

Chapter 12

Project Procurement Management (PMBOK Guide)

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Introduction

- The processes necessary to purchase or acquire products, services, or results needed from outside the project team
- Includes the contract management and change control processes required to develop and administer contracts or purchase orders issued by authorized project team members
- 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
- Plan procurements
- Conduct procurements
- Administer procurements
- Close procurements

Introduction

- Involves contract
 - Legal documents, binding agreement between the seller and buyer
 - Can be simple or complex
 - Has terms and conditions
 - Can be called agreement, understanding, subcontract, or purchase order
- PM team should make sure that the procurements meet project needs while adhering to organizational procurement policies
- Most organizations have policies and procedures defining procurement rules, who has authority to sign and administer agreements on behalf of the organization

Introduction

- Because of legally binding nature, it needs more extensive approval process
- Goal of approval: the contract language describes the products, services, or results that will satisfy the identical project need
- PM team may get need from specialists in contracting, purchasing, law, and technical disciplines
- Complex project, simultaneous/in sequence multiple contracts and subcontracts
- Buyer-seller relationship can exist at many levels, between internal and/or external organizations to acquiring organization

Introduction

- Depending on the application seller can be called a contractor, subcontractor, vendor, service provider, or supplier
- Depending on buyer's position in the project acquisition , buyer can be called a client, customer, prime contractor, acquiring organization, governmental agency, service requestor, or purchaser
- During the contract life cycle seller is first called bidder, then the selected source, and then the contracted supplier or vendor
- The seller typically manage the work as a project if the acquisition is not just for the shelf material, goods, or common products.
Therefore:
 - The buyer becomes the customer, and is thus a key project stakeholder for seller
 - The seller's PM team is concerned with all the processes of PM 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)

Project Procurement Management Overview

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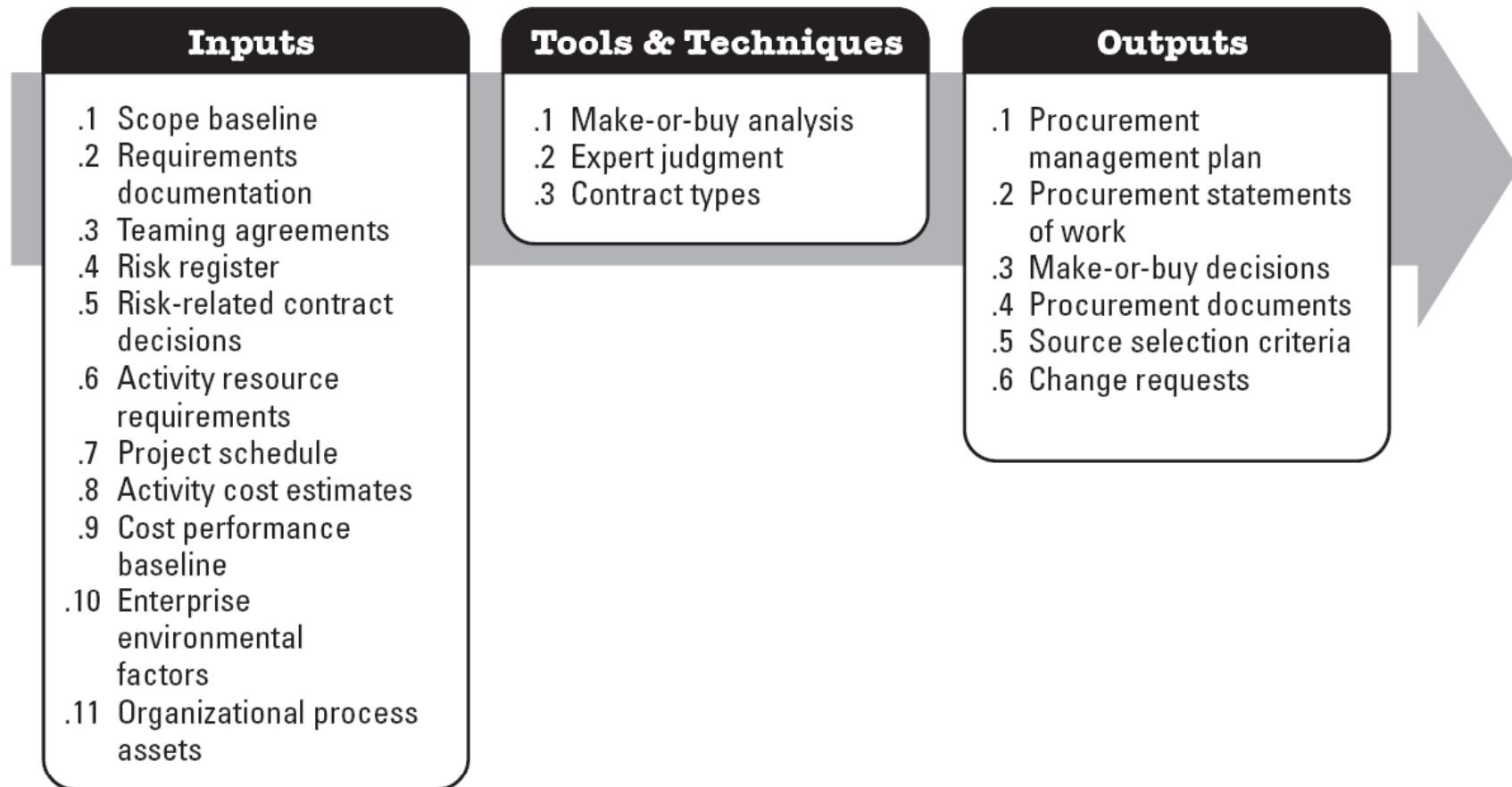
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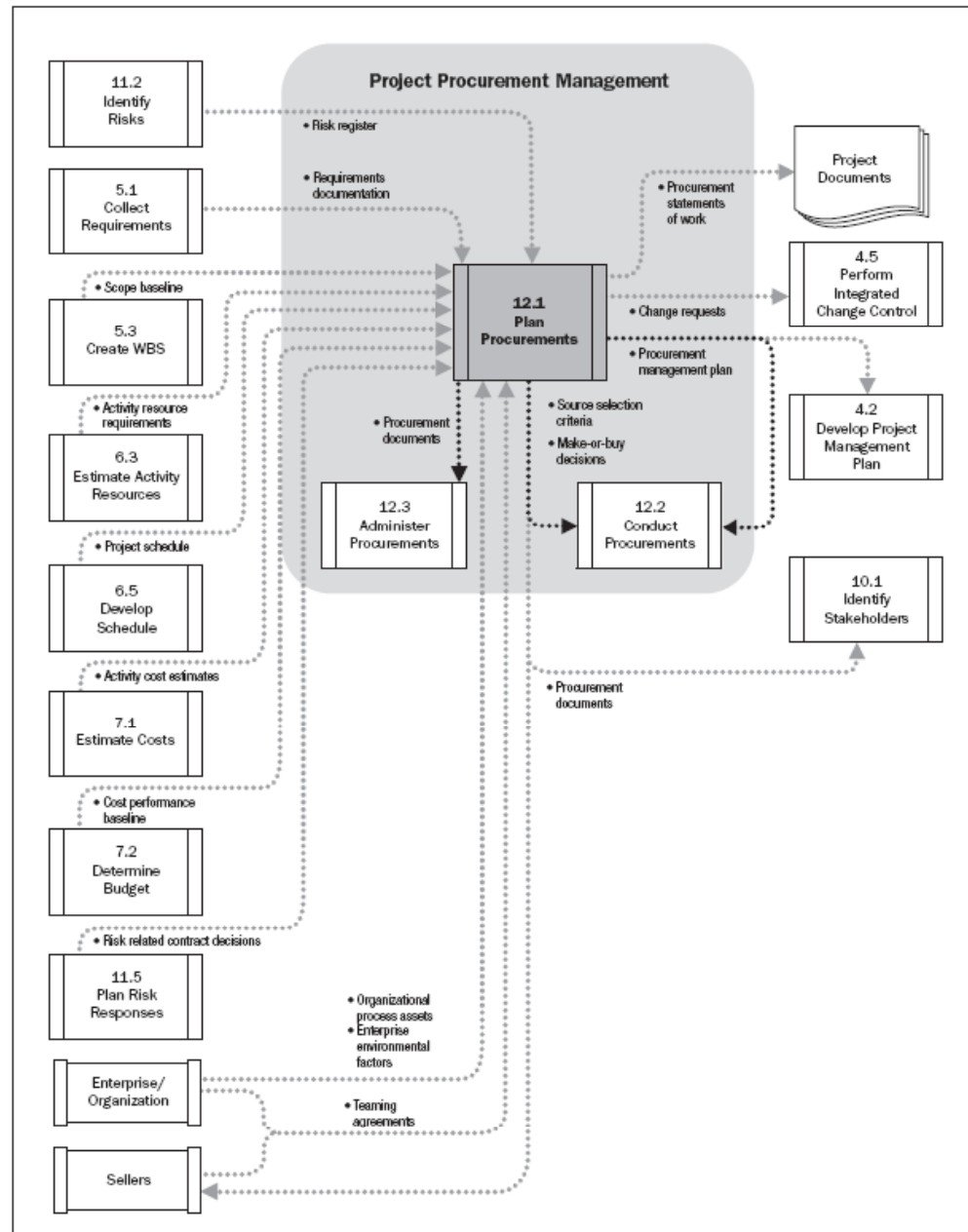
12.1 Plan Procurements

- The process of documenting project purchasing decisions, specifying the approach, and identifying potential sellers
- Identifies project needs which can be/must be met by acquiring products, services, or results outside of the project organization, versus those which can be accomplished by the project team
- Determines if acquire outside support, if yes, how, how much, and when
- Includes consideration of potential sellers, also to people who are responsible for obtaining or holding any relevant permits and professional licences required by legislation, regulation, or organizational policy in executing the project
- Project schedule can significantly influence the strategy during this process.
- Includes consideration of risks involved with each make-or-buy decision

Inputs, Tools & Techniques, Outputs



Data Flow



Inputs

- Scope baseline (describes the need, justification, requirements, and current boundaries for the project)
 - Scope statement (product scope description, service description and result description, list of deliverables, and acceptance criteria, technical issues or concerns which can impact cost (e.g. : delivery dates, available skilled resources, organizational policies)
 - WBS
 - WBS dictionary (identification of the deliverables and description of the work)
- Requirements documents
 - Important information about project requirements
 - Requirements with contractual and legal implications including health, safety, security, performance, environmental, insurance, intellectual property rights, equal employment opportunity, licenses, and permits

Inputs

- Teaming agreements
 - Legal agreements to form partnership, or joint venture
 - Defines buyer-seller roles for each party
- Risk register
 - Identified risks, risk owners, risk responses
- Risk-related contract decisions
 - Insurance, bonding, services, and other items as appropriate to specify each party's responsibility for specific risks
- Activity resource requirements
 - People, equipment, or location
- Project schedule
- Activity cost estimates
 - To evaluate the reasonableness of the bids or proposals received from the potential sellers
- Cost performance baseline
 - Detailed planned budget over time

Inputs

- Enterprise environmental factors
 - 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
 - Unique local requirements
- Organizational process assets
 - Formal procurement policies, procedures, and guidelines
 - Management systems used in developing the procurement management plan and selecting the contract types
 - An established multi-tier supplier system of pre-qualified sellers based on prior experience

Tools and Techniques

- Make-or-buy analysis
 - The capability may exist within the organization but committed to the other ongoing projects
 - Budget constraints
 - Should consider all related costs (direct/indirect)
- Expert judgment
 - Technical or legal
 - Assessing inputs to and outputs from this process
 - Evaluating the seller proposals
 - Terms and conditions

Tools & Techniques

- Contract types
 - Fixed-price is typically preferred, but other types might be justified
 - Type of contract and its terms and conditions fix the degree of risk being assumed by the buyer and seller
 - Fixed-price contracts
 - Many incorporate incentives (schedule delivery dates, cost, and technical performance)
 - Financial damage if the contract is not completed according to the contract
 - Firm fixed price contracts (FFP)
 - Preferred by buyers
 - Fixed price incentive fee contracts (FPIF)
 - Price ceiling is set, final contract price is determined after completion of all work
 - Fixed price economic price adjustment contracts (FP-EPA)
 - When the contract period is a considerable period of years
 - Must relate to some reliable financial index

Tools & Techniques

– Cost-reimbursable contracts

- Payments for all legitimate actual costs plus a fee representing seller profit
- May include incentives
- Good for projects which do not have clear scope, or risks are high
- Cost plus fixed fee contracts (CPFF)
- Cost plus incentive fee contracts (CPIF)
- Cost plus award fee contracts (CPAF)

Tools & Techniques

- Time and material contracts (T&M) [hybrid]
 - Often used for staff augmentation, acquisition of experts, any outside support
 - The work is open ended
 - 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 contract award
 - May require not-to-exceed values of time/values

Outputs

- Procurement management plan
 - 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
 - Standardize procurement documents
 - 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 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 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
 - Can be formal/informal, highly detailed/broadly framed

Outputs

- Procurement statement of work (SOW)
 - Specifications, quantity desired, quality levels, performance data, period of performance, work location, and other requirements
 - Clear, complete, and concise
- Make-or-buy decisions
 - Document the conclusions reached regarding make-or-buy products, services, or results
 - Decisions to require insurance policies or performance bond contracts
- Procurement documents
 - To solicit proposals from prospective sellers
 - Bid, tender, or quotation is used when seller selection is based on price
 - Proposal when other consideration such as technical capability, or technical approach are paramount
 - Request for Information (RFI), Invitation For Bid (IFB), Request For Proposal (RFP), Request For Quotation (RFQ), tender notice, invitation for negotiation, invitation for seller's initial response
 - Include a description of the desired form of the response, the relevant procurement SOW, and any contractual provisions.
 - Complexity and level of detail consistent with the value, and risks
 - Procurement requests are normally done in accordance with the policies (e.g., newspapers, journals, internet, ...)

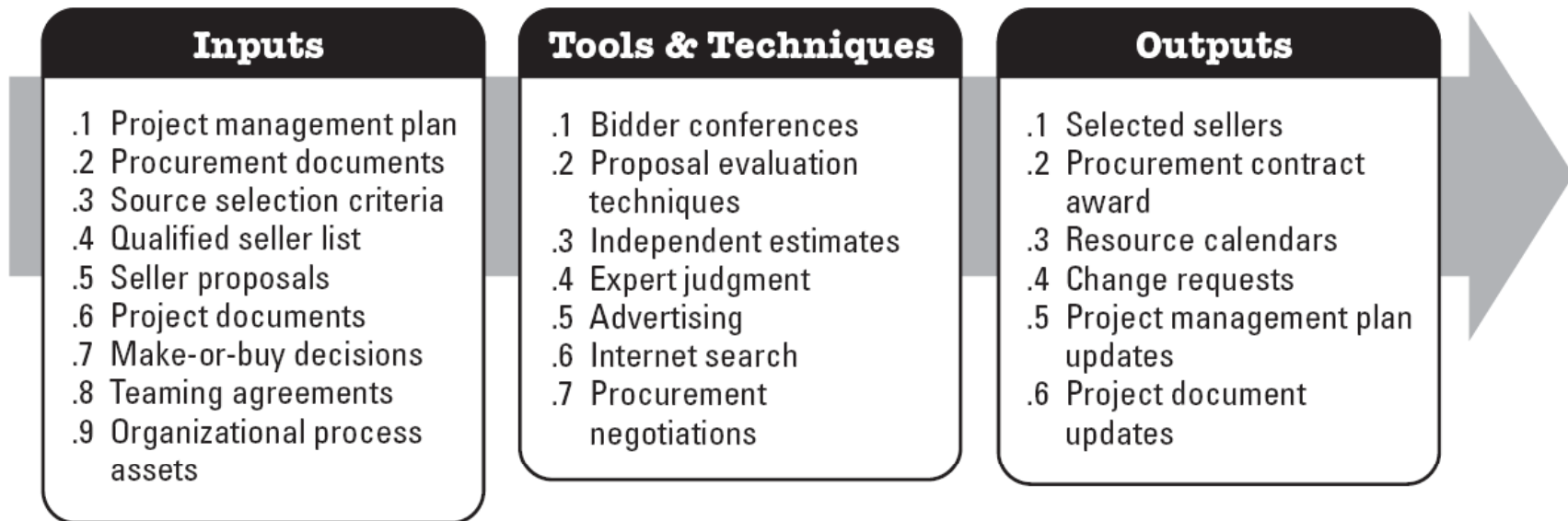
Outputs

- Source selection criteria (how to score seller proposals)
 - Can be limited to price (cost of item + all ancillary expenses such as delivery)
 - Understanding of need
 - Overall or life-cycle cost
 - Technical capability
 - Risk
 - Management approach
 - Technical approach
 - Warranty
 - Financial capability
 - Production capacity and interest
 - Business size and type
 - Past performance of sellers
 - References
 - Intellectual property rights
 - Proprietary rights
- Change requests

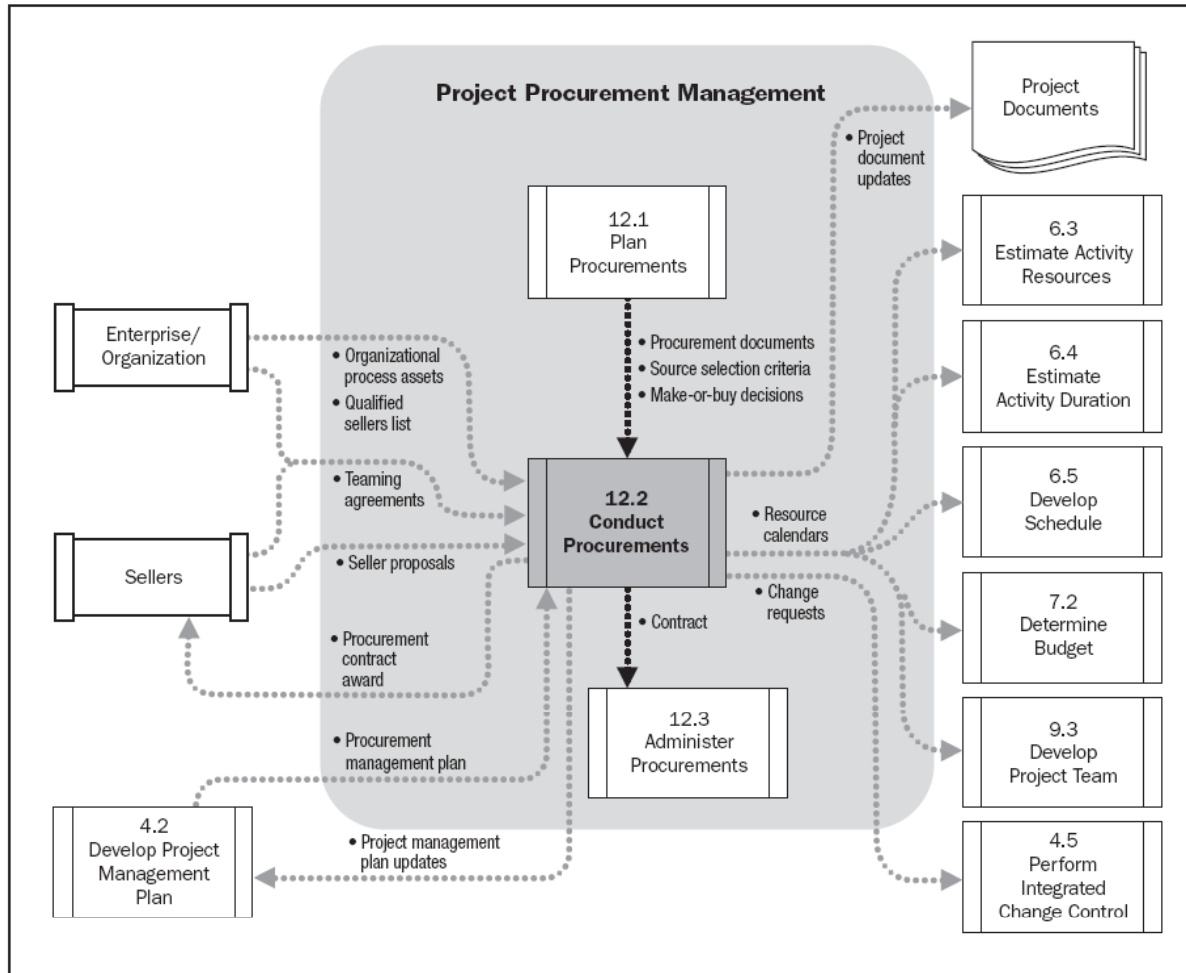
12.2 Conduct Procurements

- The process of obtaining seller responses, selecting a seller, and awarding a contract
- Bids/proposals are received, previously defined selection criteria are applied to select the qualified/acceptable seller
- Can be a repetitive process for major procurement

Inputs, Tools & Techniques, Outputs



Data Flow



Inputs

- Project management plan
- Procurement documents
- Source selection criteria
 - Capabilities, capacity, delivery dates, product cost, life-cycle cost, technical expertise
- Qualified seller list
 - Pre-screened for their qualifications and past experience
- Seller proposals
- Project documents
 - Risk register, and risk-related contract decisions
- Make-or-buy decisions
- Teaming agreements
 - Seller may work under some form of interim contract funded by the buyer or jointly by both parties
- Organizational process assets
 - List of prospective and previously qualified sellers, and
 - Information on relevant past experience with sellers, both good and bad

Tools and Techniques

- Bidder conferences
 - Contractor/vendor/pre-bid conferences
 - To make sure all prospective sellers have a clear and common understanding of procurement (technical/contractual)
 - Responses to questions as an amendment to the procurement documents
- Proposal evaluation techniques
- Independent estimates
- Expert judgment
 - Contracting, legal, finance, accounting, engineering, design, research, development, sales, and manufacturing
- Advertising
 - Newspapers/trade publications
 - Legal requirements
- Internet search
 - Not applicable to high-risk, highly complex, procurement effort that must be closely monitored
- Procurement negotiations
 - Clarify the structure, requirements, and other terms of the purchases
 - Responsibilities, authority to make changes, applicable terms, governing laws, technical, and business approaches, proprietary rights, contract financing, technical solutions, overall schedule, payments, and price

Outputs

- Selected sellers
- Procurement contract award
 - SOW or deliverables
 - Schedule baseline
 - Performing 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 approval
 - Change request handling, and
 - Termination and alternative dispute resolution (ADR) mechanism

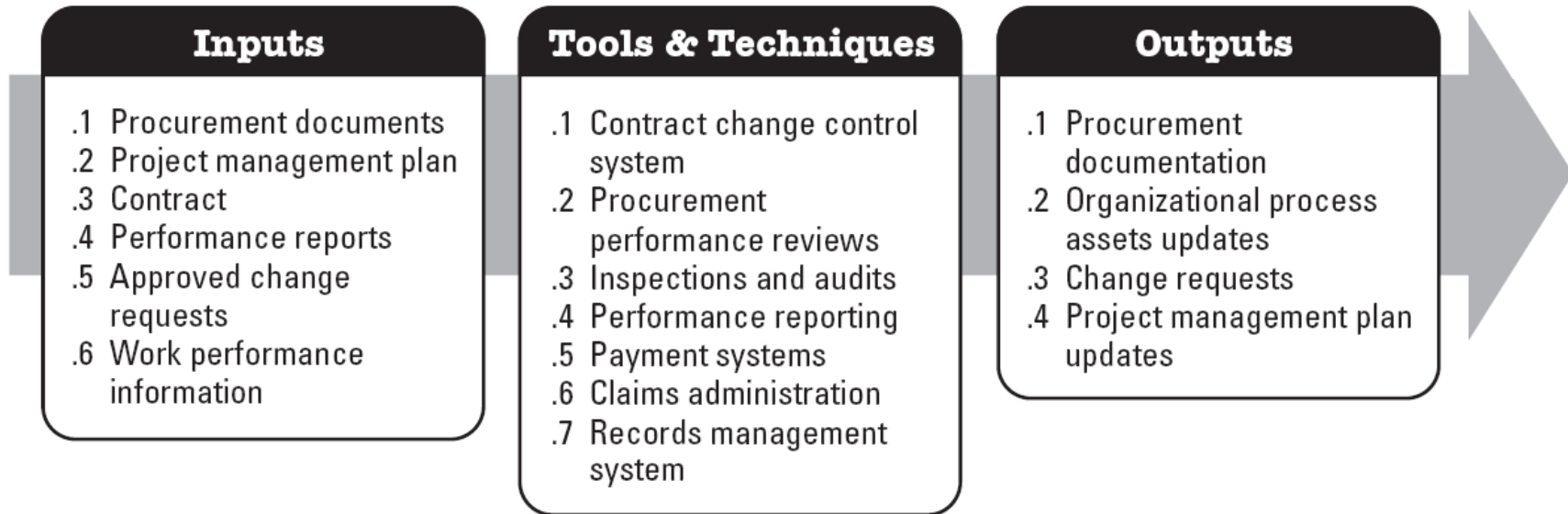
Output

- Resource calendars
 - Quality and availability of contracted resources, and dates on which they are active or idle
- Change requests
 - Through Integrated Change Control Process
- Project management plan updates
 - Cost baseline
 - Scope baseline
 - Schedule baseline, and
 - Procurement management plan
- Project document updates
 - Requirements document
 - Requirements traceability documentation, and
 - Risk register

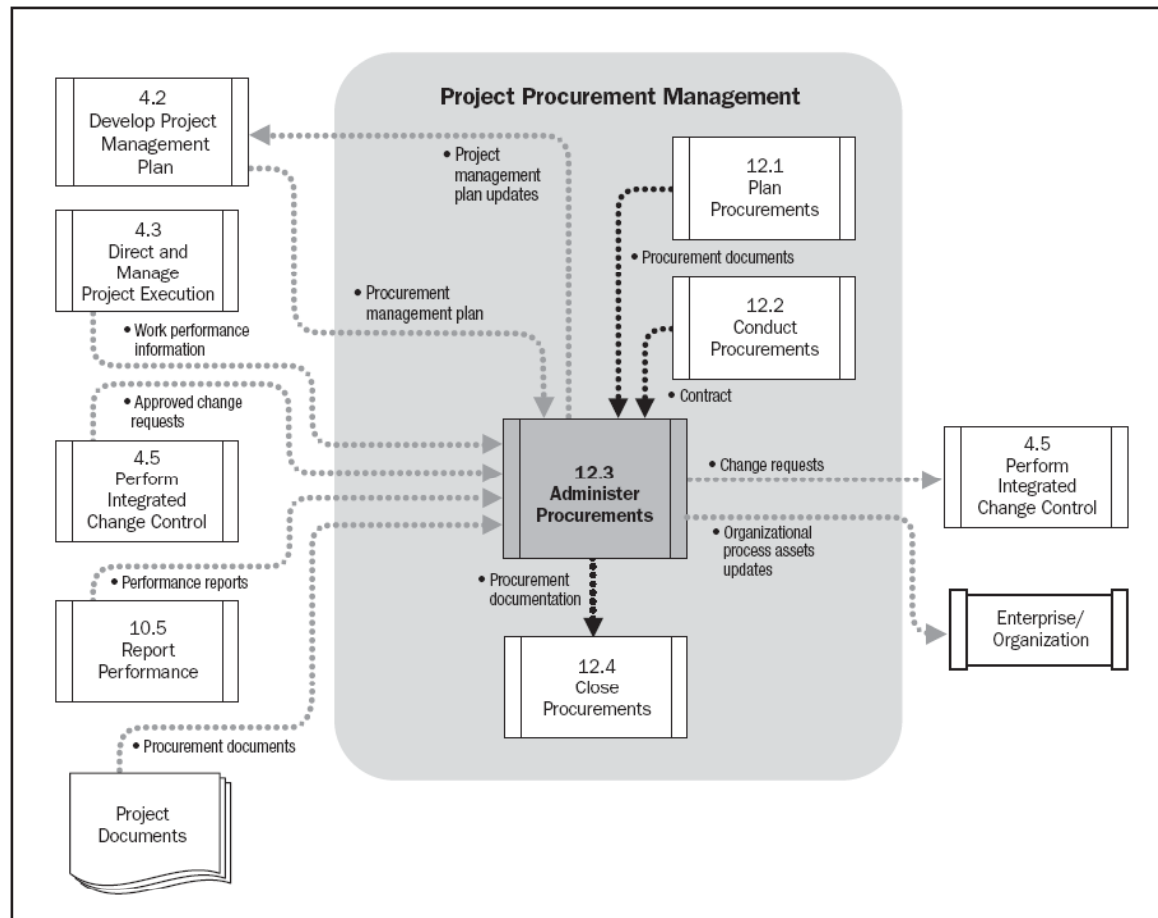
12.3 Administer Procurements

- The process of managing procurement relationships, monitoring contract performance, and making changes and corrections as needed
- Ensures that the seller's performance meets procurement requirements and that the buyer performs according to the terms of the legal contract
- Direct and manage project execution
- Report performance
- Perform quality control
- Perform integrated change control
- Monitor and control risks

Inputs, Tools & Techniques, Outputs



Data Flow



Inputs

- Procurement documents
 - Procurement contract award
 - SOW
- Project management plan
 - How the procurement processes will be managed from developing procurement documentation through contract closure
- Contract
- Performance reports
 - Seller-developed technical documentation and other deliverable information provided in accordance with the terms of the contract
 - Seller performance reports (which deliverables have been completed and which have not)
- Approved change requests
 - Modifications to the terms and conditions of the contract such as SOW, pricing, description of the products, services, or results to be provided
- Work performance information
 - Extend to which quality standards are being satisfied, what costs have been incurred or committed, and which seller invoices have been paid

Tools and Techniques

- Contract change control system
 - The process by which the procurement can be modified
 - Include paperwork, tracking system, dispute resolution procedure, and approval levels necessary for authorizing changes
- Procurement performance reviews
 - A structured review of the seller's progress to deliver project scope, quality, cost, and schedule as compared to the contract
 - Objectives: performance success/failure, progress WRT SOW, contract non-compliance
- Inspections and audits
- Performance reporting
- Payment systems
- Claims administration
 - Claims, disputes, or appeals for contested changes and potential constructive changes
 - Buyer and seller cannot agree on compensation for the change/even change has occurred
 - Should be handled according to Alternative Dispute Resolution (ADR)
- Records Management system
 - To manage contract and procurement documentation and records

Outputs

- Procurement documentation
 - Procurement contract with all supporting schedules, requested unapproved/approved contract change
 - Seller-developed technical documentation, work performance information such as deliverables, seller performance reports, warranties, financial documents (invoices, payment records), and contract related inspections
- Organizational process assets updates
 - Correspondence
 - Warnings of unsatisfactory performance, requests for change, inspection results
 - Payment schedules and requests
 - Seller performance evaluation documentation
 - If seller should be allowed to work on future projects
 - Early termination of seller's contract, determining contract penalties, fees, incentives
- Change requests
 - Should uniquely identified and documented by project correspondence
- Project management plan updates
 - Procurement management plan
 - To reflect any approved change requests (impacting costs/schedules)
 - Baseline schedule

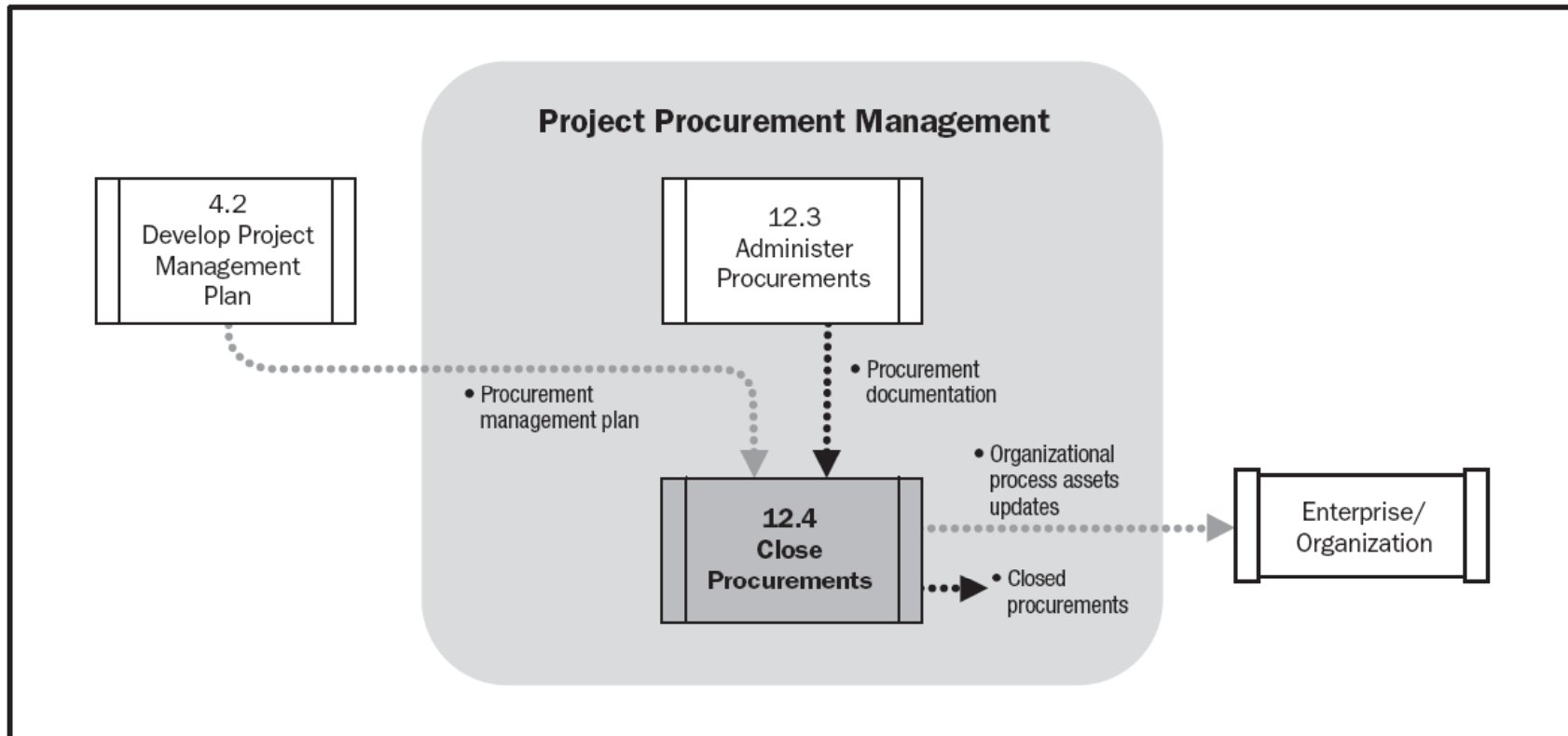
12.4 Closing Procurements

- The process of completing each project procurement
- Involves verification that all work and deliverables were acceptable
- Administrating activities like finalizing open claims, updating records, archiving such information
- Unresolved claims may be subject to litigation after closure
- Early termination of a contract as a special case
 - Based on mutual agreement, from the default of one party, or for the convenience of the buyer if mentioned in the contract
 - Rights and responsibilities should be mentioned in contract
 - The buyer may have to compensate the seller for seller's preparations, any completed and accepted work

Inputs, Tools & Techniques, Outputs



Data Flow



Inputs

- Project management plan
- Procurement documentation
 - All is collected, indexed, and filed
 - Contract schedule, scope, quality, and cost performance along with all contract change documentation, payment records, and inspection results are catalogued
 - These can be used for lessons learned and as a basis for evaluating for future contracts

Tools and Techniques

- Procurement audits
 - Structure review of the procurement process originating from the Plan Procurements Process through Administer Procurements
 - Objective: identify successes/failures
- Negotiated settlements
 - Primary goal of outstanding issues, claims, and disputes
 - Other methods of ADR include mediation, arbitration, litigation in court
- Records management system

Outputs

- Closed procurements
 - Buyer provides seller with formal written notice
 - Requirements usually mentioned in the terms and conditions of the contract
- Organizational process assets updates
 - Procurement file
 - Indexed contract documentation, closed contract, other project files
 - Deliverable acceptance
 - Written notice
 - Requirements for formal deliverable acceptance and how to address non-conforming deliverables are usually defined in the contract
 - Lessons learned documentation
 - Process improvement procurements