

## PMP Exam Tips on Procurement Management, Fourth edition

Jim Owens PMP



### ***Procurements section contracted***

Procurement in the Fourth Edition of PMBOK has contracted down to four processes from six, and PMI has removed explicit mention of “contacting” in the process names, but none of the functionality has been lost of course. And although we normally think of procurement processes as being between a buyer and seller, these same processes are equally applicable to work performed for other units of the project team’s organization.

#### **The four processes are now:**

1. Plan Procurements,
2. Conduct Procurements,
3. Administer Procurements, an
4. Close Procurements.

#### **Buying into procurement**

Everybody knows something about procurement, because basically **procurement** means **buying or acquiring**, and in a project it is often necessary to acquire goods, services or results, or to acquire from outside the organization, team members, consultants and expert resources, and other resources such as plant and machinery.

#### **Typical procurement items include:**

- Machinery or equipment,
- A portion of the product of the project,
- Services such as training (required for the project),
- Expert Advice
- Consultancy, or
- Anything else that may be purchased leased or rented to advance the project.

#### **What should you procure for your project?**

Well in the trivial case, you could purchase the entire product or service that the project is meant to create, or you could outsource the entire thing. There could be a lot less risk in doing this (especially if it’s a new or otherwise very risky endeavor for your organization), but the tradeoff is usually the much higher **cost**.

**Jim’s tip:** If the cost is **not** significantly higher, ask yourself why this is. It may be that the seller has not quoted for everything that you have requested, or is using lower-grade materials, or unethical methods (I heard of one company that used pirated software to develop their websites and ended up being sued) or maybe they simply don’t understand fully what’s involved in this instance.

A second danger with low quotes is that the seller might be knowingly quoting at a loss in the hope of getting further work from you, or using you as a reference site,

but then might hit financial problems trying to meet the price, and all that risk that you thought you had transferred, suddenly comes home to roost.

And of course the seller might be knowingly quoting at a loss in the hope of somehow screwing more money of your organization later by challenging the contract details etc.

You also need to perform “Due diligence” on companies from which you wish to make a major purchase. What if you procure a concrete foundation for an office block, then the company you procure from is unable to deliver or goes into liquidation, and you have a set-in-concrete is the delivery date?

### False Economies

How many times have you watched one of those DIY programs on TV and seen someone make a reproduction antique writing bureau out of discarded wooden orange crates, a shotgun and a handful of shellac? So you get thinking to yourself, “Maybe I could make a table for the plasma TV out of those and save a fortune?” But by the time you finish (if you ever do) it costs more than the store-bought one, still looks like orange crates, and the drawers stick?



Anyone who just laughed out loud has done this before.

So the trick is never try to make something that you can buy at as reasonable price elsewhere.

And that’s just what you should do in business, on two levels – the “management” level, and the project management level (Tip: in the exam “management” usually means “senior management”, the guys and gals who get the best toilets and parking spaces).

Generally speaking, management doesn’t want their organization to manage projects. What they really want is products, services or results, and a project is just one way of getting them. It’s just like when you are very ill, do you really WANT to go to hospital to undergo risky and expensive surgery, and a long recovery period? Of course not, you simply want the result that you want, and if you could buy the result (without the process), I’m sure you would.

So what management will do is to decide if they can procure what they need and then compare the price from a seller with the cost (and stress) of running a project.

If management decide to go the project route it’s not necessarily a done deal, because then the project manager and team should go through a similar process to decide if parts of the project could benefit from be outsourced.

Our **first** step in procurement then, assuming that management have decided to go with a project, is to **study** the **Scope** statement very carefully (so you know **exactly** what the project includes, and the main things that it doesn’t include) then you decide what **parts** your organization will **make** and what it will **buy**, which is why the tool used is called a “make or buy” analysis.

**Make or Buy Analysis focuses on:**

- Does our organization have the **skills** and **resources** to make the product or service?
- Can we make the product or service more **cheaply** than we can buy it?
- If **time** is a very important factor, do we need to buy (or make) the product or service to save time?
- How critical is it that we retain detailed control over a certain area?
- Is there proprietary information that we don't want other's to have access to?
- Do we have people available who have significant spare capacity (i.e the organization has to pay for them to stand idle)

Once you have decided what we need to procure something, then you need to draw up a detailed statement of the product or service in **sufficient detail** for an outside company to quote accurately on the manufacture or delivery of it.

This detailed statement is called a Procurement **Statement of Work (SOW)** – not to be confused with a Project Statement of Work, which is a very high-level brief document produced before the project exists (see my notes on Integration management).

Most procurement items are NOT available off-the-shelf. But even if they are, many organizations stipulate that you must approach several potential suppliers and carefully select the best one.

Approaches are then made to potential suppliers, but note that many organizations (especially government) have a closed “preferred supplier” list from which you must choose (in fact suppliers often have to go through a selection process just to added to such a list), or if allowable, you can use trade journals, directories and so on. Each potential supplier will be given the SAME buyer's requirements documentation - SOW, deadlines, milestones etc.

The **buyer's documentation** will also detail any other specific requirements that the seller must meet.

**It may also include:**

- The **people** to be dealt with in the buyer's organization,
- Their level of **authority**, and
- Details of how **changes** to the contract will be managed.

In many instances (especially in government work), the buyer will specify the precise **format** in which the sellers offer must be made. This may seem a little strange, but it makes the buyer's job is made much easier if **all** if the seller's offers are in the **same format**, and all the costings etc are in the same order and calculated the same way.

A **contract administrator** within the buyer's organization will ensure that the sellers **comply** with the requirements of the organization and the contract.

General solicitation terms (remember that you must use the PMBOK terms in the exam, irrespective of what your particular organization calls them. And if they

sound familiar it's because they originally came from the US Department of Defense)

- **Request for Information (RFI)**
- **Tender Notice**
- **Invitation for Negotiation**
- **Request for Quotations (RFQ), or Invitation for Bids (IFB)** these used when the price is the most important factor.
- **Request for Proposals (RFP)** used these use issued when there are a number of important factors (other than just price). And in this case the buyer may be expecting the seller to help solve some of the problems – i.e. the buyer is not certain of all the details yet.
- **Bidder Conference** The seller collects representatives of the sellers in a location, such as a large office, hotel, etc. To ensure that everyone has an equal opportunity to bid, and are aware of the same information. These conferences can often lead to considerable debate and (hopefully) generation of ideas, and clarification of the buyer's needs. If you need to meet with a seller individually, ensure that no "secret deals" are struck and that any information provide to this seller is shared with all the others, and this will help prevent allegations of conflict of interest.
- **Invitation To Bribe (ITBr)** well maybe not, now that we a "Code of Ethics and Professional Conduct" ☺



After the seller conference, the interested sellers will provide you with documentation of their own, including quotations (and sometimes further requests for clarification).

The **buyer** will now design a **selection system** that will include **screening methods** e.g.:

- Maybe ignore bids from countries/areas which a poor record in ethical areas
- Don't buy from companies in countries that are likely to declare war in the foreseeable future, especially with your country ☺. Hey, doesn't that rule out the US?
- Ignore bids **over** a certain **value** – they may be profiteering.
- Ignore bids **under** a certain value – they may not understand the problem.
- Ignore bids from **immediate family members**
- And so on.

Next draw up a **weighting matrix** to work out the **value** to the **project** of each bid. Note that the selection system used must fit within your organization's **policies** otherwise expect to be accused of **bias**.

Exceptions to the above that you may face (and must know for the exam) occur when for example there is only one possible seller in the market.

When I was managing a large project for a financial organization in Adelaide and the Australian Stock Exchange, part of the project required a special modem with a built-in encryptor/decryptor – and there was a **single accredited** supplier for these. The alternative was that I could have simulated the encryption/decryption processes in software, but that would have taken a very long time (especially with the Stock Exchange's accreditation processes) and there would be the risk of undiscovered software bugs (sorry, undocumented features :-), so modems from the sole provider was the only real viable option (there is a similar problem with ordering fish, you may have to place an order with a sole provider )

**So we could have the following cases:**

- **Sole source.** Where only ONE qualified seller exists in the marketplace – as with my Stock Exchange and modem example above.
- **Single source.** This is where there may be MULTIPLE suppliers, but **your organization insists** that you use one specific supplier.
- **Oligopoly.** (No I didn't make this one up ☺) this is where there are **very few suppliers** for this particular product or service and the **actions** of one supplier will have direct **affect** on the other supplier's prices (and even on the market itself). E.g. if there are only two suppliers then they may collude in price-fixing.

OK, so you've been through your bidder conference to the bidder end, and if there's anyone still standing after all this, a **contract** needs to be drawn up.

The contract should be **written** (as well as being **formal**) – I know your grandfather believed in the sanctity of a handshake, but he probably died poor (and in a much cheaper grave from the one he paid for).

And don't expect this part of the procurement process to be smooth sailing, there will be a lot of **arguing** and **renegotiating** at this stage (especially when the parties realize that they can't get away with just a handshake).

It's important to remember that the actual **contents** of the **contract** are usually considered to be **confidential** (referred to as "**privacy**" in the exam).

Then when the product, service or result is completed, the seller the buyer, at which time it is subject to "**product verification**", a process similar to scope verification and administrative closure, to **confirm** that the seller has met its **obligations** – it is recommended that you store your historical data and lessons learned at this stage for use in procurement in future projects.

### **There are Three Main Contract Types in PMBOK:**

- Fixed-price (NB can include incentives)
- Cost-reimbursable

- Time and Material (T&M), this is a hybrid of the first two types

### Fixed Price Contracts

Sometimes used when the required product is very **well defined**. Fixed price should to be used unless the product is well defined; otherwise there could be considerable risk to **both** parties (if seller has under quoted then they lose incentive to complete and may delay the delivery, which could have a knock-on effect for the buyer). So PMBOK allows “fixed” price to include incentives.

- **Firm Fixed Price (FFP) Contract**. The buyer pays the seller a **set contracted amount**, irrespective of the seller’s costs.

	Estimate	Actual Result	
		Project 1	Project 2
<b>Seller’s cost to produce</b>	\$10,000	\$9,000	\$13,000
<b>Agreed Price</b>	\$12,000	\$12,000	\$12,000
<b>Seller’s Profit (Price – Cost)</b>	\$2,000	\$3,000	<b>-\$1,000</b>

*Firm Fixed Price (FFP) Contract*

- **Fixed Price Incentive Fee (FPIF) Contract** The buyer pays the seller an amount calculated from a **target cost**, **target profit**, **target price**, **ceiling price** and a **share ratio**.

	Estimate	Actual Result	
		Project 1	Project 2
<b>Seller’s cost to produce</b>	\$10,000	\$8,000	\$9,000
<b>Target profit</b>	\$1,000	\$1,000	\$1,000
<b>Sharing Formula (80/20)</b>		20%x2,000 = \$400	20%x 1,000 = \$200
<b>Ceiling Price</b>	\$12,000	\$12,000	\$12,000
<b>Price</b>	\$11,000	\$9,400	\$10,200
<b>Profit (Price – Cost)</b>	\$1,000	\$1,400	\$1,200

*Fixed Price Incentive Fee (FPIF) Contract*

### Cost Reimbursable Contracts

The seller is reimbursed for actual their costs, which can include **direct costs** (costs incurred for the exclusive benefit of the project) or **indirect costs** (overhead charged by the performing organization)

Again, this contract type can include incentives for meeting or exceeding certain project objectives

- **Cost Plus Incentive Fee (CPIF) Contract** The buyer reimburses the seller for the **seller’s allowable costs** plus a **fixed amount of profit** (fee) and a **possible incentive** bonus based on performance criteria.

	Estimate	Actual Result	
		Project 1	Project 2
<b>Seller’s cost to produce</b>	\$10,000	\$8,000	\$11,000
<b>Target profit</b>	\$1,000	\$1,000	\$1,000
<b>Sharing Formula (80/20)</b>		20% $\times$ 2,000 = \$400	20% $\times$ -1,000 = -200
<b>Price</b>	\$11,000	\$9,400	\$11,800
<b>Profit</b>	\$1,000	\$1,400	\$800

*Cost Plus Incentive Fee (CPIF)*

- **Cost Plus Fixed Fee (CPFF) Contract** The buyer reimburses the seller for the seller’s **allowable costs** plus a **fixed amount of profit** (fee) which is usually a percentage of the estimated costs.

	Estimate	Actual Result	
		Project 1	Project 2
<b>Seller’s cost to produce</b>	\$8,000	\$9,000	\$10,000
<b>Fixed Fee</b>	\$1,000	\$1,000	\$1,000
<b>Price (Cost + Fee)</b>	\$9,000	\$10,000	\$11,000
<b>Profit (Price – Cost)</b>	\$1,000	\$1,000	\$1,000

*Cost Plus fixed Fee (CPIF)*

- **Cost Plus Fee (CPF) or Cost Plus Percentage of Cost (CPPC)** The buyer reimburses the seller for the **seller’s contracted allowable costs** plus a **percentage** of the **actual cost** as profit.

	Estimate	Actual Result	
		Project 1	Project 2
<b>Seller’s cost to produce</b>	<b>\$8,000</b>	<b>\$9,000</b>	<b>\$10,000</b>
<b>Percentage of Costs 10%</b>	<b>\$800</b>	<b>\$900</b>	<b>\$1,000</b>
<b>Price (Cost + Percentage)</b>	<b>\$8,800</b>	<b>\$9,900</b>	<b>\$11,000</b>
<b>Profit (Price – Cost)</b>	<b>\$800</b>	<b>\$900</b>	<b>\$1,000</b>

*Cost Plus Percentage of Costs (CPPC)*

**Time and Material (T&M) contracts**

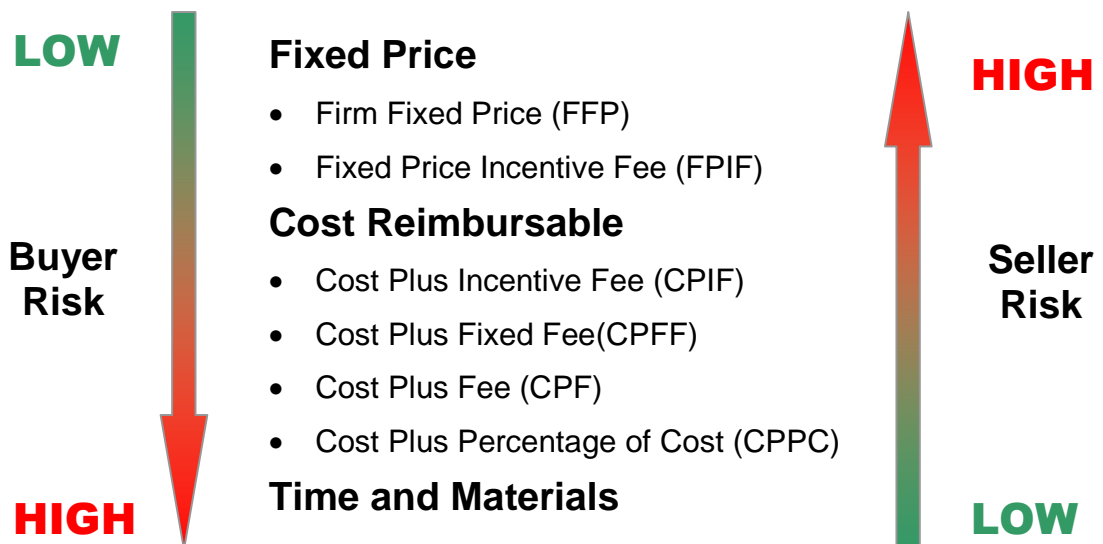
Includes components of both cost-reimbursable and fixed-price contracts.

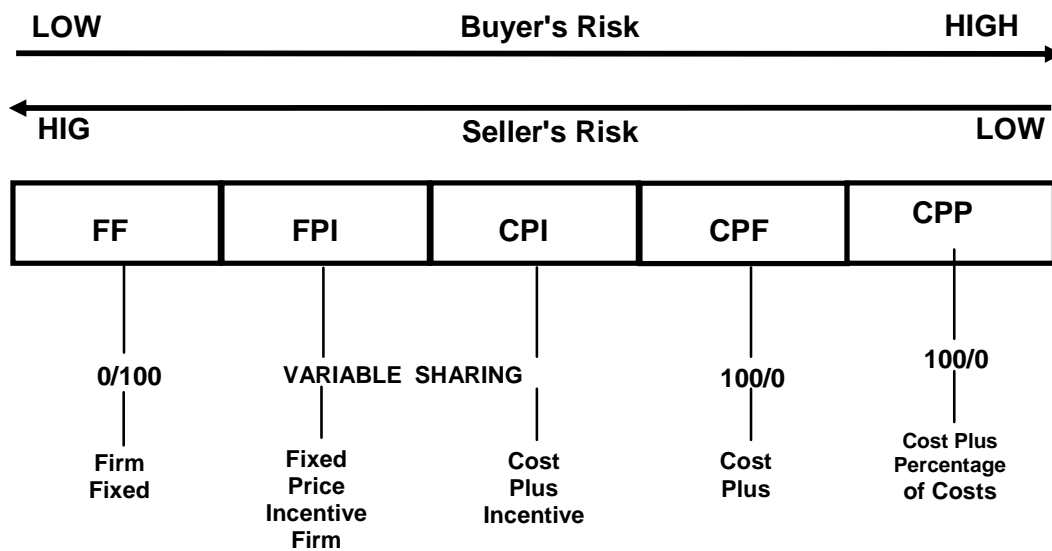
Fixed-price because it used fixed rates for the resources, and cost-reimbursable because the contract is effectively open ended.

**Who wears the risk?**

Frequently asked in the exam, which type has least/most risk for buyer/seller, etc. See where the contract types fit into my diagram, or the diagram by P. Cavendish & M. Martin (whichever is easier to remember), and this will help answer such questions.

**Effect of contract type on Buyer and seller risk (Memorize)**





Negotiating & Contracting for Project Management  
 P. Cavendish & M. Martin, PMI 1982

N.B. Some project managers may have different viewpoints or opinions to those expressed here – but PMI are marking your exam, so the PMBOK is *\*always\** right and if I say anything that appears to contradict the PMBOK, then believe the PMBOK.

**PS I've made every effort to get this right to help you in your exam – but if I've missed something please let me know.**

**Regards, Jim Owens PMP**

Director of Certification PMI Western Australia Chapter

Director PMTI, Australia and New Zealand Operation

Columnist with [www.PMHub.net](http://www.PMHub.net)