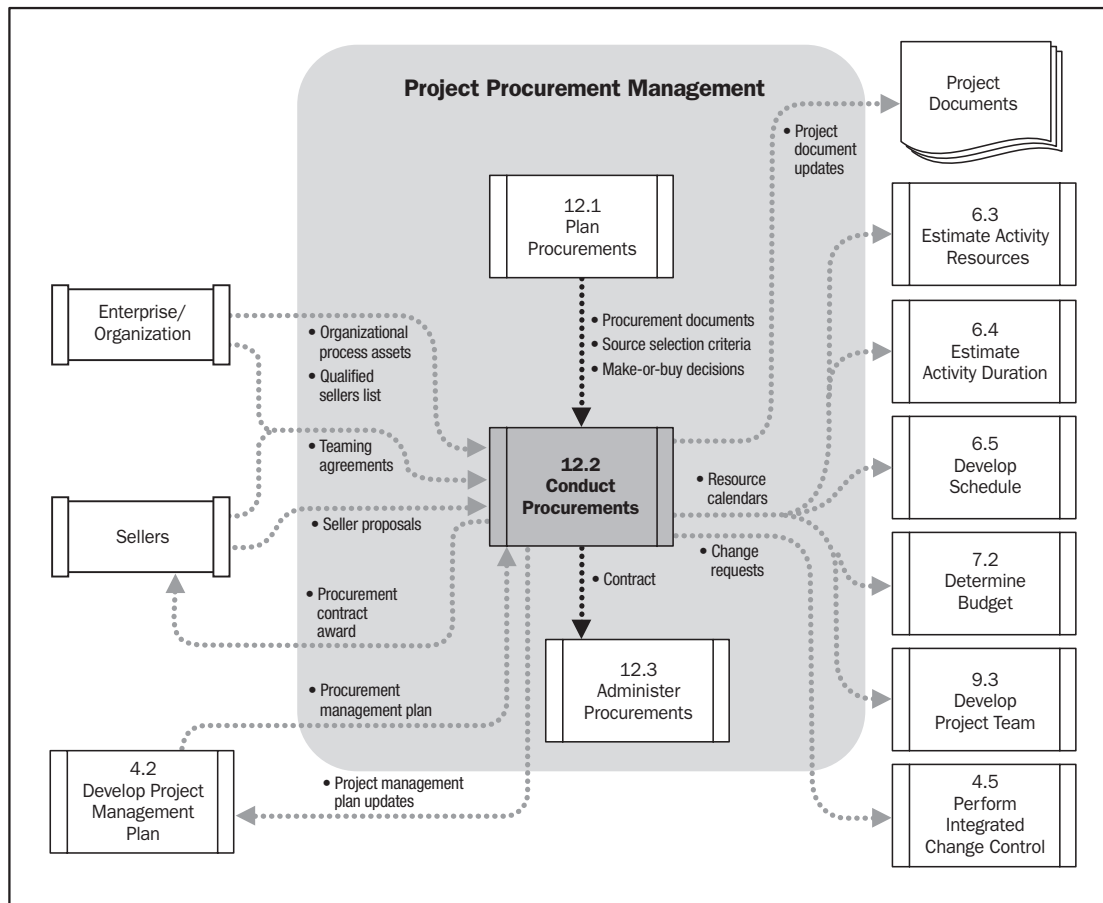


Figure 12-5. Conduct Procurements Data Flow Diagram

## 12.2.1 Conduct Procurements: Inputs

### .1 Project Management Plan

The procurement management plan, part of the project management plan described in Section 4.2.3.1, is an input to Conduct Procurements and describes how the procurement processes will be managed from developing procurement documentation through contract closure (Section 12.1.3.1).

### .2 Procurement Documents

Described in Section 12.1.3.4.

### .3 Source Selection Criteria

Source selection criteria can include information on the supplier's required capabilities, capacity, delivery dates, product cost, life-cycle cost, technical expertise, and the approach to the contract as described in Section 12.1.3.5.

### .4 Qualified Seller List

A listing of sellers who have been pre-screened for their qualifications and past experience, so that procurements are directed to only those sellers who can perform on any resulting contracts.

### .5 Seller Proposals

Seller proposals prepared in response to a procurement document package form the basic set of information that will be used by an evaluation body to select one or more successful bidders (sellers).

### .6 Project Documents

Project documents that are often considered include:

- Risk register (Section 11.5.1.1), and
- Risk-related contract decisions (Section 11.5.3.2).

### .7 Make-or-Buy Decisions

Described in Section 12.1.3.3.

### **.8 Teaming Agreements**

Whenever a teaming agreement is in place, the buyer and seller roles will have already been decided by executive management. In some cases the seller may already be working under some form of interim contract funded by the buyer or jointly by both parties. The effort of the buyer and seller in this process is to collectively prepare a procurement statement of work that will satisfy the requirements of the project. The parties will then negotiate a final contract for award.

### **.9 Organizational Process Assets**

Elements of the organizational process assets that can influence the Conduct Procurements process include, but are not limited to:

- Listings of prospective and previously qualified sellers, and
- Information on relevant past experience with sellers, both good and bad.

## **12.2.2 Conduct Procurements: Tools and Techniques**

### **.1 Bidder Conferences**

Bidder conferences (sometimes called contractor conferences, vendor conferences, and pre-bid conferences) are meetings between the buyer and all prospective sellers prior to submittal of a bid or proposal. They are used to ensure that all prospective sellers have a clear and common understanding of the procurement (both technical and contractual requirements), and that no bidders receive preferential treatment. Responses to questions can be incorporated into the procurement documents as amendments. To be fair, buyers must take great care to ensure that all prospective sellers hear every question from any individual prospective seller and every answer from the buyer.

### **.2 Proposal Evaluation Techniques**

On complex procurements, where source selection will be made based on seller responses to previously defined weighted criteria, a formal evaluation review process will be defined by the buyer's procurement policies. The evaluation committee will make their selection for approval by management prior to the award.

### **.3 Independent Estimates**

For many procurement items, the procuring organization may elect to either prepare its own independent estimate, or have an estimate of costs prepared by an outside professional estimator, to serve as a benchmark on proposed responses. Significant differences in cost estimates can be an indication that the procurement statement of work was deficient, ambiguous, and/or that the prospective sellers either misunderstood or failed to respond fully to the procurement statement of work.

### **.4 Expert Judgment**

Expert judgment may be used in evaluating seller proposals. The evaluation of proposals may be accomplished by a multi-discipline review team with expertise in each of the areas covered by the procurement documents and proposed contract. This can include expertise from functional disciplines such as contracting, legal, finance, accounting, engineering, design, research, development, sales, and manufacturing.

### **.5 Advertising**

Existing lists of potential sellers can often be expanded by placing advertisements in general circulation publications such as selected newspapers or in specialty trade publications. Some government jurisdictions require public advertising of certain types of procurement items, and most government jurisdictions require public advertising of pending government contracts.

### **.6 Internet Search**

The internet has a major influence on most project procurements and supply chain acquisitions in organizations. While many commodities, components, and off-the-shelf-items can be quickly located and secured at a fixed-price on the internet, the high-risk, highly complex, procurement effort that must be closely monitored cannot be obtained by this means.

### **.7 Procurement Negotiations**

Negotiations clarify the structure, requirements and other terms of the purchases so that mutual agreement can be reached prior to signing the contract. Final contract language reflects all agreements reached. Subjects covered should include responsibilities, authority to make changes, applicable terms and governing law, technical, and business management approaches, proprietary rights, contract financing, technical solutions, overall schedule, payments, and price. Negotiations conclude with a contract document that can be executed by both buyer and seller.

For complex procurement items, contract negotiation can be an independent process with inputs (e.g., issues or an open items listing) and outputs (e.g., documented decisions) of its own. For simple procurement items, the terms and conditions of the contract can be previously set and non-negotiable, and only need to be accepted by the seller.

The project manager may not be the lead negotiator on procurements. The project manager and other members of the project management team may be present during negotiations to provide assistance, and if needed to add clarification of the project's technical, quality, and management requirements.

## 12.2.3 Conduct Procurements: Outputs

### .1 Selected Sellers

The sellers selected are those sellers who have been judged to be in a competitive range based upon the outcome of the proposal or bid evaluation, and who have negotiated a draft contract that will become the actual contract when an award is made. Final approval of all complex, high-value, high-risk procurements will generally require organizational senior management approval prior to award.

### .2 Procurement Contract Award

A procurement contract is awarded to each selected seller. The contract can be in the form of simple purchase order or a complex document. Regardless of the document's complexity, a contract is a mutually binding legal agreement that obligates the seller to provide the specified products, services, or results, and obligates the buyer to compensate the seller. A contract is a legal relationship subject to remedy in the courts. The major components in a contract document will vary, but will sometimes include the following:

- Statement of work or deliverables,
- Schedule baseline,
- Performance reporting,
- Period of performance,
- Roles and responsibilities,
- Seller's place of performance,
- Pricing,

- Payment terms,
- Place of delivery,
- Inspection and acceptance criteria,
- Warranty,
- Product support,
- Limitation of liability,
- Fees and retainage,
- Penalties,
- Incentives,
- Insurance and performance bonds,
- Subordinate subcontractor approvals,
- Change request handling, and
- Termination and alternative dispute resolution (ADR) mechanisms. The ADR method can be decided in advance as a part of the procurement award.

### **.3 Resource Calendars**

The quantity and availability of contracted resources and those dates on which each specific resource can be active or idle are documented.

### **.4 Change Requests**

Change requests to the project management plan, its subsidiary plans, and other components are processed for review and disposition through the Perform Integrated Change Control process (Section 4.5).

### **.5 Project Management Plan Updates**

Elements of the Project Management Plan that may be updated include, but are not limited to:

- Cost baseline,
- Scope baseline,
- Schedule baseline, and
- Procurement management plan.

### .6 Project Document Updates

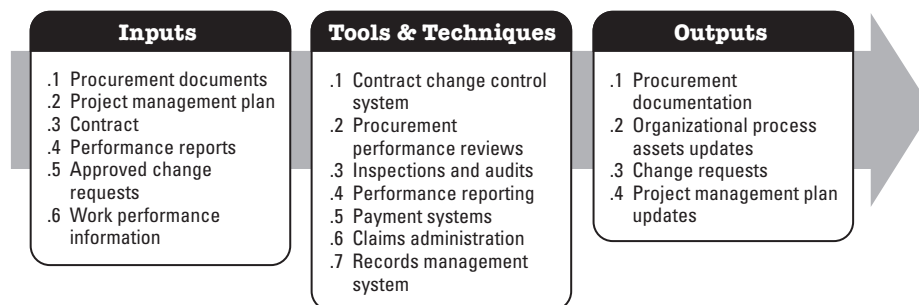
Project documents that may be updated include, but are not limited to:

- Requirements documentation,
- Requirements traceability documentation, and
- Risk register.

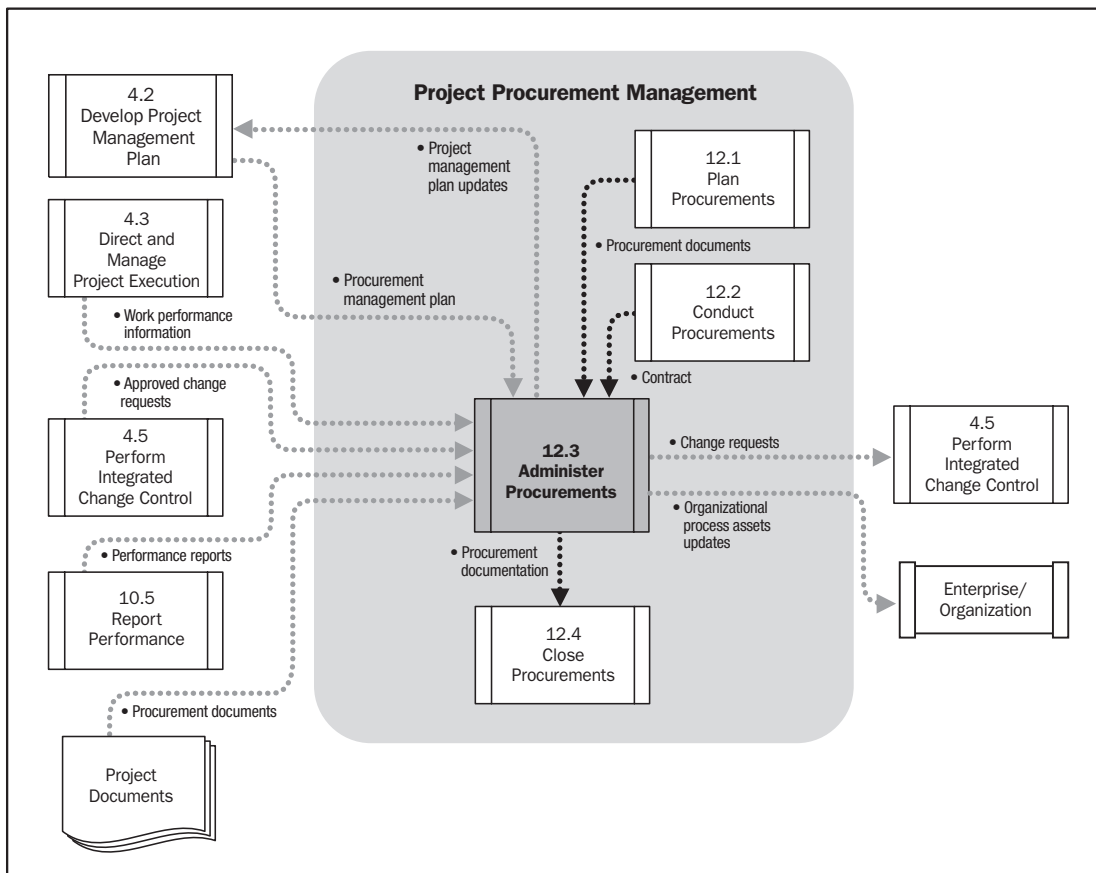
## 12.3 Administer Procurements

Administer Procurements is the process of managing procurement relationships, monitoring contract performance, and making changes and corrections as needed (see Figures 12-6 and 12-7). Both the buyer and the seller will administer the procurement contract for similar purposes. Each must ensure that both parties meet their contractual obligations and that their own legal rights are protected. The Administer Procurements process ensures that the seller's performance meets procurement requirements and that the buyer performs according to the terms of the legal contract. The legal nature of the contractual relationship makes it imperative that the project management team is aware of the legal implications of actions taken when administering any procurement. On larger projects with multiple providers, a key aspect of contract administration is managing interfaces among the various providers.

Due to varying organizational structures, many organizations treat contract administration as an administrative function separate from the project organization. While a procurement administrator may be on the project team, this individual typically reports to a supervisor from a different department. This is usually true if the performing organization is also the seller of the project to an external customer.



**Figure 12-6. Administer Procurements: Inputs, Tools & Techniques, and Outputs**



**Figure 12-7. Administer Procurements Data Flow Diagram**

Administer Procurements includes application of the appropriate project management processes to the contractual relationship(s) and integration of the outputs from these processes into the overall management of the project. This integration will often occur at multiple levels when there are multiple sellers and multiple products, services, or results involved. The project management processes that are applied may include, but are not limited to:

- **Direct and Manage Project Execution** (Section 4.3) to authorize the seller's work at the appropriate time;
- **Report Performance** (Section 10.5) to monitor contract scope, cost, schedule, and technical performance;

- **Perform Quality Control** (Section 8.3) to inspect and verify the adequacy of the seller's product;
- **Perform Integrated Change Control** (Section 4.5) to assure that changes are properly approved and that all those with a need to know are aware of such changes; and
- **Monitor and Control Risks** (Section 11.6) to ensure that risks are mitigated.

Administer Procurements also has a financial management component that involves monitoring payments to the seller. This ensures that payment terms defined within the contract are met and that seller compensation is linked to seller progress, as defined in the contract. One of the principal concerns when making payments to suppliers is that there is a close relationship of payments made to the work accomplished.

The Administer Procurements process reviews and documents how well a seller is performing or has performed based on the contract and establishes corrective actions when needed. This performance review may be used as a measure of the seller's competency for performing similar work on future projects. Similar evaluations are also carried out when it is necessary to confirm that a seller is not meeting the seller's contractual obligations and when the buyer contemplates corrective actions. Administer Procurements includes managing any early terminations of the contracted work (for cause, convenience, or default) in accordance with the termination clause of the contract.

Contracts can be amended at any time prior to contract closure by mutual consent, in accordance with the change control terms of the contract. Such amendments may not always be equally beneficial to both the seller and the buyer.

### 12.3.1 Administer Procurements: Inputs

#### .1 Procurement Documents

Procurement documents contain complete supporting records for administration of the procurement processes. This includes procurement contract awards and the statement of work.

#### .2 Project Management Plan

The procurement management plan (Section 12.1.3.1), part of the project management plan, is an input to Administer Procurements and describes how the procurement processes will be managed from developing procurement documentation through contract closure.

#### .3 Contract

Described in Section 12.2.3.2.

#### **.4 Performance Reports**

Seller performance-related documentation includes:

- Seller-developed technical documentation and other deliverable information provided in accordance with the terms of the contract, and
- Seller performance reports (Section 10.5.3.1). The seller's performance reports indicate which deliverables have been completed and which have not.

#### **.5 Approved Change Requests**

Approved change requests can include modifications to the terms and conditions of the contract including the procurement statement of work, pricing, and description of the products, services, or results to be provided. All changes are formally documented in writing and approved before being implemented.

#### **.6 Work Performance Information**

Work performance information (Section 4.3.3.2) including the extent to which quality standards are being satisfied, what costs have been incurred or committed, and which seller invoices have been paid, are all collected as part of project execution.

### **12.3.2 Administer Procurements: Tools and Techniques**

#### **.1 Contract Change Control System**

A contract change control system defines the process by which the procurement can be modified. It includes the paperwork, tracking systems, dispute resolution procedures, and approval levels necessary for authorizing changes. The contract change control system is integrated with the integrated change control system.

#### **.2 Procurement Performance Reviews**

A procurement performance review is a structured review of the seller's progress to deliver project scope and quality, within cost and on schedule, as compared to the contract. It can include a review of seller-prepared documentation and buyer inspections, as well as quality audits conducted during seller's execution of the work. The objective of a performance review is to identify performance successes or failures, progress with respect to the procurement statement of work, and contract non-compliance, which allow the buyer to quantify the seller's demonstrated ability or inability to perform work. Such reviews may take place as a part of project status reviews which would include key suppliers.

### **.3 Inspections and Audits**

Inspections and audits required by the buyer and supported by the seller as specified in the procurement contract can be conducted during execution of the project to verify compliance in the seller's work processes or deliverables. If authorized by contract, some inspection and audit teams can include buyer procurement personnel.

### **.4 Performance Reporting**

Performance reporting provides management with information about how effectively the seller is achieving the contractual objectives.

### **.5 Payment Systems**

Payments to the seller are typically processed by the accounts payable system of the buyer after certification of satisfactory work by an authorized person on the project team. All payments should be made and documented in strict accordance with the terms of the contract.

### **.6 Claims Administration**

Contested changes and potential constructive changes are those requested changes where the buyer and seller cannot reach an agreement on compensation for the change, or cannot agree that a change has occurred. These contested changes are variously called claims, disputes, or appeals. Claims are documented, processed, monitored, and managed throughout the contract life cycle, usually in accordance with the terms of the contract. If the parties themselves do not resolve a claim, it may have to be handled in accordance with alternative dispute resolution (ADR) typically following procedures established in the contract. Settlement of all claims and disputes through negotiation is the preferred method.

### **.7 Records Management System**

A records management system is used by the project manager to manage contract and procurement documentation and records. It consists of a specific set of processes, related control functions, and automation tools that are consolidated and combined as part of the project management information system (Section 4.3.2.2). The system contains a retrievable archive of contract documents and correspondence.

### 12.3.3 Administer Procurements: Outputs

#### .1 Procurement Documentation

Procurement documentation includes, but is not limited to, the procurement contract with all supporting schedules, requested unapproved contract changes, and approved change requests. Procurement documentation also includes any seller-developed technical documentation and other work performance information such as deliverables, seller performance reports, warranties, financial documents including invoices and payment records, and the results of contract-related inspections.

#### .2 Organizational Process Assets Updates

Elements of the organizational process assets that may be updated include, but are not limited to:

- **Correspondence.** Contract terms and conditions often require written documentation of certain aspects of buyer/seller communications, such as the need for warnings of unsatisfactory performance and requests for contract changes or clarification. This can include the reported results of buyer audits and inspections that indicate weaknesses the seller needs to correct. In addition to specific contract requirements for documentation, a complete and accurate written record of all written and oral contract communications, as well as actions taken and decisions made, are maintained by both parties.
- **Payment schedules and requests.** All payments should be made in accordance with the procurement contract terms and conditions.
- **Seller performance evaluation documentation.** Seller performance evaluation documentation is prepared by the buyer. Such performance evaluations document the seller's ability to continue to perform work on the current contract, indicate if the seller can be allowed to perform work on future projects, or rate how well the seller is performing the project work. These documents can form the basis for early termination of the seller's contract or determine how contract penalties, fees, or incentives are administered. The results of these performance evaluations can also be included in the appropriate qualified seller lists (Section 12.2.1.4).

### .3 Change Requests

Change requests to the project management plan, its subsidiary plans and other components, such as the cost baseline, project schedule (Section 6.5.3.1) and procurement management plan (Section 12.1.3.1), may result from the Administer Procurements process. Change requests are processed for review and approval through the Perform Integrated Change Control process (Section 4.5).

Requested but unresolved changes can include direction provided by the buyer, or actions taken by the seller, that the other party considers a constructive change to the contract. Since any of these constructive changes may be disputed by one party and can lead to a claim against the other party, such changes are uniquely identified and documented by project correspondence.

### .4 Project Management Plan Updates

Elements of the project management plan that may be updated include, but are not limited to:

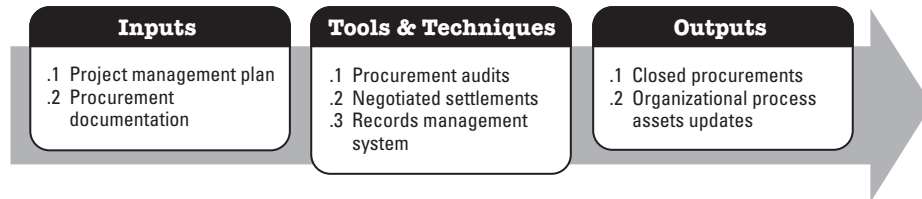
- **Procurement management plan.** The procurement management plan (Section 12.1.3.1) is updated to reflect any approved change requests that affect procurement management, including impacts to costs or schedules.
- **Baseline schedule.** If there are slippages that impact overall project performance, the baseline schedule may need to be updated to reflect the current expectations.

## 12.4 Close Procurements

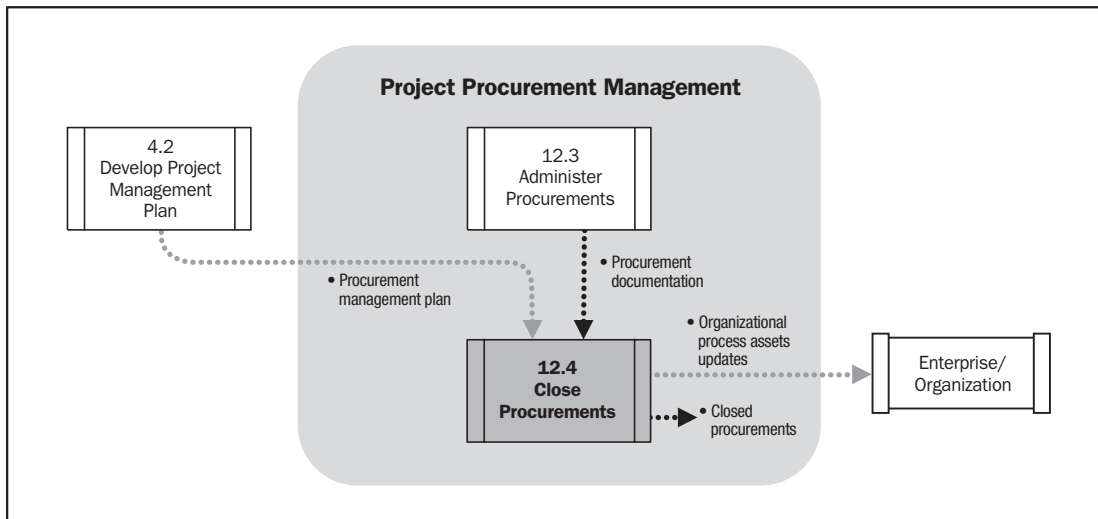
Close Procurements is the process of completing each project procurement (see Figures 12-8 and 12-9). It supports the Close Project or Phase process (Section 4.6), since it involves verification that all work and deliverables were acceptable.

The Close Procurements process also involves administrative activities such as finalizing open claims, updating records to reflect final results and archiving such information for future use. Close Procurements addresses each contract applicable to the project or a project phase. In multi-phase projects, the term of a contract may only be applicable to a given phase of the project. In these cases, the Close Procurements process closes the procurement(s) applicable to that phase of the project. Unresolved claims may be subject to litigation after closure. The contract terms and conditions can prescribe specific procedures for contract closure.

Early termination of a contract is a special case of procurement closure that can result from a mutual agreement of both parties, from the default of one party, or for convenience of the buyer if provided for in the contract. The rights and responsibilities of the parties in the event of an early termination are contained in a terminations clause of the contract. Based upon those procurement terms and conditions, the buyer may have the right to terminate the whole contract or a portion of the contract, at any time for cause or convenience. However, based upon those contract terms and conditions, the buyer may have to compensate the seller for seller's preparations and for any completed and accepted work related to the terminated part of the contract.



**Figure 12-8. Close Procurements: Inputs, Tools & Techniques, and Outputs**



**Figure 12-9. Close Procurements Data Flow Diagram**

### 12.4.1 Close Procurements: Inputs

#### .1 Project Management Plan

Described in Section 4.2.3.1.

#### .2 Procurement Documentation

To close the contract, all procurement documentation is collected, indexed, and filed. Information on contract schedule, scope, quality, and cost performance along with all contract change documentation, payment records, and inspection results are cataloged. This information can be used for lessons learned information and as a basis for evaluating contractors for future contracts.

### 12.4.2 Close Procurements: Tools and Techniques

#### .1 Procurement Audits

A procurement audit is a structured review of the procurement process originating from the Plan Procurements process (Section 12.1) through Administer Procurements (Section 12.3). The objective of a procurement audit is to identify successes and failures that warrant recognition in the preparation or administration of other procurement contracts on the project, or on other projects within the performing organization.

#### .2 Negotiated Settlements

In all procurement relationships the final equitable settlement of all outstanding issues, claims, and disputes by negotiation is a primary goal. Whenever settlement cannot be achieved through direct negotiation, some form of alternative dispute resolution (ADR) including mediation or arbitration may be explored. When all else fails, litigation in the courts is the least desirable option.

#### .3 Records Management System

Described in Section 12.3.2.7.

### 12.4.3 Close Procurements: Outputs

#### .1 Closed Procurements

The buyer, usually through its authorized procurement administrator, provides the seller with formal written notice that the contract has been completed. Requirements for formal procurement closure are usually defined in the terms and conditions of the contract and are included in the procurement management plan.

#### .2 Organizational Process Assets Updates

Elements of the organizational process assets that may be updated include, but are not limited to:

- **Procurement file.** A complete set of indexed contract documentation, including the closed contract, is prepared for inclusion with the final project files.
- **Deliverable acceptance.** The buyer, usually through its authorized procurement administrator, provides the seller with formal written notice that the deliverables have been accepted or rejected. Requirements for formal deliverable acceptance, and how to address non-conforming deliverables, are usually defined in the contract.
- **Lessons learned documentation.** Lessons learned, what has been experienced, and process improvement recommendations should be developed for the project file to improve future procurements.

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