

Project Management Professional



PMP PREPARATION COURSE

6TH EDITION

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Chapter 12

Project Procurement Management

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Lecture 09 : Project Procurement Management

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Lecture 09 : Project Procurement Management

0. Introduction

❖ Notes

- The project manager does not have to be a trained expert in procurement management **laws and regulations** but should be **familiar** enough with the procurement process to make intelligent **decisions** regarding contracts and contractual relationships.
- The project manager is typically **not authorized** to sign legal agreements binding the organization; this is reserved for those who have the authority to do so.
- For **smaller organizations** or startup companies and those without a purchasing, contracting, or procurement department, the project manager may assume the purchasing authority role to negotiate and sign contracts directly (**decentralized purchasing**).
- For **more mature organizations**, the actual procurement and contracting functions will be carried out by a separate department with the specific role to purchase, negotiate, and sign contracts (**centralized purchasing**).

Lecture 09 : Project Procurement Management

0. Introduction

❖ Notes

- The seller may be identified as a contractor, subcontractor, vendor, service provider, or supplier.

قد يتم تعريف البائع على أنه المقاول أو المقاول من الباطن أو البائع أو مقدم الخدمة أو المورد.

- The buyer may be called a client, customer, prime contractor, contractor, acquiring organization, service requestor, or purchaser

قد يطلق على المشتري اسم العميل أو الزبون أو المقاول الرئيسي أو المؤسسة القائمة بالشراء أو طالب الخدمة أو المشتري.

Project Procurement Management Overview

12.1 Plan Procurement Management

- .1 Inputs
 - .1 Project charter
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 - .4 Project documents
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 - .6 Organizational process assets
- .2 Tools & Techniques
 - .1 Expert judgment
 - .2 Data gathering
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 - .2 Procurement strategy
 - .3 Bid documents
 - .4 Procurement statement of work
 - .5 Source selection criteria
 - .6 Make-or-buy decisions
 - .7 Independent cost estimates
 - .8 Change requests
 - .9 Project documents updates
 - .10 Organizational process assets updates

12.2 Conduct Procurements

- .1 Inputs
 - .1 Project management plan
 - .2 Project documents
 - .3 Procurement documentation
 - .4 Seller proposals
 - .5 Enterprise environmental factors
 - .6 Organizational process assets
- .2 Tools & Techniques
 - .1 Expert judgment
 - .2 Advertising
 - .3 Bidder conferences
 - .4 Data analysis
 - .5 Interpersonal and team skills
- .3 Outputs
 - .1 Selected sellers
 - .2 Agreements
 - .3 Change requests
 - .4 Project management plan updates
 - .5 Project documents updates
 - .6 Organizational process assets updates

12.3 Control Procurements

- .1 Inputs
 - .1 Project management plan
 - .2 Project documents
 - .3 Agreements
 - .4 Procurement documentation
 - .5 Approved change requests
 - .6 Work performance data
 - .7 Enterprise environmental factors
 - .8 Organizational process assets
- .2 Tools & Techniques
 - .1 Expert judgment
 - .2 Claims administration
 - .3 Data analysis
 - .4 Inspection
 - .5 Audits
- .3 Outputs
 - .1 Closed procurements
 - .2 Work performance information
 - .3 Procurement documentation updates
 - .4 Change requests
 - .5 Project management plan updates
 - .6 Project documents updates
 - .7 Organizational process assets updates

Lecture 09 : Project Procurement Management

01. Plan Procurement Management



Lecture 09 : Project Procurement Management

01. Plan Procurement Management

► Plan Procurement Management is the process of :

- Documenting project procurement decisions. هي عملية توثيق قرارات الشراء في المشروع
- Specifying the approach. تحديد طريقة الشراء
- Identifying potential sellers. تحديد البائعين المحتملين

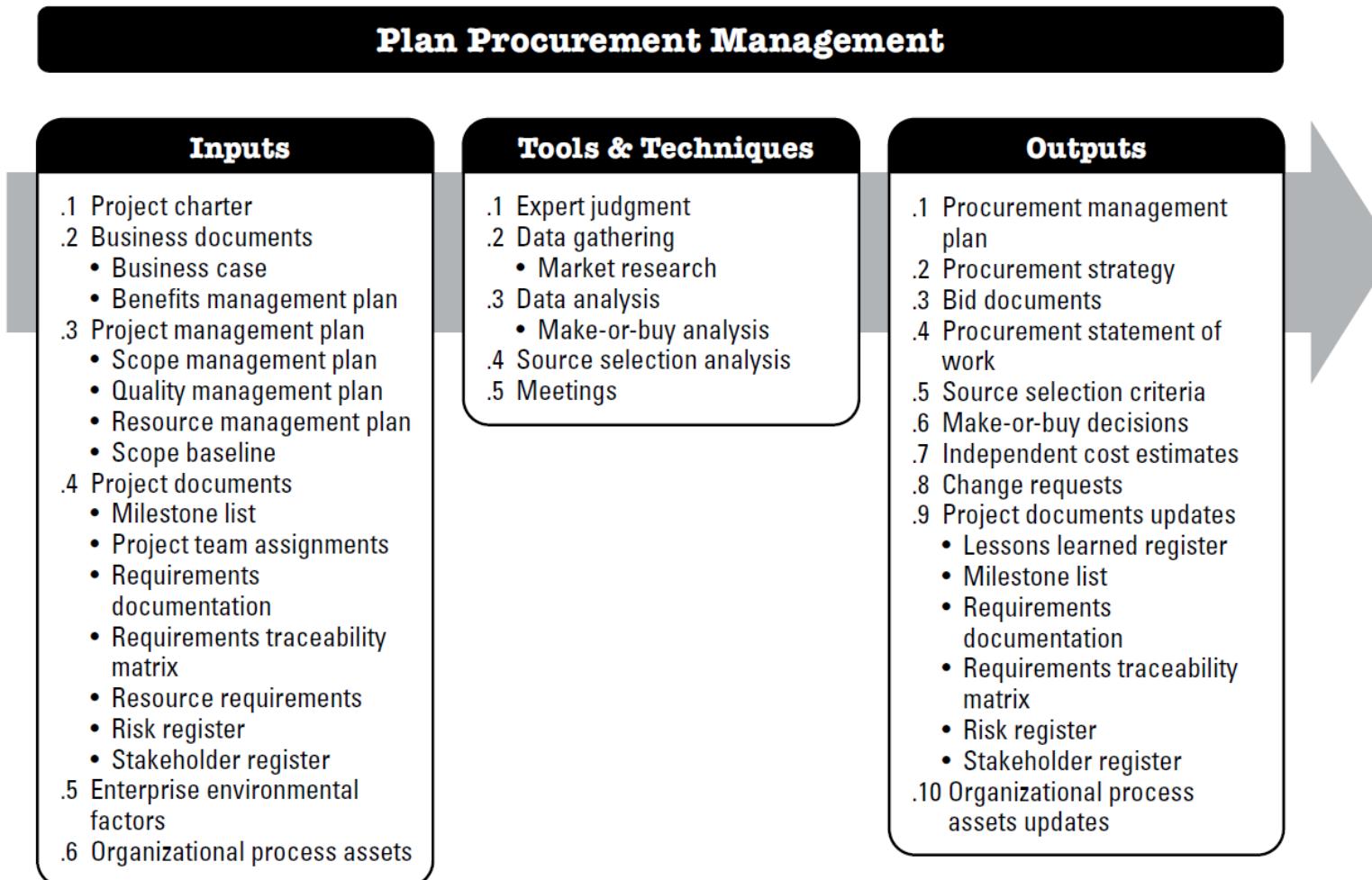
❖ The key benefit of this process:

- ✓ Determines whether to acquire goods and services from outside the project and, if so, what to acquire as well as how and when to acquire it.

✓ تحدد ما إذا كان سيتم الحصول على البضائع والخدمات من خارج المشروع، وإذا كان كذلك، فما هو الذي يتم الحصول عليه وطريقة وتوقيت الحصول عليه.

Lecture 09 : Project Procurement Management

01. Plan Procurement Management



Project Procurement Management

(1) Plan Procurement Management



Lecture 09 : Project Procurement Management

01. Plan Procurement Management

Inputs :

Project management plan

- Scope management plan
- Quality management plan
- Resource management plan
- Scope baseline

Project documents

- Milestone list
- Project team assignments.
- Requirements documentation
- Resource requirements
- Risk register

Lecture 09 : Project Procurement Management

01. Plan Procurement Management

Inputs :

12.1.1.1 PROJECT CHARTER

Described in Section 4.1.3.1. The project charter contains the objectives, project description, summary milestones, and the preapproved financial resources.

12.1.1.2 BUSINESS DOCUMENTS

Described in Section 1.2.6. The business documents include the following:

- ◆ **Business case.** The procurement strategy and business case need to be aligned to ensure the business case remains valid.
- ◆ **Benefits management plan.** The benefits management plan describes when specific project benefits are expected to be available, which will drive procurement dates and contract language.

Lecture 09 : Project Procurement Management

01. Plan Procurement Management

Inputs :

12.1.1.3 PROJECT MANAGEMENT PLAN

Described in Section 4.2.3.1. Project management plan components include but are not limited to:

- ◆ **Scope management plan.** Described in Section 5.1.3.1. The scope management plan describes how the scope of work by the contractors will be managed through the execution phase of the project.
- ◆ **Quality management plan.** Described in Section 8.1.3.1. The quality management plan contains the applicable industry standards and codes the project is required to follow. This information is used in bidding documents such as the RFP and will eventually be referenced in the contract. This information may be used in supplier prequalification or as part of the selection criteria.
- ◆ **Resource management plan.** Described in Section 9.1.3.1. The resource management plan has information on which resources will be purchased or leased, along with any assumptions or constraints that would influence the procurement.
- ◆ **Scope baseline.** Described in Section 5.4.3.1. The scope baseline contains the scope statement, WBS, and WBS dictionary. Early in the project, the project scope may still be evolving. The elements of the scope that are known are used to develop the statement of work (SOW) and the terms of reference (TOR).

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01. Plan Procurement Management

Inputs :

12.1.1.4 PROJECT DOCUMENTS

Project documents that can be considered as inputs for this process include but are not limited to:

- ◆ **Milestone list.** Described in Section 6.2.3.3. This list of major milestones show when the sellers are required to deliver their results.
- ◆ **Project team assignments.** Described in Section 9.3.3.2. The project team assignments contain information on the skills and abilities of the project team and their availability to support the procurement activities. If the project team does not have the skills to perform the procurement activities for which they are responsible, additional resources will need to be acquired or training will need to be provided, or both.

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01. Plan Procurement Management

Inputs :

- ◆ **Requirements documentation.** Described in Section 5.2.3.1. Requirements documentation may include:
 - Technical requirements that the seller is required to satisfy, and
 - Requirements with contractual and legal implications that may include health, safety, security, performance, environmental, insurance, intellectual property rights, equal employment opportunity, licenses, permits, and other nontechnical requirements.
- ◆ **Requirements traceability matrix.** Described in Section 5.2.3.2. The requirements traceability matrix links product requirements from their origin to the deliverables that satisfy them.
- ◆ **Resource requirements.** Described in Section 9.2.3.1. Resource requirements contain information on specific needs such as team and physical resources that may need to be acquired.
- ◆ **Risk register.** Described in Section 11.2.3.1. The risk register provides the list of risks, along with the results of risk analysis and risk response planning. Some risks are transferred via a procurement agreement.
- ◆ **Stakeholder register.** Described in Section 13.1.3.1. The stakeholder register provides details on the project participants and their interests in the project, including regulatory agencies, contracting personnel, and legal personnel.

01. Plan Procurement Management

Inputs : Organizational Process Assets

Contract Types

1- Fixed Price (FP) عقود السعر الثابت

- Firm Fixed Price (FFP): السعر الثابت المحدد
- Fixed Price Incentive Fee (FPIF): عقد السعر الثابت مع قيمة تحفيزية
- Fixed price with economic price adjustments (FPEPA). عقد السعر الثابت مع ضبط السعر الاقتصادي

2- Cost-reimbursable contracts عقود استرداد التكلفة.

- Cost plus fixed fee (CPFF). عقد تكلفة مضافًا إليه مبلغ ثابت
- Cost plus incentive fee (CPIF). عقد تكلفة مضافًا إليه مبلغ تحفيزي
- Cost plus award fee (CPAF). عقد التكلفة مضافًا إليها مكافأة

3- Time and material contracts (T&M). عقد الزمن والمواد

01. Plan Procurement Management

1- Fixed Price (FP)

عقود السعر الثابت

A Fixed-Price contract is also known as a **lump-sum contract**. This type of contract is used when **there is no uncertainty in the scope of work**. Once the **contract is signed**, the seller is contractually bound to **complete the task** within the agreed amount of **money and time**. The seller bears the **majority of the risk** due to the nature of the contract, as he must provide for the completion of the work as stipulated in the contract.

1.1 Firm Fixed Price (FFP): السعر الثابت المحدد

- ✓ The **most common** used contract type
- ✓ It is favored by most buying organizations because the price for goods is set at the outset.
- ✓ The seller has to complete the job within an agreed amount of **money and time**.
- ✓ Any cost **increase** due to the **bad performance** of the seller will be the **responsibility of the seller**, who is contractually bound to **complete the job** within the agreed amount.
- ✓ Mostly used in **government contracts** where the **scope of work** is specified with every possible detail outlined.
- ✓ **Buyer has little risk**, provides he has a complete defined scope.

Example: The seller has to complete the job for 100,000 USD within 18 months

01. Plan Procurement Management

1.2 Fixed Price Incentive Fee (FPIF): عقد السعر الثابت مع قيمة تحفيزية

- ✓ Although the price is fixed, the seller is given an additional incentive based on his performance.
- ✓ The incentive can be tied to any project metrics such as cost, time, or technical performance

Example: 10,000 USD will be paid to the contractor as an incentive if he completes the work before two months

1.3 Fixed price with economic price adjustments (FPEPA). عقد السعر الثابت مع ضبط السعر الاقتصادي

- ✓ Used if the contract is multi-year long.
- ✓ Here, you include a special provision in a clause which protects the seller from inflation.
- ✓ Special provision allowing for predefined final adjustments to the contract price due to changed conditions, such as inflation changes or cost increases (or decreases) for specific commodities.

يتم استخدام هذا النوع عندما تمتد فترة أداء البائع لعدة أعوام كثيرة

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2- Cost-reimbursable contracts

عقود استرداد التكلفة

- ✓ Used when there is uncertainty in the scope, or the risk is higher.
- ✓ In this contract, since the buyer pays for all cost, he bears the risk

2.1 Cost plus fixed fee (CPFF). عقد تكلفة مضافة إلية مبلغ ثابت

- ✓ 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.
- ✓ Used in projects where the risk is high, and no one is interested in bidding. Therefore, this type of contract is selected to keep the seller safe from risks.

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2.2 Cost plus incentive fee (CPIF). عقد تكلفة مضافة إلية مبلغ تحفيزي

- ✓ The seller will be reimbursed for all costs plus an incentive fee based upon achieving certain performance objectives mentioned in the contract.
- ✓ This incentive will be calculated using an agreed on a predetermined formula.
- ✓ Here, the risk also lies with the buyer; however, this risk is lower than the Cost Plus Fixed Fee where the buyer has to pay a fixed fee along with the cost incurred.
- ✓ The incentive is a motivating factor for the seller. The seller may get some incentive if he can complete the work with less cost or before time.

Example: If the project is completed with under budget, 25% of the remaining fund will be given to the seller.

2.3 Cost plus award fee (CPAF). عقد التكلفة مضافةً إليها مكافأة

Here, the seller is paid for all his legal costs plus some award fee. This award fee will be based on achieving satisfaction according to specified performance objectives described in the contract.

- ✓ The evaluation of performance is a subjective matter, and you cannot appeal it.

Note: There is a difference between the incentive fee and the award fee.

- ✓ An incentive fee is calculated based on a formula defined in the contract and is an objective evaluation.
- ✓ An award fee is dependent on the satisfaction of the client and is evaluated subjectively.

Example: If the seller completes the task meeting or exceeding all quality standards, based on his performance he may be given an award of up to 10,000 USD.



Q) A project is contracted on a Cost-Plus-Fixed-Fee (CPFF) basis with a fee of 10 percent of estimated costs. The estimated cost is US\$50,000. If the project comes in at US\$60,000 with no changes in project scope, what would be the total cost of the contract?

A- US\$55,000.

B- US\$125,000.

- Fee is calculated as 10% of 50,000 = $(10/100)*50,000 = 5,000$

C- US\$75,000.

- Total cost of the contract is $60,000 + 5,000 = \text{US\$}65,000$.

D- US\$65,000.



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3- Time and material contracts (T&M).

عقد الزمن والمواد

- ✓ This is a hybrid contract of Fixed-Price and Cost Reimbursable contracts.
- ✓ Here, the risk is distributed to both parties.
- ✓ Used when the deliverable is “labor hours.”
- ✓ This type of contract is used to hire some experts or any outside support.
- ✓ Here, the buyer can specify the hourly rate for the labor with a “not-to-exceed” limit.

Example: Technician will be paid 20 USD per hour.

Summary

You should always select a contract which provides the optimum value for your time and money and protects your project from any risks.

- 1- You should go for a Fixed-Price contract if the scope of work is well defined and fixed.
- 2- You should choose the Cost Reimbursable contract if the project scope is not fixed and is exploratory.
- 3- You should go for the Time and Materials type of contract if you require only expert opinions, consultancy service, or outside support.

Fixed Price (FP)

FFP

FP-EPA

FPIF

LOW

Time & Material

For small projects

Cost Reimbursable

CPFF

CPPC

CPAF

HIGH

BUYER'S RISK

HIGH

SELLER'S RISK

LOW

- ✓ Unclear requirements and SOW are a risk and have cost and schedule impacts.

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Data Gathering



➤ Market research أبحاث السوق

- ✓ Includes examination of industry and specific seller capabilities. فحص القدرات في القطاع وقدرات البائع الخاصة

Data Analysis

➤ Make-or-buy analysis

- ✓ Used to determine whether work or deliverables can best be accomplished by the project team or should be purchased from outside sources.

Factors to consider in the make-or-buy decision include:

- The organization's current resource allocation and their skills and abilities.
- The need for specialized expertise.
- Evaluating the risks involved with each make-or-buy decision.



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Source Selection Analysis

تحليل اختيار المورد

Commonly used selection methods include the following:

1- Least cost.

- ✓ appropriate for procurements of a standard or routine nature.
- ✓ Where well-established practices and standards exist and from which a specific and well-defined outcome is expected.

2- Qualifications only.

- ✓ Applies when the time and cost of a full selection process would **not make sense** because the **value** of the procurement is relatively **small**
- ✓ The buyer establishes a short list and selects the bidder with the best **credibility, qualifications, experience, expertise, areas of specialization, and references**.

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01. Plan Procurement Management

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Source Selection Analysis

تحليل اختيار المورد

3- Quality-based/highest technical proposal score

- ✓ The seller who submitted the highest-ranked technical proposal is selected

يقع الاختيار على البائع الذي قدم العرض الفني الحائز على أعلى درجة

4- Quality and cost-based

- ✓ When risk and/or uncertainty are greater for the project, quality should be a key element when compared to cost.

حينما تكون المخاطرة وعدم اليقين أكبر للمشروع، يجب أن تكون الجودة هي العنصر الرئيسي عند مقارنتها بالتكلفة

5- Sole source

المصدر الوحيد.

- ✓ The buyer asks a specific seller to prepare technical and financial proposals, which are then negotiated. Since there is no competition, this method is acceptable only when properly justified and should be viewed as an exception.

يطلب المشتري من بائع محدد إعداد عروض فنية ومالية والتي تخضع للتفاوض. ونظرًا لعدم وجود منافسة، فإن هذا الأسلوب يعد مقبولًا فقط حينما يكون مبررًا ويجب اعتباره استثناءً.

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Source Selection Analysis

تحليل اختيار المورد

6- Fixed budget الميزانية الثابتة.

- ✓ The fixed-budget method requires disclosing the available budget to invited sellers in the RFP and selecting the highest-ranking technical proposal within the budget.

يتطلب الإفصاح عن الميزانية المتاحة للبائعين المدعوين في طلب تقديم عرض و اختيار العرض الفني الحائز على أعلى درجة في حدود الميزانية

- ✓ Because sellers are subject to a cost constraint, they will adapt the scope and quality of their offer to that budget.
- ✓ The buyer should therefore ensure that the budget is compatible with the SOW and that the seller will be able to perform the tasks within the budget.
- ✓ This method is appropriate only when the SOW is precisely defined, no changes are anticipated, and the budget is fixed and cannot be exceeded.

ويعد هذا الأسلوب ملائماً فقط حينما يحدد بيان العمل بدقة ولا يتوقع إجراء تغيرات والميزانية ثابتة ولا يمكن تجاوزها.

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01. Plan Procurement Management

Outputs

PROCUREMENT MANAGEMENT PLAN

- ✓ Prequalified sellers, if any, to be used. البائعين المؤهلين مسبقاً المطلوب استخدامهم
- ✓ Timetable of key procurement activities. الجدول الزمني للأنشطة الرئيسية للمشتريات
- ✓ Stakeholder roles and responsibilities related to procurement, including authority and constraints of the project team when the performing organization has a procurement department.
أدوار ومسؤوليات المعنيين المرتبطة بالمشتريات والتي تشمل صلاحية وقيود فريق المشروع حينما يكون لدى المؤسسة المنفذة إدارة مشتريات
- ✓ Constraints and assumptions that could affect planned procurements.
القيود والافتراضات التي قد تؤثر على المشتريات المخططة
- ✓ How procurement will be coordinated with other project aspects, such as project schedule development and control processes.
كيفية تنسيق المشتريات مع جوانب المشروع الأخرى مثل عمليات وضع الجدول الزمني للمشروع والتحكم به

Lecture 09 : Project Procurement Management

01. Plan Procurement Management

Outputs

Procurement Strategy

The objective of the procurement strategy is to:-

- ✓ Determine the project delivery method. تحديد أسلوب تسليم المشروع
- ✓ The type of legally binding agreement نوع الاتفاق الملزم قانوناً
- ✓ How the procurement will advance through the procurement phases طريقة تقدم المشتريات عبر مراحل المشتريات
 - ❖ Delivery methods طرق التسليم.
 - ❖ Contract payment types أنواع سداد العقود.
 - ❖ Procurement phases
 - Sequencing
 - Performance indicators
 - Criteria for moving from phase to phase

Lecture 09 : Project Procurement Management

01. Plan Procurement Management

Outputs

BID DOCUMENTS

وثائق العطاء



➤ Bid documents are used to solicit proposals from prospective sellers

➤ Request for information (RFI). طلب معلومات.

يستخدم طلب المعلومات حينما يكون هناك حاجة إلى المزيد من المعلومات حول البضائع والخدمات من البائعين

➤ Request for quotation (RFQ). طلب عرض الأسعار.

يستخدم طلب عرض الأسعار عامًّا حينما يكون هناك حاجة إلى المزيد من المعلومات حول الطريقة التي يفي بها **البائعون** المتطلبات ومقدار التكلفة.

➤ Request for proposal (RFP). طلب تقديم عرض.

هذه هي الوثائق **الأكثر رسمية** يستخدم طلب تقديم العرض في حالة وجود مشكلة في المشروع ويصعب تقرير الحل “للطلب” ولها قواعد مشتريات صارمة من حيث المحتوى والحد الزمني وردود**البائع**

- ✓ The buyer structures procurement documents to facilitate an accurate and complete response from each prospective seller and to facilitate easy evaluation of the responses

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01. Plan Procurement Management

Outputs

BID DOCUMENTS

وثائق العطاء



Request for quote (RFQ)	From buyer to seller. Requests the seller to provide a price for the procured product or service.
Request for proposal (RFP)	From buyer to seller. Requests the seller to provide a proposal to complete the procured work or to provide the procured product.
Request for Information (RFI)	From buyer to seller. Asks for additional information about the seller's products and/or services.

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01. Plan Procurement Management

Outputs

Procurement Statement of Work

بيان العمل الخاص بالمشتريات

- Developed from the project **scope baseline** and defines only that **portion** of the project scope that is to be included within the related contract.
- Describes the procurement item in **sufficient detail** to allow prospective sellers to determine if they are **capable** of providing the products.
- SOW can include specifications, quantity desired, quality levels , performance reporting

Source Selection Criteria:

- ✓ Capability and capacity.
- ✓ Product cost and life cycle cost.
- ✓ Delivery dates.
- ✓ Technical expertise and approach.
- ✓ Specific relevant experience.
- ✓ Key staff's qualifications, availability, and competence.
- ✓ Financial stability of the firm.
- ✓ Management experience.

القدرة والطاقة الإنتاجية

تكلفة المنتج وتكلفة دورة الحياة

تواریخ التسلیم

الخبرة الفنية والأسلوب

الخبرة المحددة ذات الصلة

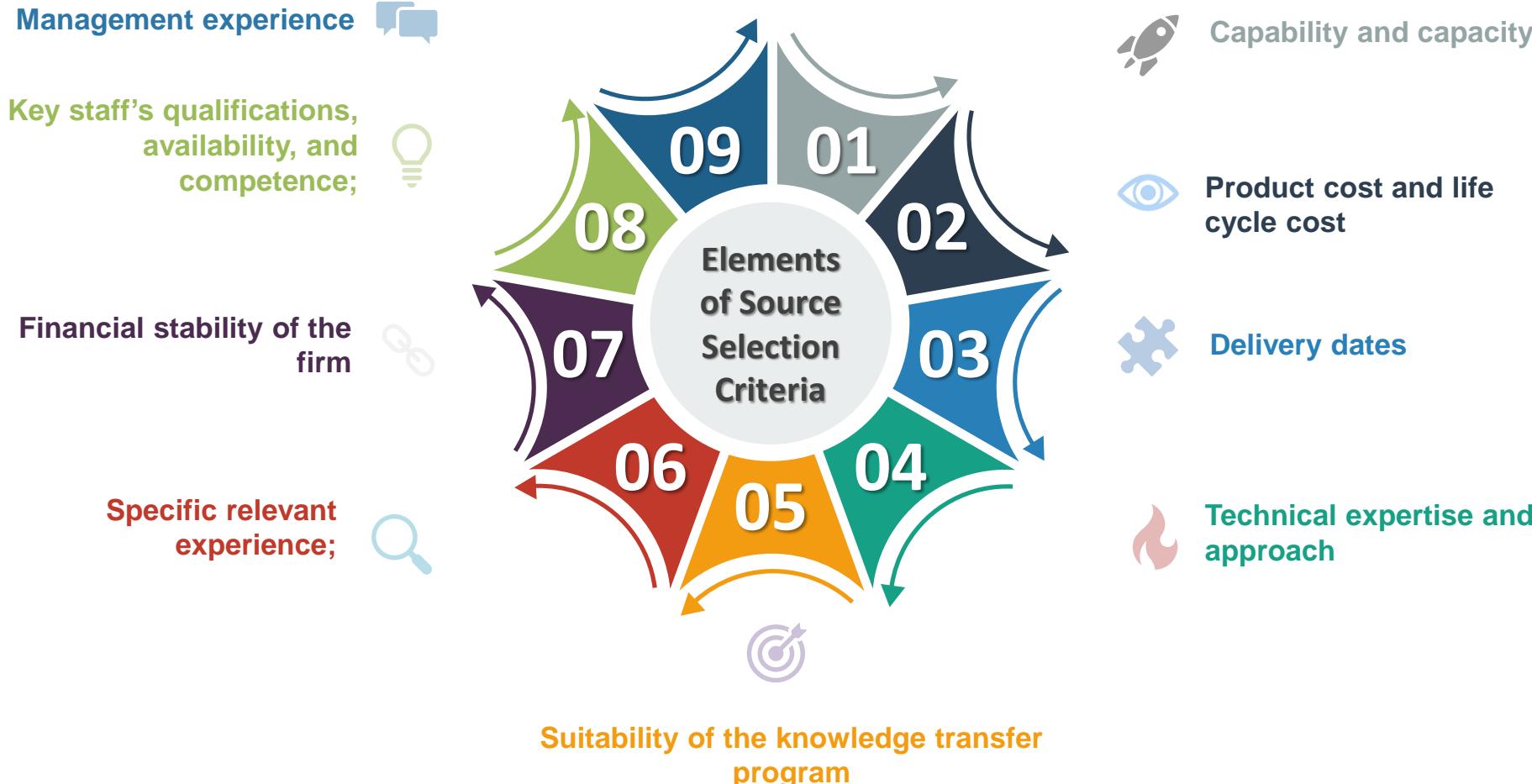
الاستقرار المالي للمؤسسة

خبرة الإدارة



Lecture 09 : Project Procurement Management

01. Plan Procurement Management



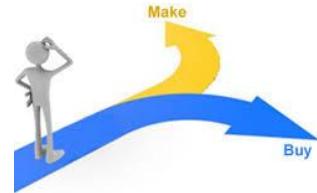
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01. Plan Procurement Management

Outputs

Make-OR-Buy Decisions

قرارات التصنيع أم الشراء



- A make-or-buy analysis results in a decision as to whether particular **work** can best be accomplished **by the project team** or needs to be purchased from **outside sources**.

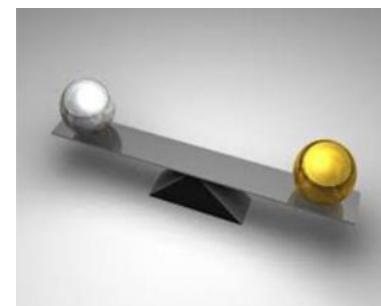
Independent Cost Estimates

تقديرات التكاليف المستقلة

- For large procurements, the procuring organization may elect to either prepare its **own independent estimate** or have a cost estimate 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 SOW was **deficient** or **ambiguous**.
- ✓ The prospective sellers either **misunderstood** or failed to respond fully to the procurement SOW.



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01. Plan Procurement Management

Table 12-1. Comparison of Procurement Documentation

Procurement Management Plan	Procurement Strategy	Statement of Work	Bid Documents
How procurement work will be coordinated and integrated with other project work, particularly with resources, schedule, and budget Timetable for key procurement activities Procurement metrics to manage the contract Responsibilities of all stakeholders Procurement assumptions and constraints Legal jurisdiction and currency used for payment Information on independent estimates Risk management issues Prequalified sellers, if applicable	Procurement delivery methods Type of agreements Procurement phases	Description of the procurement item Specifications, quality requirements and performance metrics Description of collateral services required Acceptance methods and criteria Performance data and other reports required Quality Period and place of performance Currency; payment schedule Warranty	Request for information (RFI), Request for quote (RFQ), Request for proposal (RFP)

Lecture 09 : Project Procurement Management

02. Conduct Procurements



Lecture 09 : Project Procurement Management

02. Conduct Procurements

➤ Conduct Procurements is the process of :

- Obtaining seller responses الحصول على عروض البائع
- Selecting a seller و اختيار أحد البائعيين
- Awarding a contract و ترسیمه العقد

❖ The key benefit of this process

- ✓ Selects a qualified seller and implements the legal agreement for delivery.
✓ تختار بائع مؤهل وتنفذ الاتفاق القانوني للتسليم
- ✓ The end results of the process are the established agreements including formal contracts.
✓ النتائج النهائية للعملية هي الاتفاقيات المقررة التي تشمل العقود الرسمية.

Project Procurement Management

(2) Conduct Procurements



Input

1. Project management plan
2. Project documents
3. Procurement documentation
4. Seller proposals
5. Enterprise environmental factors
6. Organizational process assets



Tools & Techniques

1. Expert judgment
2. Advertising
3. Bidder conferences
4. Data Analysis
5. Interpersonal and team skills



Outputs

1. Selected sellers
2. Agreements
3. Change requests
4. Project management plan updates
5. Project document updates
6. Organizational process assets updates

Lecture 09 : Project Procurement Management

02. Conduct Procurements

Inputs

Seller Proposals:

عروض البائع

- Prepared in response to procurement document package .
- Used by an evaluation body to **select** one or more successful **bidders** (sellers).



ستستخدم بواسطة هيئة تقييم لاختيار واحد أو أكثر من مقدمي العروض (البائعين) الفائزين.

TT

Advertising

الإعلان

- Existing lists of potential sellers often can be **expanded** by placing advertisements in general circulation publications such as :

Selected newspaper, trade publications, or online resources .

مثل الصحف المختارة أو منشورات تجارية متخصصة

- Most government jurisdiction require public advertising of government contracts

تطلب معظم الاختصاصات الحكومية الإعلان العام أو الإعلان عبر الإنترنت عن العقود الحكومية قيد الانتظار



Lecture 09 : Project Procurement Management

02. Conduct Procurements

TT

Bidder Conferences:

مؤتمرات مقدمي العروض

- ✓ Meetings between the buyer and prospective sellers **prior** to proposal submittal.
- ✓ Used to ensure that all prospective bidders have a **clear** and common **understanding** of the procurement and **no** bidders receive preferential treatment.



TT

Data analysis:

Proposal Evaluation :

- ✓ Proposals are evaluated to ensure they are complete and respond in full to the bid documents, procurement statement of work, source selection criteria.

❖ تخضع العروض للتقييم لضمان اكتمالها واستجابتها كاملة لوثائق العطاء وبيان العمل الخاص بالمشتريات ومعايير اختيار المورد.



Lecture 09 : Project Procurement Management

02. Conduct Procurements

TT

INTERPERSONAL AND TEAM SKILLS

Negotiation:

- ✓ Is a discussion aimed at reaching an agreement.
- ✓ Procurement negotiation clarifies the structure, rights, and obligations of the parties so that mutual agreement can be reached prior to signing the contract.
- ✓ The negotiation should be led by a member of the procurement team that has the authority to sign contracts.
- ✓ Project manager and other members of the project management team may be present during negotiation to provide assistance as needed.



O

Selected Sellers

- ✓ The selected sellers are those who have been judged to be in a competitive range based on the outcome of the proposal or bid evaluation.



❖ البائعون المختارون هم الذين تم تقييمهم بأنهم في النطاق التنافسي بناءً على نتائج تقييم العرض أو العطاء.

Lecture 09 : Project Procurement Management

02. Conduct Procurements

O Agreement:

✓ العقد هو اتفاق ملزم تبادلياً يلزم البائع بتوفير المنتجات ويلزم المشتري بتعويض البائع

- ✓ A contract is a binding legal agreement that obligates the seller to provide the specified products, services, or results, and obligates the buyer to compensate the seller.

The major components in an agreement document and may include:

- Procurement statement of work or major deliverables; بيان العمل الخاص بالمشتريات أو التسليمات الرئيسية
- Schedule, milestones. الجدول الزمني، أو المعالم
- Performance reporting; تقارير الأداء
- Pricing and payment terms; التسعير وشروط السداد
- General terms and conditions; الشروط والأحكام العامة
- Incentives and penalties; الحواجز والغرامات
- Insurance and performance bonds; التأمين وضمان التنفيذ
- Subordinate subcontractor approvals; اعتمادات المقاول من الباطن التابع
- Change request handling; التعامل مع طلبات التغيير
- Inspection, quality, and acceptance criteria; الفحص والجودة ومعايير القبول
- Termination clause and alternative dispute resolution mechanisms بند الفسخ وآليات حل النزاع البديلة



Lecture 09 : Project Procurement Management

03. Control Procurements



Lecture 09 : Project Procurement Management

03. Control Procurements

➤ Control Procurements is the process of :

❖ The key benefit of this process:

- ✓ Ensures that both the seller's and buyer's performance meet the project's requirements according to the terms of the legal agreement. تضمن أن أداء البائع والمشتري يلبي متطلبات الشراء وفقاً لبنود الاتفاق القانوني.
 - ✓ This process is performed throughout the project as needed.

Project Procurement Management

(3) Control Procurement



Input

1. Project management plan
2. Project documents
3. Agreements
4. Procurement documentation
5. Approved Change requests
6. Work performance data
7. Enterprise environmental factors
8. Organizational process assets



Tools & Techniques

1. Expert judgment
2. Claims administration
3. Data Analysis
4. Inspection
5. Audits



Outputs

1. Closed Procurements
2. Work performance Information
3. Procurement documentation updates
4. Change requests
5. Project management plan updates
6. Project document updates
7. Organizational process assets updates

Lecture 09 : Project Procurement Management

03. Control Procurements

INPUTS

Agreements

- Agreements are understandings between parties, including understanding of the **duties** of each party. The relevant agreements are reviewed to verify terms and conditions are met.

Procurement documentation

Procurement documentation includes :-

- Statement of work
- Payment information
- Contractor work performance information
- Plans and drawings.

Lecture 09 : Project Procurement Management

03. Control Procurements

INPUTS

Approved change requests

- Can include modifications to the terms and conditions of the contract, including the procurement statement of work (SOW), pricing, and descriptions of the products.

Work performance data

Work performance data contains seller data on project status such as:-

- ✓ Technical performance.
- ✓ Activities that have started, are in progress, or have completed.
- ✓ Costs that have been incurred or committed.
- ✓ Information on the seller invoices that have been paid. معلومات حول فواتير البائع المسددة.

Lecture 09 : Project Procurement Management

03. Control Procurements

TT

Claims Administration

- Requested changes where buyer and seller cannot reach an agreement on compensation for the change or cannot agree that a change has occurred These contested changes are called claims.
- If the parties themselves do not resolve a claim, it may have to be handled in accordance with alternative dispute resolution (ADR).
- Settlement of all claims and disputes through **negotiation** is the preferred method.

❖ والأسلوب المفضل هو تسوية كافة المطالبات والنزاعات من خلال التفاوض

Lecture 09 : Project Procurement Management

03. Control Procurements

TT

Data Analysis

1- Performance Reviews:

- Performance reviews for contracts measure, compare, and analyse quality, resource, schedule, and cost performance against the agreement.
- This includes identifying work packages that are ahead or behind schedule, over or under budget, or have resource or quality issues.



2- Earned Value Analysis (EVA).

- Schedule and cost variances along with schedule and cost performance indexes are calculated to determine the degree of variance from target.



3- Trend Analysis

- Trend analysis can develop a forecast estimate at completion (EAC) for cost performance to see if performance is improving or deteriorating.



Lecture 09 : Project Procurement Management

03. Control Procurements

TT

Inspection :

- An inspection is a **structured review** of the work being performed by the **contractor**.
- On a construction/engineering/infrastructure project, inspections involve walkthroughs of the site by both the buyer and the contractor to ensure a mutual understanding of the work in progress.



TT

Audit:

- Audits are a structured review of the procurement process.
- Resulting audit observations should be brought to the attention of the buyer's project manager and the seller's project manager for adjustments to the project, when necessary.



Lecture 09 : Project Procurement Management

03. Control Procurements

O 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.
- All deliverables should have been provided on time and meet technical and quality requirements, there should be no outstanding claims or invoices, and all final payments should have been made
- The project management team should have approved all deliverables prior to closure.



A close-up photograph of a person's hands writing in a notebook with a pencil. The hands are positioned in the upper left corner of the frame, with one hand holding the pencil and the other hand resting on the page. The notebook has a light-colored cover. The background is blurred, showing what appears to be a wooden desk or table.

PMP

Questions & Answers

Project Procurement Management

BY: EL-Sayed Mohsen , PMP®, PMI- RMP®



Q1) A buyer and seller set the rates for junior engineers, senior engineers, architects, and other predefined roles. In what type of contract would this be applicable?

- A- Fixed-price with economic price adjustment contract**
- B- Fixed-price incentive contract**
- C- Fixed-price contract**
- D- Time and material contract**





Q3) If you are working on a project with constantly changing scope, which type of contract would work best when hiring an outside vendor to complete a portion of the work?

- A- Lump sum**
- B- Cost-reimbursable**
- C- Time and material**
- D- Fixed price**



B

PMBOK 472

◆ **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. This type should be used if the scope of work is expected to change significantly during the execution of the contract.



Q4) You are building a mile-long bridge on a T&M contract. During the excavation activity, you learned some telephone cables are crossing the alignment where you have to construct the bridge. You need to relocate these telephone cables, but there is no provision of such an activity in the contract. Further, the relocation of the cables is a costly task, and you need to do a lot of government paperwork, as well. You requested an amendment in the contract, but the buyer rejected it. Despite many efforts, you both could not resolve this issue. What should you do next?

- A- Terminate the contract following the termination procedures mentioned in the contract.**
- B- File a judicial petition in accordance with the state's law.**
- C- Seek arbitration following the ADR procedures in the contract.**
- D- Relocate the cables at your own expense since the contract does not cover this activity.**

PMBOK 498



C

contested changes are called claims. When they cannot be resolved, they become disputes and finally 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.



Q5) Which of the following is an output of the Conduct Procurements process?

- A- Advertising**
- B- Selected Sellers**
- C- Bidder conferences**
- D- Expert Judgment**

PMBOK 488



B

12.2.3 CONDUCT PROCUREMENTS: OUTPUTS

12.2.3.1 SELECTED SELLERS

The selected sellers are those who have been judged to be in a competitive range based on the outcome of the proposal or bid evaluation. Final approval of complex, high-value, high-risk procurements will generally require organizational senior management approval prior to award.



Q6) Which of the following techniques can help clarify the structure, requirements, and other terms of the purchases so that mutual agreement between a buyer and a seller can be reached prior to signing the contract?

- A- Independent estimates**
- B- Advertising**
- C- Bidder conferences**
- D- Procurement negotiations**

PMBOK 488



at reaching an agreement. **Procurement negotiation** clarifies the structure, rights, and obligations of the parties and other terms of the purchases so that mutual agreement can be reached prior to signing the contract. Final document language reflects all agreements reached. Negotiation concludes with a signed contract document or other formal



Q7) If a project manager believes that a particular subcontract needs to be terminated, which of the following can provide guidance on the contract termination procedure?

- A- The contract termination procedures in the organizational process assets**
- B- The termination clause of the specific subcontract**
- C- The change control procedures in the project management plan**
- D- The contract termination procedures in the project procurements management plan**



PMBOK 489

- ◆ **Termination clause** and alternative dispute resolution mechanisms.

Q8) You recently took over a project as the project manager. This is your first project management assignment. The project sponsor is very supportive and is helping you out in successfully managing the project. Recently, some bad quality deliverables were received on the project, and the project sponsor suggested that you to periodically review the vendor's progress to deliver project scope and quality, within cost and on schedule, as compared to the contract. Which of the following statements is true in this context?

- A- The sponsor has asked you to carry out regular trend analysis.**
- B- The sponsor has asked you something that is not a good project management practice.**
- C- The sponsor has asked you to carry out regular procurement performance reviews.**
- D- The sponsor is giving you a bigger workload so that you can perform better on the next assignment.**

PMBOK 498



C

◆ **Performance Reviews.** Performance reviews for contracts measure, compare, and analyze quality, resource, schedule, and cost performance against the agreement. This includes identifying work packages that are ahead or behind schedule, over or under budget, or have resource or quality issues.



Q9) During the Conduct Procurements process, the procuring organization found that there were significant differences in pricing by different sellers. What is the best course of action in such a scenario?

- A- Award the project to a supplier who is already on the procuring organization's preferred supplier list.**
- B- Cancel the procurement activity.**
- C- Investigate whether the procurement statement of work was defective or ambiguous.**
- D- Award the project to the highest bidder.**



C

12.1.3.7 INDEPENDENT COST ESTIMATES

For large procurements, the procuring organization may elect to either prepare its own independent estimate or have a cost estimate 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 SOW was deficient or ambiguous, or that the prospective sellers either misunderstood or failed to respond fully to the procurement SOW.

PMBOK 479



Q10) A buyer and seller are looking at getting into a long-term relationship spanning 10 years. Both parties would like to be protected from the unstable financial conditions of their country, which are beyond their control. What type of contract is appropriate for such a relationship?

- A- Fixed Price Incentive Fee (FPIF)**
- B- Firm Fixed Price (FPP)**
- C- Time & Material (T&M)**
- D- Fixed Price with Economic Price Adjustment Contract (FP-EPA)**



PMBOK 471

- **Fixed price with economic price adjustments (FPEPA).** This type is used whenever the seller's performance period **spans a considerable period of years**, or if the payments are made in a different currency. It is a fixed-price contract, but with a special provision allowing for predefined final adjustments to the contract price due to **changed conditions**, such as **inflation changes** or **cost increases** (or decreases) for specific commodities.



Q11) A seller entered into a contract with a buyer. At the end of the project, the seller was reimbursed for the cost of the project but received a low fee based on certain subjective criteria that were specified in the contract. What type of contract is this likely to be?

- A- Cost Plus Fixed Fee (CPFF) contract**
- B- Fixed Price Incentive Fee (FPIF) contract**
- C- Cost Plus Incentive Fee (CPIF) contract**
- D- Cost Plus Award Fee (CPAF) contract**



PMBOK 472

- *Cost plus award fee (CPAF).* The seller is reimbursed for all legitimate costs, but the majority of the fee is earned based on the satisfaction of certain broad subjective performance criteria that are 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.



Q12) The Conduct Procurements process receives bids or proposals and applies criteria to select one or more sellers who are both qualified and acceptable as a seller. Which of the following techniques is not a valid technique for this process?

- A- Make-or-buy analysis**
- B- Proposal Evaluation Techniques**
- C- Advertising**
- D- Bidder Conference**

PMBOK 482

Conduct Procurements



Tools & Techniques

- .1 Expert judgment
- .2 Advertising
- .3 Bidder conferences
- .4 Data analysis
 - Proposal evaluation
- .5 Interpersonal and team skills
 - Negotiation



Q13) A project is contracted on a Cost-Plus-Fixed-Fee (CPFF) basis with a fee of 10 percent of estimated costs. The estimated cost is US\$50,000. If the project comes in at US\$60,000 with no changes in project scope, what would be the total cost of the contract?

A- US\$55,000.

B- US\$125,000.

- Fee is calculated as 10% of 50,000 = $(10/100)*50,000 = 5,000$

C- US\$75,000.

- Total cost of the contract is $60,000 + 5,000 = \text{US\$65,000}$.

D- US\$65,000.



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/ PMP TRICKS



Q14) You are a Project manager in Big construction company , Your company would like to outsource the landscaping works to the subcontractor to complete within Three months, The Budget of the Works is \$ 40,000 and the Scope is well defined .This type of contract is:

- A- Fixed-price
- B- Cost-reimbursable
- C- Time and material
- D- Cost plus incentive fee



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/ PMP TRICKS



Q15) After several months of negotiations your organization is almost ready to sign a contract. The contract will span multiple years and allow for final price adjustments based on changing conditions. The ideal contract type is:

- A. Firm fixed price**
- B. Fixed price incentive fee**
- C. Fixed price with economic price adjustment**
- D. Time and materials**

ANSWERS

C



Q16) As a project manager, you have in your project a vendor delayed in supplying some resources even though the accounting system by hourly rate. What should you refer for resolving this issue?

- A) Procurement management plan**
- B) Procurement documents**
- C) Agreement**
- D) Arbitration**





Q17) At the midway of the project, the project sponsor told you that the project will terminated. You already signed a contract with a vendor and the vendor already started for supplying materials. What should you do next?

- A) Follow the procedures of close procurement**
- B) Review the contract terms**
- C) Negotiating with vendor**
- D) Ask the vendor to stop supplying**





Q18) At the closing procurement ,What is the benefit of collect lessons learned ?

- A) Update the OPA**
- B) to evaluate customer satisfaction.**
- C) collecting lessons learned**
- D) future procurement**





Q19) Your company got a project which needs few vendors to finish the work. One of the vendors before signing asked you to get first a part of payment before he make the first shipping. As a PM you will review:

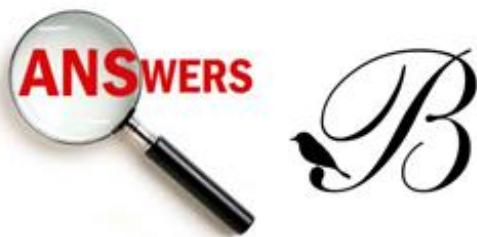
- A) Procurement Statement of work**
- B) Contract and agreement.**
- C) Procurement management plan**
- D) Company process and conditions**





Q20) During the implementation phase, you know that one of the suppliers who is working on your project has taken another project. As a project manager, what should you do next?

- A) Remove the supplier from your project**
- B) Performance review.**
- C) Change management plan**
- D) Procurement review**





Q21) You are project manager and you have been finished make or buy analysis and bidder conference & applied source selection criteria for your sellers, what you should have to do next?

- A) Selected sellers**
- B) Procurement negotiation**
- C) Sign contract**
- D) Close contract**





Q22) You are project manager for a systems integration effort and need to procure the hardware components from external sources. Your subcontractor administrator has told you to prepare a product description and quantity desired which is referenced in a?

- A) Procurement statement of work**
- B) Contract scope statement**
- C) Risk register**
- D) Project Charter**

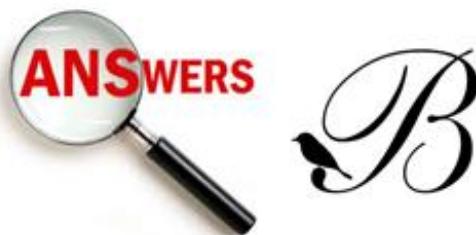
ANSWERS





Q22) Which of the following that provides expected cost of a procurement by a third party and helps identify significant variations from cost estimates prepared in-house?

- A) Bidder Conferences**
- B) Independent Estimates**
- C) Advertising**
- D) Procurement Negotiations**





Q23) You are working on a project as a project manager . your vendor selection process took more than the anticipated amount of time. However, now every thing is complete and vendor is in board . after few weeks, vendor informs you that few of his resources left and he is in short of required team to complete the project . what should you do next ?

- A) Tell the vendor to continue the work until they find the replacement**
- B) Take a decision as per the contract**
- C) Cancel the contract and select the second best vendor**
- D) Tell the vendor to analyze the impact of this on the project**





Q24) You are in the process of managing procurement relationships; monitoring contract performance, making changes and corrections as appropriate and it ensures that both the seller's and buyer's performance meet the project's requirements .Which of the following Outputs for this Process ?

- A) Closed Procurements**
- B) Procurement Management Plan**
- C) Audit**
- D) Agreement**



At the midway of the project, the sole provider has delayed the delivery of the materials for the project that lead to an effect on the Project schedule. Keeping the supplier with the same delivery rate will provide further delays, and replacing the supplier will lead to cost overrun. What will you do next?

- Work with the supplier to solve the problem
- Get another supplier
- Escalate the Problem to Procurement Department
- Cancel the contract

[◀ Back](#)[Marked](#)[See all questions](#)[NEXT ▶](#)

Your company has signed a fixed-price contract with the seller organization to finalize the project requirement. Which of the following estimating technique would be best in order to estimate the activity cost?

- Bottom-up-Estimating
- Parametric Estimating
- Analogous Estimating
- Three Point Estimating

You are a project manager for a big project. You want to outsource some of the works. The project schedule is very tight and the scope not well defined. What type of contract should you sign?

- Cost Plus Incentive Fee Contracts (CPIF)
- Firm fixed price contract (FFP)
- Fixed Price Incentive Fee Contracts (FPIF)
- Cost Plus Fixed Fee Contracts (CPFF)

You are facing a problem with one of your contractors, and you didn't reach an agreement by negotiation, what's the next step?

- Litigation
- Terminate the Contract
- Call the Sponsor for Help
- Alternative dispute resolution (ADR) such as Arbitration

[< Back](#)[Marked](#)[See all questions](#)[NEXT >](#)

A project is contracted on a Cost-Plus-Fixed-Fee (CPFF) basis with a Fixed fee of US \$5,000. The estimated cost is US\$50,000. If the project comes in at US\$60,000 with no changes in project scope, what would be the total cost of the contract?

- US\$75,000
- US\$65,000
- US\$80,000
- US\$55,000

You are a Project Manager in a construction company and urgently require some expert welders for a short duration. You checked their availability internally with the functional manager, but the functional manager is not able to match the skills required. You decide to acquire these resources on contract. Which of the following is the BEST type of contract for your requirements?

- Fixed Price
- Cost Reimbursable
- Time and Material
- Cost Plus Incentive Fee

You are managing a contract as part of your project. You have obtained the seller's responses, selected a seller, and awarded a contract. Which of the following should you do next in Project Procurement Management?

- Procurement performance reviews
- Make or buy analysis
- Procurement contract award
- Quality audits

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