

Project Procurement Management

Outline

- ☐ Introduction
 - ☐ Plan Purchases and Acquisitions
 - ☐ Plan Contracting
 - ☐ Request Seller Responses
 - ☐ Select Sellers
 - ☐ Contract Administration
 - ☐ Contract Closure
-

Introduction



Procurement Management

- ❑ Includes the processes to purchase or acquire the product, service, or result needed from outside the project team
 - ❑ Includes the contract management and change control processes required to administer contracts or purchase orders issued by authorized project team members
 - ❑ Includes administering contractual obligations placed on the project team by the contract
-

PM's Role in Procurement

- ☐ Contracts are risk allocation and mitigation tools
 - ☐ A contract should not be created before the PM is assigned to the project
 - ☐ A PM must be able to work within the procurement process in order to manage the project
 - ☐ PM must understand contracts
-

Contract

- ❑ 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
 - ❑ A legal relationship subject to remedy in the courts
 - ❑ The agreement can be simple or complex, and can reflect the simplicity or complexity of the deliverables
-

Contract

- ❑ Includes terms and conditions, and can include other items such as the seller's proposal or marketing literature, and any other documentation that the buyer is relying upon to establish what the seller is to perform or provide
 - ❑ It is the PM's responsibility to help tailor the contract to the specific needs of the project
 - ❑ Most organizations have documented policies and procedures specifically defining who can sign and administer contracts
-

Contract

- 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 ensures that the contract language describes products, services, or results that will satisfy the identified project need
 - Performance bond
 - A bond that secures some performance and fulfillment of the contractor's obligations under the contract
-

What is a Contract

- ❑ A contract is formal agreement
 - ❑ All requirements should be specifically states in contract
 - ❑ All contract requirements must be met
 - ❑ Changes should be in writing and formally controlled
 - ❑ Most governments back all contracts by providing a court system for dispute resolution
 - ❑ Legal terms and conditions
 - ❑ Scope of work, marketing literature, drawing, charts
 - ❑ The contract describes the business relationship and roles and responsibilities on the project
-

Terms and Conditions

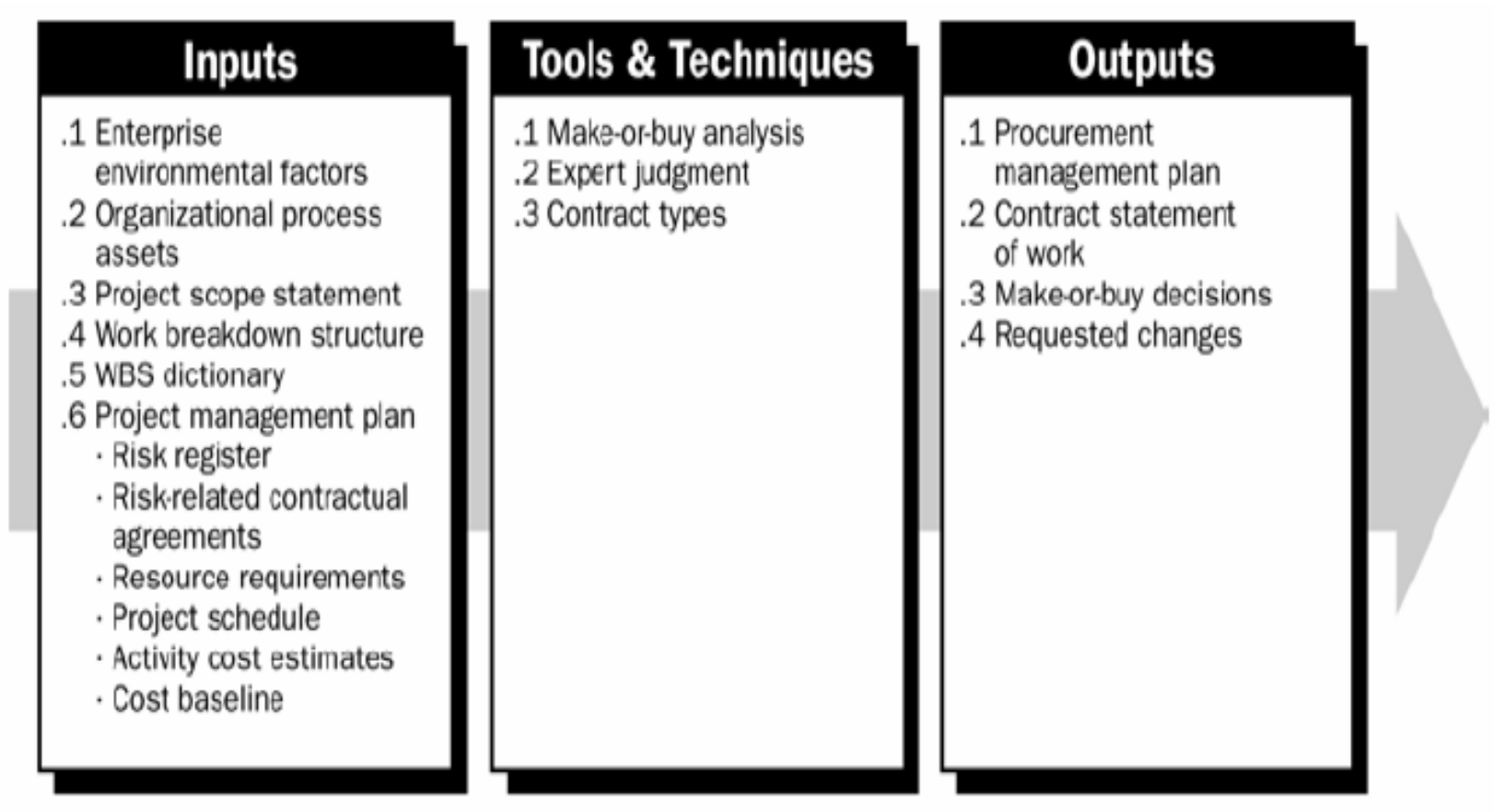
- ☐ Authority
 - ☐ Breach
 - ☐ Default
 - ☐ Changes
 - ☐ Force majeure
 - ☐ Incentives
 - ☐ Liability
 - ☐ Intellectual property
 - ☐ Liquidated damages
 - ☐ Material breach
 - ☐ Retainage
 - ☐ Termination
 - ☐ Waiver
-

Plan Purchases and Acquisitions

Plan Purchases and Acquisitions

- ❑ Identifies which project needs can best be met by purchase, and which project needs can be accomplished by the project team
 - ❑ Involves consideration of whether, how, what, how much, and when to acquire
 - ❑ Includes reviewing the risks involved in each make-or-buy decision
 - ❑ Also includes reviewing the type of contract planned to be used with respect to mitigating risks and transferring risks to the seller
-

Plan Purchases and Acquisitions



Project Management Plan

- Other planning outputs are considered during the Plan Purchases and Acquisitions process
 - Risk register
 - Risk-related contractual agreements
 - Activity resource requirements
 - Project schedule
 - Activity cost estimates
 - Cost baseline
-

Procurement planning

- ☐ Make or buy
 - ☐ Contract type selection
 - ☐ Incentives
 - ☐ Risk and contract type
 - ☐ Type of scope of work
-

Make or Buy Analysis

- ❑ One of the main reasons to buy is to decrease risk
 - ❑ It is better to make if
 - You have an idle plant or workforce
 - You want to retain control
 - The work involves proprietary information or procedures
 - ❑ Cost of buy-side
 - Direct cost : actual out-of-pocket costs
 - Indirect cost : management and monitoring the procurement process
-

Make or Buy Analysis

- If a buy decision is to be made, it also reflects the perspective of the organization as well as the immediate needs of the project
 - Purchasing an item rather than renting it may not be cost effective from the perspective of the project
 - However. if the organization has an ongoing need for the item, the portion of the purchase cost allocated to the project could be less than cost of the rental
 - The cost allocation could be based upon an margin analysis
-

Make or Buy Analysis

- The long-range strategy of the organization is also a component in the make-or-buy analysis
 - Items needed for the performance of the project may not be available within the organization
 - However, the organization may anticipate future requirements for those items and the organization's plans may also be based on making the items in the future
 - Such considerations can lead to a make decision
 - When this occurs, the cost charged to the project can be less than the actual costs
-

Contract Types

- Fixed-price or lump-sum contracts (FP)
 - A fixed total price for a well defined product
 - This category of contract can also include incentives for meeting or exceeding selected project objectives, such as schedule targets
-

Contract Types

- ❑ Cost-reimbursable contracts (CR)
 - Involves payment to the seller for seller's actual costs, plus a fee typically representing seller profit
 - Costs are usually classified as direct costs or indirect costs. Indirect costs are usually calculated as a percentage of direct costs
 - Cost-reimbursable contracts often include incentive clause where if the seller meets or exceeds selected project objectives, such as schedule targets or total cost, then the seller receives an incentive or bonus payment
-

Contract Types

- Three common types
 - Cost-Plus-Fee (CPF) or Cost-Plus-Percentage of Cost (CPPC)
 - Cost-Plus-Fixed-Fee (CPFF)
 - Cost-Plus-Incentive-Fee (CPIF)
-

Contract Types

- Time and Material contracts (T&M)
 - Another word of unit price
 - A hybrid type of fix-price type arrangements
 - The full value of the agreement and the exact quantity of items to be delivered are not defined by the buyer at the time of the contract award
 - For example, unit rates can be preset
 - This type of contract is usually used for a small dollar amounts
-

FP From Perspective of Buyer

☐ Advantages

- Less work for buyer to manage
- Seller has a strong incentive to control costs
- Companies have experience with this type
- Buyer knows the total price at project start

☐ Disadvantages

- Seller may underprice the work and try to make up profits on change orders
 - Seller may not complete some of the contract statement of work if they begin to lose money
 - More work for buyer to write the contract statement of work
 - Can be more expensive than CR, the seller will need to add to the price for their increased risk
-

CR From Perspective of Buyer

☐ Advantages

- Simpler contract statement of work
- Usually requires less work to write the scope than fixed price
- Generally lower cost than fixed price because the seller does not have to add as much for risk

☐ Disadvantages

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

T&M From Perspective of Buyer

☐ Advantages

- Quick to create
- Contract duration is brief
- Good choice when you are hiring people to augment your staff

☐ Disadvantages

- Seller has no incentive to control costs
 - Appropriate only for small projects
 - Requires the most day to day oversight from the buyer
-

Purchase Order

- ❑ The simplest form of a fixed-price contract
 - ❑ A form of contract that is normally unilateral (signed by one party) instead of bilateral (signed by both parties)
 - ❑ It is usually used for simple commodity procurements
-

Risk and Contract Type

- Who has the risk in a contract? The buyer or seller?
 - Buyer in a CR Contract. If the costs increase, the buyer pays the added costs
 - Seller in a FP Contract. If the costs increase, the seller pays the costs and makes less profit
-

Incentives

- ❑ An incentive helps bring the seller's objectives in line with those of the buyer
 - ❑ With an incentive, both buyer and seller work toward the same objective, for instance, completing the project on time
-

Procurement Management Plan

- A formal or informal component of the project plan that describes how solicitation planning through contract closeout will be managed
-

Contract Statement of Work

- ❑ A Contract Statement of Work describes the products, services, or results to be supplied by the seller
 - ❑ The Contract SOW must describe all the work and activities the seller is required to complete, include all meetings, all reports, all communications
-

Contract Statement of Work

☐ Types of Contract SOW

■ Performance

- ☐ Conveys what the final product should be able to accomplish
- ☐ e.g., I want a car that will go zero to 120km/hr in 4.2 seconds

■ Functional

- ☐ Conveys the end purpose or result
- ☐ e.g., I want a car with 23 cup holders

■ Design

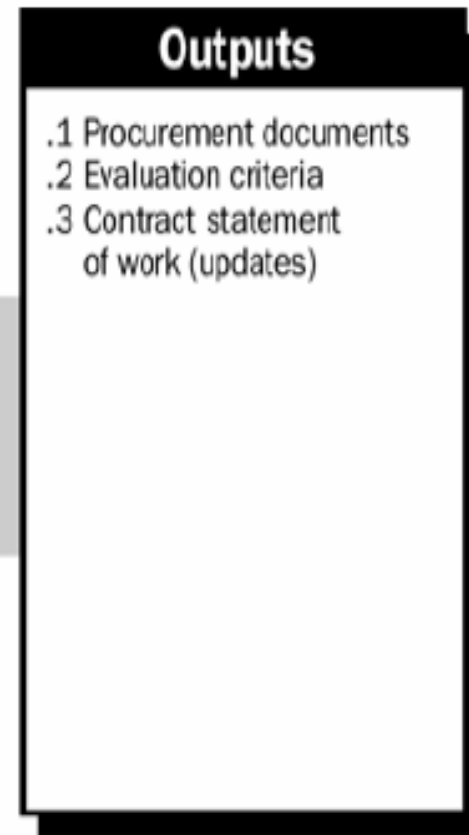
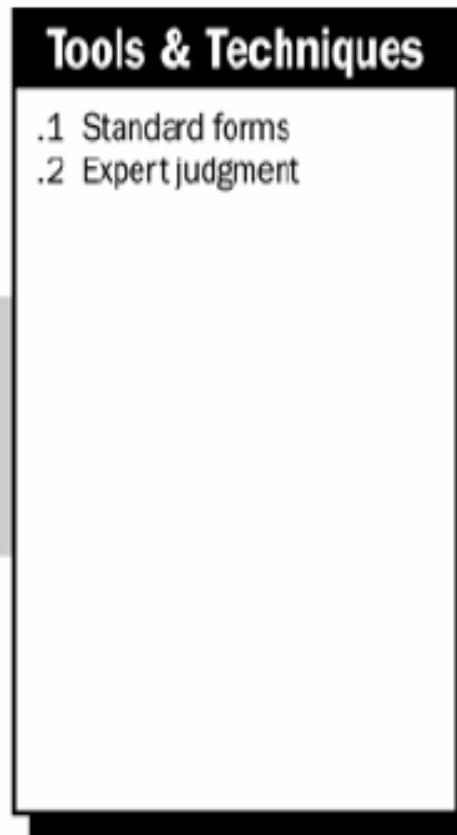
- ☐ Conveys precisely what work is to be done
 - ☐ e.g., build it exactly as shown on these drawings
-

Plan Contracting

Plan Contracting

- ❑ Documenting products, services, and results requirements and identifying potential sellers
 - ❑ Prepares the documents needed to support the Request Seller Response process and Select Sellers process
-

Plan Contracting



Contract Type Selection

- ☐ Risk
 - ☐ Triple constraints
 - ☐ Contract SOW
 - How well it defined
 - The uncertainty of contract SOW
 - ☐ Ability
 - Human resource
 - Expertise
 - ☐ Industry standard
 - ☐ The uncertainty of finance
 - ☐ Planning uncertainty
 - the seller wrote the SOW
-

Procurement Documents

- ❑ Procurement documents are used to seek proposals from prospective sellers
 - ❑ The buyer structures procurement documents to facilitate an accurate and complete response from each prospective seller and facilitate easy evaluation of the bids
 - ❑ Procurement documents are rigorous enough to ensure consistent, comparable responses, but flexible enough to allow consideration of seller suggestions for better ways to satisfy the requirements
-

Procurement Documents

- ☐ Should include
 - ☐ Scope of work
 - ☐ Proposed terms and conditions of the contract
 - ☐ NDA
 - ☐ Information for sellers
 - Background information
 - Procedures for replying
 - Guidelines for preparation of the proposal
 - Evaluation criteria
 - Pricing forms
-

Procurement Documents

- ❑ Types of procurement documents
 - RFP (Request for Proposal)
 - ❑ Requests a price but also a detailed proposal on how the work will be accomplished, who will do it, resumes, company's experience, etc.
 - IFB (Invitation for Bid)
 - ❑ Requests one price for all the work
 - RFQ (Request for Quotation)
 - ❑ Requests a price quote per item, hour, or foot
-

Procurement Documents

Procurement Documents	Contract Type	Contract SOW
RFP	CR	Performance or functional
IFB	FP	Design
RFQ	T&M	Any

Evaluation Criteria

- Evaluation criteria are developed and used to rate or score proposals
 - Examples of evaluation criteria
 - Understanding of work
 - Overall or life-cycle cost
 - Technical capability
 - Management approach
 - Technical approach
 - Financial capacity
 - Production capacity and interest
 - Business size and type
 - References
 - Intellectual property rights
 - Proprietary rights
-

Non-Competitive Procurement

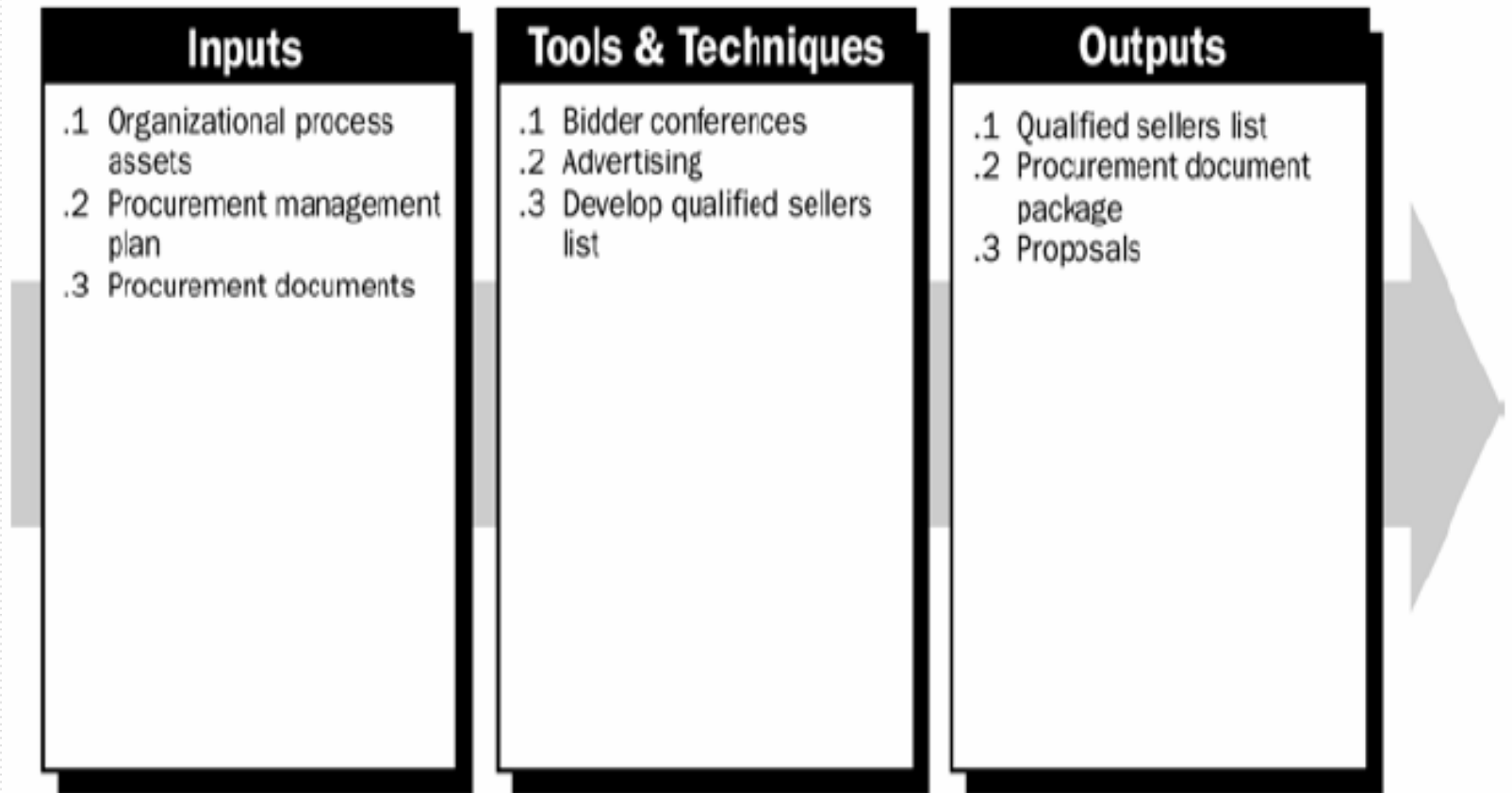
- ❑ Sometimes work is awarded to a company without following the procurement process
 - ❑ This happens when
 - The project is under extreme schedule pressure
 - The seller has unique qualifications
 - There is only one seller
 - A seller holds a patent for the item you need
 - Other mechanisms exist to ensure that seller prices are reasonable
-

Request Seller Responses

Request Seller Responses

- ❑ Obtains responses, such as bids and proposals, from prospective sellers on how project requirements can be met

Request Seller Responses



Bidder's Conference

- ❑ Meetings with prospective sellers to make sure that they all have a clear and common understanding of the procurement
 - ❑ PM must watch out
 - Collusion
 - Sellers not asking their questions in front of their competition
 - Make sure all questions and answers are put in writing and issued to all potential sellers by the buyer as an addendum to the procurement documents
-

Procurement Documents Package

- ❑ A buyer-prepared formal request sent to each seller and is the basis upon which a seller prepares a bid for the requested products, services, or results that are defined and described in the procurement documentation
-

Select Sellers

Select Sellers

- ☐ Receives bids or proposals and applies evaluation criteria
 - ☐ Choose among potential sellers
 - ☐ Negotiate a written contract with each seller
-

Select Sellers


Inputs

- .1 Organizational process assets
- .2 Procurement management plan
- .3 Evaluation criteria
- .4 Procurement document package
- .5 Proposals
- .6 Qualified sellers list
- .7 Project management plan
 - Risk register
 - Risk related contractual agreements

Tools & Techniques

- .1 Weighting system
- .2 Independent estimates
- .3 Screening system
- .4 Contract negotiation
- .5 Seller rating systems
- .6 Expert judgment
- .7 Proposal evaluation techniques

Outputs

- .1 Selected sellers
 - .2 Contract
 - .3 Contract management plan
 - .4 Resource availability
 - .5 Procurement management plan (updates)
 - .6 Requested changes
- 

Weighting System

- ❑ A method for quantifying qualitative data to minimize the effect of personal prejudice on seller selection
 - ❑ Most such systems involve assigning a numerical weight to each of the evaluation criteria, rating the prospective sellers on each criterion, multiplying the weight by the rating, and totaling the resultant products to compute an over all score
-

Independent Estimates

- ❑ For many procurement items, the procuring organization can either prepare its own independent estimates or have prepared an independent estimate of the costs as a check on proposed pricing
 - ❑ Significant differences from these cost estimates can be an indication that the SOW was not adequate, that the prospective seller either misunderstood or failed to respond fully to the SOW, or that the marketplace changed
-

Screening System

- ❑ Involves establishing minimum requirements of performance for one or more of the evaluation criteria
 - ❑ Eliminating sellers that do not meet minimum requirements of the evaluation criteria
-

Contract Negotiation

- ❑ Clarifies the structure and requirements of the contract so that mutual agreement can be reached prior to signing the contract
 - ❑ Objectives of contract negotiation
 - Obtain a fair and reasonable price
 - Develop a good relationship with the seller
 - ❑ For simple procurement items, the terms and conditions of the contract can be fixed and non-negotiable, and only need to be accepted by the seller
-

Contract Negotiation

- Main items to negotiate
 - Responsibilities
 - Authority
 - Applicable terms and law
 - Technical and business management approaches
 - Contract financing
 - Schedule
 - Payments and price
 - Proprietary rights
-

Contract Negotiation

- Negotiation tactics
 - Attacks
 - Personal insults
 - Good guy / Bad guy
 - Deadline
 - Lying
 - Limited authority
 - Missing man
 - Fair and reasonable
 - Delay
 - Extreme demands
 - Withdrawal
 - Fait accompli
-

Contract Negotiation

- ❑ The PM may not be the lead negotiator on the contract
 - ❑ The project team may be present during negotiations to provide, if needed, any clarification of the project's technical, quality, and management requirements
-

Contract Administration

Contract Administration

- Managing the contract and relationship between the buyer and seller, reviewing and documenting how a seller is performing or has performed to establish required corrective actions and provide a basis for future relationships with the seller, managing the contractual relationship with the outside buyer of the project
-

Contract Administration

- ❑ Both the buyer and the seller administer the contract for similar purpose
 - ❑ Each party ensures that both it and the other party meet their contractual obligations and that their own legal rights are protected
-

Contract Administrator

- ❑ Contract administrator is the only one with authority to change contract
 - ❑ There will be potential conflict between contract administrator and PM
-

Contract Administration

Inputs

- .1 Contract
- .2 Contract management plan
- .3 Selected sellers
- .4 Performance reports
- .5 Approved change requests
- .6 Work performance information

Tools & Techniques

- .1 Contract change control system
- .2 Buyer-conducted performance review
- .3 Inspections and audits
- .4 Performance reporting
- .5 Payment system
- .6 Claims administration
- .7 Records management system
- .8 Information technology

Outputs

- .1 Contract documentation
- .2 Requested changes
- .3 Recommended corrective actions
- .4 Organizational process assets (updates)
- .5 Project management plan (updates)
 - Procurement management plan
 - Contract management plan



Changes

- ❑ The requested changes are processed for review and approval through the integration change control process
 - ❑ The first step to handle changes that arise on contracted project is to analyze the impacts to the project, just as it would be on a project without contracts or purchase orders
 - ❑ The change procedures in the contract must also be followed, and all changes should be formally make as modifications to the contract
-

Contract Change Control System

- ❑ A contract change control system defines the process by which the contract can be modified
 - ❑ It includes the paperwork, tracking systems, dispute resolution procedures, and approval levels necessary for authorizing changes
-

Contract Change Control System

- How project control is different in a contracted environment
 - You need to deal with a different company's set of procedures
 - It is not easy to "see" problems
 - Greater reliance on reports to determine if a problem exists
 - Greater reliance on relationships between the buyer's and the seller's PMs
-

Claims Administration

- ❑ Claims are those requested changes where the buyer and seller cannot agree on compensation for the change, or cannot agree that a change has even occurred
 - ❑ If the parties themselves do not resolve a claim, it may have to be handled in accordance with the dispute resolution procedures established in the contract
-

Organizational Process Assets (Updates)

☐ Correspondence

- 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

☐ Seller performance evaluation documentation

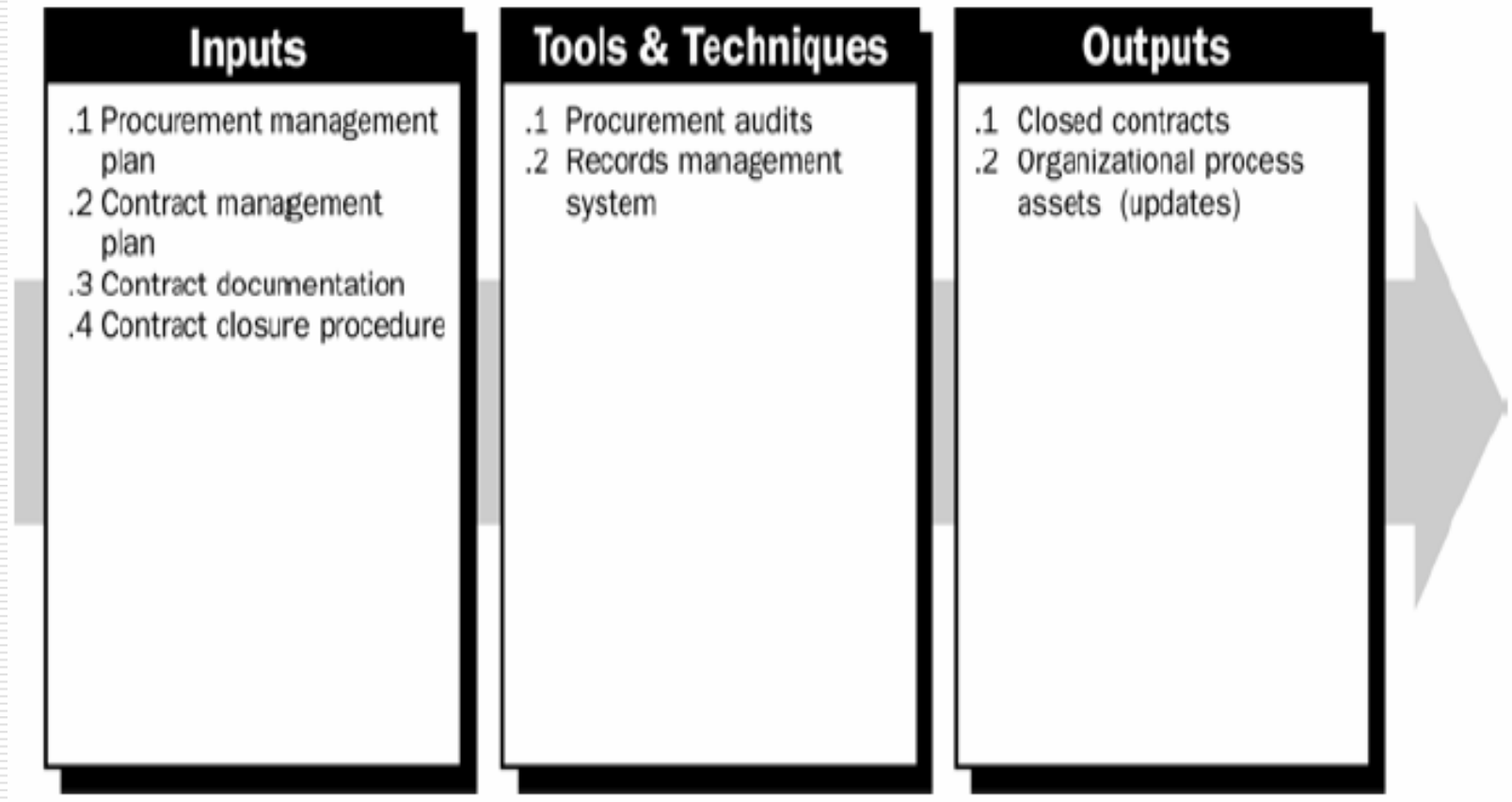
- Prepared by the buyer
 - Indicate if the seller can be allowed to perform work on future projects
-

Contract Closure

Contract Closure

- ❑ Completing and setting each contract, including the resolution of any open items, and closing each contract applicable to the project or a project phase
 - ❑ The contract closure process involves verification that all the work and deliverables were acceptable
 - ❑ It also involves updating record to reflect final results and archiving such information for future use
-

Contract Closure



Procurement Audits

- ❑ Is a structured review of the procurement process
 - ❑ 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
 - ❑ Administration closure use the term "lessons learned" and contract closure use the term "procurement audit"
-