Project Procurement Management

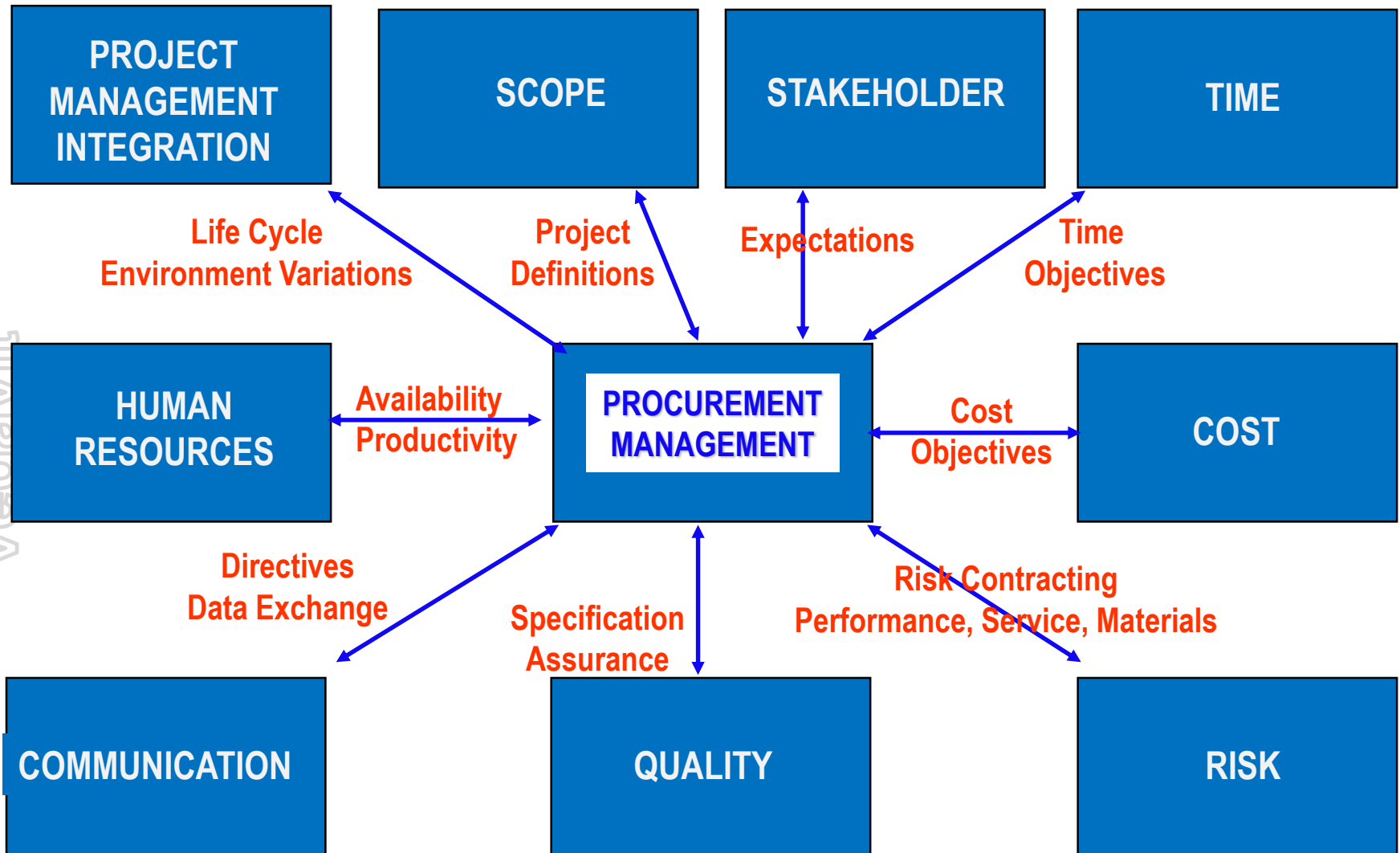**Definition**

Processes necessary to purchase or acquire products, services or results needed from outside the project team.

Another look @ Procurement Management

PROJECT MANAGEMENT INTEGRATION

SCOPE

STAKEHOLDER

TIME

Life Cycle Environment Variations

Project Definitions

Expectations

Time Objectives

HUMAN RESOURCES

Availability Productivity

PROCUREMENT MANAGEMENT

Cost Objectives

COST

Directives Data Exchange

Specification Assurance

Risk Contracting Performance, Service, Materials

COMMUNICATION

QUALITY

RISK

Project Procurement Management

40. Plan Procurement Management [PLANNING]

41. Conduct Procurements [EXECUTING]

42. Control Procurements [M&C]

43. Close Procurements [CLOSING]

Project Manager's Role

✓ Identifying project procurement needs

✓ Determine contract types and potential providers

✓ Identify/select procurement source

✓ Assessing quality and completeness of contract

✓ Verify product/service acceptance

✓ Structured review of the procurement process

Definition

Documenting project purchasing decisions, specifying the approach and identifying potential sellers.

Plan Procurement

1. Project Management plan
2. Requirements Documentation
3. Risk Register
4. Activity Resource Requirements
5. Project Schedule
6. Activity Cost Estimates
7. Stakeholder Register
8. Enterprise Environmental Factors
9. Organization Process Assets

1. Expert Judgement
2. Make-or-buy analysis
3. Market Research
4. Meetings

1. Procurement Management Plan
2. Procurement Statements of work
3. Procurement Documents
4. Source selection criteria
5. Make-or-buy decisions
6. Change Requests
7. Project Documents Updates

Project Planning

Procurement Management Plan

Definition

Describes how the procurement processes will be managed

- ✓ Types of Contracts to be used
- ✓ Managing Multiple Providers
- ✓ Coordination with other project aspects

Source selection criteria

- Understanding of need
- Overall or life-cycle cost
- Technical capability
- Risk
- Management Approach
- Technical Approach
- Warranty
- Financial Capacity
- Production Capacity and interest
- Business size and type
- Past performance of sellers
- References
- Intellectual property rights
- Proprietary rights

Definition

Process involves obtaining seller responses, selecting a seller and awarding a contract

Conduct Procurement

1. Procurement Management Plan
2. Procurement Documents
3. Source selection criteria
4. Seller proposals
5. Project Documents
6. Make-or-buy decisions
7. Procurement Statement of work
8. Organization Process Assets

1. Expert Judgement
2. Bidder conferences
3. Proposal evaluation techniques
4. Independent estimates
5. Advertising
6. Analytical techniques
7. Procurement Negotiation

1. Selected Sellers
2. Agreements
3. Resource Calendars
4. Change Requests
5. Project Management Plan Updates
6. Project Documents Updates

Project Executing

Definition

Managing procurement relationships, monitoring contract performance and making changes and corrections as needed.

Control Procurement

1. Project Management Plan
2. Procurement Documents
3. Agreements
4. Approved Change Requests
5. Work Performance Reports
6. Work Performance Data

1. Contract Change Control System
2. Procurement Performance Reviews
3. Inspections and Audits
4. Performance Reporting
5. Payment Systems
6. Claim Administration
7. Records Management Systems

1. Work Performance Information
2. Change Requests
3. Project Management Plan Updates
4. Procurement Documents Updates
5. Organization Process Assets Updates

Claim Administration

- Contested changes or potential constructive changes are those requested changes where buyer and seller cannot reach to an agreement for payment.

- Settle through negotiation

- Follow the ADR (alternative dispute resolution) method established in contract.

Definition

Process of completing each project procurement .

Close Procurement

1. Procurement Management Plan
2. Procurement Documents

1. Procurement Audits
2. Procurement Negotiation
3. Records Management Systems

1. Closed Procurements
2. Organization Process Assets Updates

Procurement: Tips for PMP® Exam

- ✓ Questions are written from buyer's perspective
- ✓ Seller is not supplying people to adjunct the buyer's team (seller remains external to the project team)
- ✓ Contracts require formality
- ✓ All product and project management requirements should be specifically stated in the contract
- ✓ If it is not in a contract, it can be done if a change is issued
- ✓ If it is in the contract, it must be done or a change order, signed by both parties issued
- ✓ Changes must be in writing

Procurement: Tips for PMP® Exam

- ✓ Contracts are legally binding

- ✓ Contracts should help diminish project risk

- ✓ Most governments back all contracts by providing a court system for dispute resolution

- ✓ Questions are written by government contracting specialists of USA

- ✓ Exam has very few references to International contracts

- ✓ In many parts of the world (including India), contracts are informal and relationships between parties is more important than the contract

- ✓ It is important to take a more formal approach to the procurement process when answering questions

Big Concepts

- Contract Structure

- Contract Types

- Legal Requirement on Contracts

- Contract Change Control

Contract Structure

Sections of Contract

- ✓ SOW or Deliverables

- ✓ Schedule Baseline

- ✓ Performance Reporting

- ✓ Period of Performance

- ✓ Roles & Responsibilities

- ✓ Seller's Place of Performance

- ✓ Pricing

- ✓ Payment Terms

- ✓ Place of delivery

- ✓ Inspection and acceptance criteria

Sections of Contract

- ✓ Warranty
- ✓ Product Support
- ✓ Limitation of liability
- ✓ Fees and retainage
- ✓ Penalties
- ✓ Incentives
- ✓ Insurance and performance bonds
- ✓ Subordinate subcontractors approvals
- ✓ Change request handling
- ✓ Termination and alternative dispute resolution Mechanism

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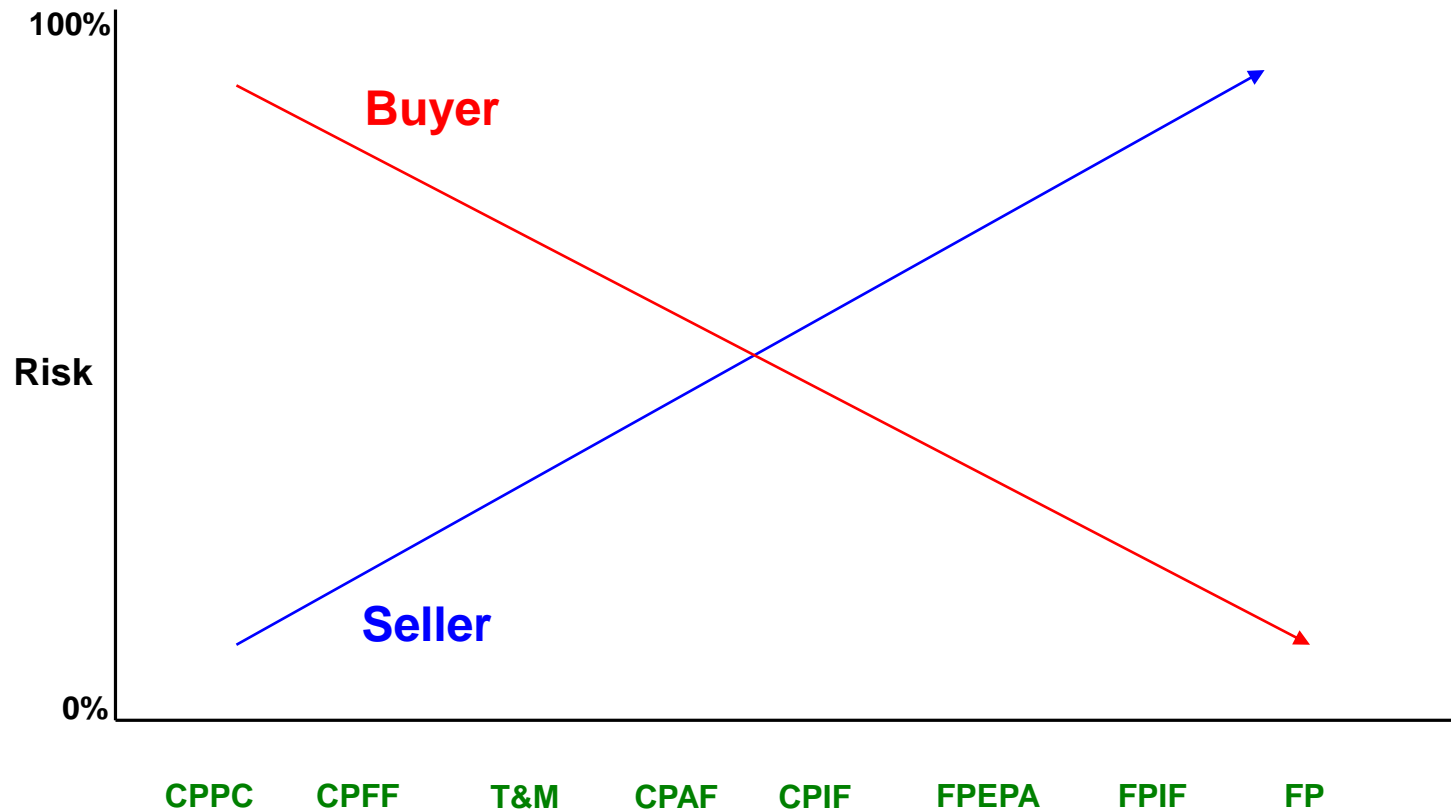
Contract Types

Procurement Contract Types

Definition

Different types of contracts are more or less appropriate for different types of purchases.

- ❖ Time and material contracts
- ❖ Unit Price contracts
- ❖ Fixed Price or lump sum contracts
- ❖ Cost reimbursable contracts

Contract type & Risk

Types of Contracts

T & M – Time & Materials

The seller is paid for the amount of time it takes to accomplish the work & also reimbursed for the materials to complete the work

Unit Price – Fixed Price

The seller is paid a fixed price for an agreed upon Unit of Supply

Continued …

Types of Contracts- Fix Price Plus

- FFP   – Firm Fixed Price

- Lump sum/firm Fixed Price. Seller at most risk

- FPIF   – Fixed Price Incentive Fee

• Most difficult to administer. It contains a number of cost/profit schemes like, cost, target profit, target price, ceiling price and share ratio. if seller maximizes profits, an incentive is offered to reduce costs and improve efficiency price, seller effort. but no profit

- FP-EPA— Fixed Price with Economic Price Adjustment

• The seller is paid a fixed price. The contract is reviewed at pre-defined intervals in the project for adjustments to the contract price based on certain parameters

Types of Contracts- Cost Plus

CPFF— Cost Plus Fixed Fee
Not desirable from buyer's point of view.
The contractor is reimbursed its cost + a fixed fee

CPAF-Cost Plus Award Fee

Not desirable from buyer's point of view. The contractor is influenced to increase costs.

CPIF— Cost Plus Incentive Fee

Seller is reimbursed for an agreed upon performance cost along with a pre established fee plus an incentive bonus. The buyer and seller share the uncertainty to a certain degree

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Contract Examples

&

Exercises

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Contract type Example: Fixed Price

✓ Fixed Price (FP)

- ✓ Contract = $1,100,000
- ✓ It is fixed regardless of any other information

✓ Fixed Price Economic Price Adjustment (FPEPA)

- ✓ Contract = $1,100,000 but a price increase will be allowed in year two based on the U.S. Consumer Price Increase report for year one; or
- ✓ Contract = $1,100,000 but a price increase will be allowed in year two to account for increases in specific material costs

Fixed Price Incentive Fee (FPIF)

- **Simple Case**
  - Contract = $1,100,000. For every month early the project is completed, an additional $10,000 is paid to the seller. For every month late the project is completed a penalty of $20,000 is levied on the seller
  - If project is completed 2 months early, Contract = $1,120,000
  - If project is completed 2 months late, Contract = $1,060,000

- **Complex Case**
  - PTA is a point on cost line upto where buyer pays the money for the service which buyer is buying. If Cost is more then PTA Profit starts dipping because customer is not paying any cost. So profits starts dipping and after some profit washes away and seller start making loss.
  - PTA = [Ceiling Price - Target Price]/ Buyer's Ratio + Target Cost

  Note: Target Price = Target Cost + Target Profit

Point of Total Assumption

Calculation of Point of Total Assumption (FPIF contracts)
The case when "BAC exceeds PTA" is shown

Cost and Price

PTA = ((Ceiling Price - Target Price)/buyer's Share Ratio) + Target Cost

Cost curve   BAC or EAC

Ceiling Price

Target Cost

PTA

Price curve

Increase of seller's loss

Decrease of seller's profit

Target Profit   (seller's gain)

SELLER'S PROFIT AREA

SELLER'S LOSS AREA

Buyer coves all costs | By BSR | Seller covers all costs

Time

$T_{Cost = Ceiling Price}$

CPIF- Complex Case

Input Data for Question

- Target Cost = $ 300,000 (Finish the work in this budget)
- Target Profit = $ 50,000 (if seller do then he gets $50,000 for his good work)
- Target Price = Target Cost + Target Profit
- Ceiling Price = $ 370,000 (Seller will not spend more than in any condition else he has to bare the every extra from his pocket)
- Share/Buyer-Seller Ratio = 70/30 (Share the profit or over expense in this ratio until they are below ceiling price)

If actual cost of the project is $335,000 then how much is the profit?

Calculations

- PTA= ((Ceiling Price – Target Price)/buyer's Share Ratio) + Target Cost
- PTA = (370,000 - 350,000) / .7 + 300,000 => 328,571
- Cost over run above PTA = PTA – Target Cost = 28,571

- Between Target Cost and PTA spending (cost) will be split between the parties like this
- Buyer's share (70% of 28,571) = 20,000 ,   Seller's share (30% of 28,571) = 8,571
- Seller has to pay for extra spending over PTA ie. Actual Cost- PTA = 335,000 – 328,571 = 6,429

- Profit will dip by Seller's Share of Loss + Over Spending above PTA = 8,571 + 6,429 = 15000
- **Final Profit = 50,000 – 15,000 = $35,000**

Contract type Example: Cost Reimbursable

- ✓ <u>Cost-Plus-Percentage of Cost (CPPC)</u>
  - ✓ Contract = Cost <u>plus</u> 12% of costs as fee
  - ✓ If seller cost = 1,000,000
    - ✓ Then, Contract = $1,120,000

- ✓ <u>Cost-Plus-Fixed-Fee (CPFF)</u>
  - ✓ Contract = Cost <u>plus</u> a fee of $100,000
  - ✓ If seller cost = 1,000,000
    - ✓ Then, Contract = $1,100,000

Contract type Example: Cost Reimbursable

✓ **Cost-Plus-Incentive-Fee (CPIF)**

✓ **If ceiling price is not defined then**

Final payout = Target cost + Fixed fee + Buyer share ratio * (Actual Cost - Target Cost)

✓ **If ceiling price is defined then**

Final payout = Target cost + Fixed fee + Buyer share ratio * (Ceiling Price - Target Cost)

✓ Fixed fee (Target Profit) $100,000. Target cost of $1,000,000, the buyer to seller benefit/cost share ratio is 60/40. Minimum fee is $75,000, Maximum fee is $150,000.

✓ If project is completed at a cost of $900,000, **Final Payout** = $1,040,000.

✓ If project is completed at a cost of $1,100,000, **Final Payout** = $1,175,000.

Note: "Target Profit" and "Fixed Fee" are interchangeable words

CPIF Example

Final payout = Target cost + Fixed fee + Buyer share ratio * (Actual Cost - Target Cost)				
Final payout = Target cost + Fixed fee + Buyer share ratio * (Ceiling Price - Target Cost)				
Minimum Fee: nnn, Maxmum Fee: mmm				
Min Fee	NA	NA	50	NA
Max Fee	NA	NA	90	NA
Ceiling Price	NA	1100	NA	NA
Target Cost	1000	1000	1000	1000
Fixed Feed (Target Profit)	100	100	100	100
Buyer/Seller Benefit/cost sharing	80% /20%	80% /20%	80% /20%	60% / 40%
Actual Cost	900	900		900
Contract Value	1020	1020		1040
Profit	120	120		140
Actual Cost	1200	1200	1200	1100
Contract Value	1260	1100	1190	1160
Profit/Loss	60	-160	-70	60

Contract type Example: Time & Material

•Contract = Material $1000/CuM of concrete, Labour $200/CuM of concrete

–If actual quantity 100 CuM then Contract = $120,000

–If actual quantity 75 CuM then Contract = $90,000

Legal Requirements on Contracts

–**Performing the promises in the contract between seller and buyer**

Essential elements of a contract

- ✓ Offer – clearly stated in a manner that can be understood by a reasonable person

- ✓ Contract must be between competent persons (mental state, age)

- ✓ Contract must have lawful objectives

Legal Requirements on Contracts

- ✓ Acceptance by the buyer, based on genuine assent of both parties

- ✓ Consideration – Most important part of the contract. It means something of value is received by the seller in exchange for meeting the promise

- ✓ Follows all laws where the contract execution occurs

Procurement Management: Few More Concepts

- Acronyms
  - IFB- Invitation for Bid,
  - RFB- Request for Bid,
  - LOI- Letter of Intent,
  - RFQ- Request for Quotation
  - RFP- Request for Proposal
- IFB or RFB/P :
  - Single Price,
  - High $ Value
- RFQ used :
  - Per Item/Hour Price,
  - Lower $ Value,
  - May be used to develop info in RFP.

Procurement Management: Few More Concepts

✓ T& M Used when you must begin work immediately without a procurement statement of work

✓ If seller need to do more work in cost plus fixed fee contract then he should negotiate to change in contract. Otherwise seller will not get more than fixed fee, no matter how much he works.

✓ An IFB is typically a request for a sealed document that lists the seller's firm price to complete the detailed work.

✓ A letter of intent is not binding in a court of law, it does make the seller feel more comfortable about expending funds before a contract is signed.

Contract Change Control System (CCCS)

✓ CCCS is a process for modifying the contract.

✓ Contract change control system (CCCS) is part of integrated change control system

✓ PM should focus on Buyer Seller relationship

✓ Following are part of CCCS

    1. Paperwork

    2. Tracking Systems

    3. Dispute resolution processes

    4. Approval Levels necessary for authorizing changes

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Discussions !

Project Stakeholder Management

Project Communications Management

44. Identify Stakeholders [INITIATING]

45. Plan Stakeholder Management [PLANNING]

46. Manage Stakeholder Engagement [EXECUTING]

47. Control Stakeholder Engagements [M&C]

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Definition

Identifying all people, group or organizations that could be impacted by the project and documenting relevant information regarding their interests, involvement and impact on project success.

Identify Stakeholders

1. Project Charter
2. Procurement Documents
3. Enterprise Environmental Factors
4. Organization Process Assets

1. Expert Judgement
2. Stakeholder Analysis
3. Meetings

1. Stakeholder Register

Sample Stakeholder Analysis Matrix

	Stakeholders				
	Ahmed	Susan	Erik	Mark	David
Organization	Internal Senior Management	Project team	Project Team	Hardware Vendor	Project manager for other internal project
Role on project	Sponsor of project and one of the compnay's founder	DBA sequencing expert	Lead Programmer	Supplies some istrument hardware	Competing for company resources
Unique Facts	Demanding, likes details, business focus, stanford MBA	Very smart, Ph.D. in biology, easy to work with, has a toddler	Best Programmer I know, weird sense of humor	Start-up company, he knows we can make him rich if this works	Nice guy, one of oldest people at company, has 3 kids in college
Level of interest	Very high	Very high	High	Very high	Low to medium
Level of Influence	Very high, can call the shots	SME, critical to success	High; hard to replace	Low; other vendors available	Low to medium
Suggestions on managing relationship	Keep informed, let him lead conversations, do as he says and quickly	Make sure she reviews specifications and leads testing; can do some work from home	Keep him happy so he stays; emphasize stock options; likes mexican food	Give him enough leads time to deliver hardware	He knows his project takes a back seat to this one, but can learn from him

Sample Stakeholder Analysis Matrix

Stakeholder	Stakeholder Interest(s) in the Project	Assessment of Impact	Potential Strategies for Gaining Support or Reducing Obstacles

Power/Interest Grid with stakeholders
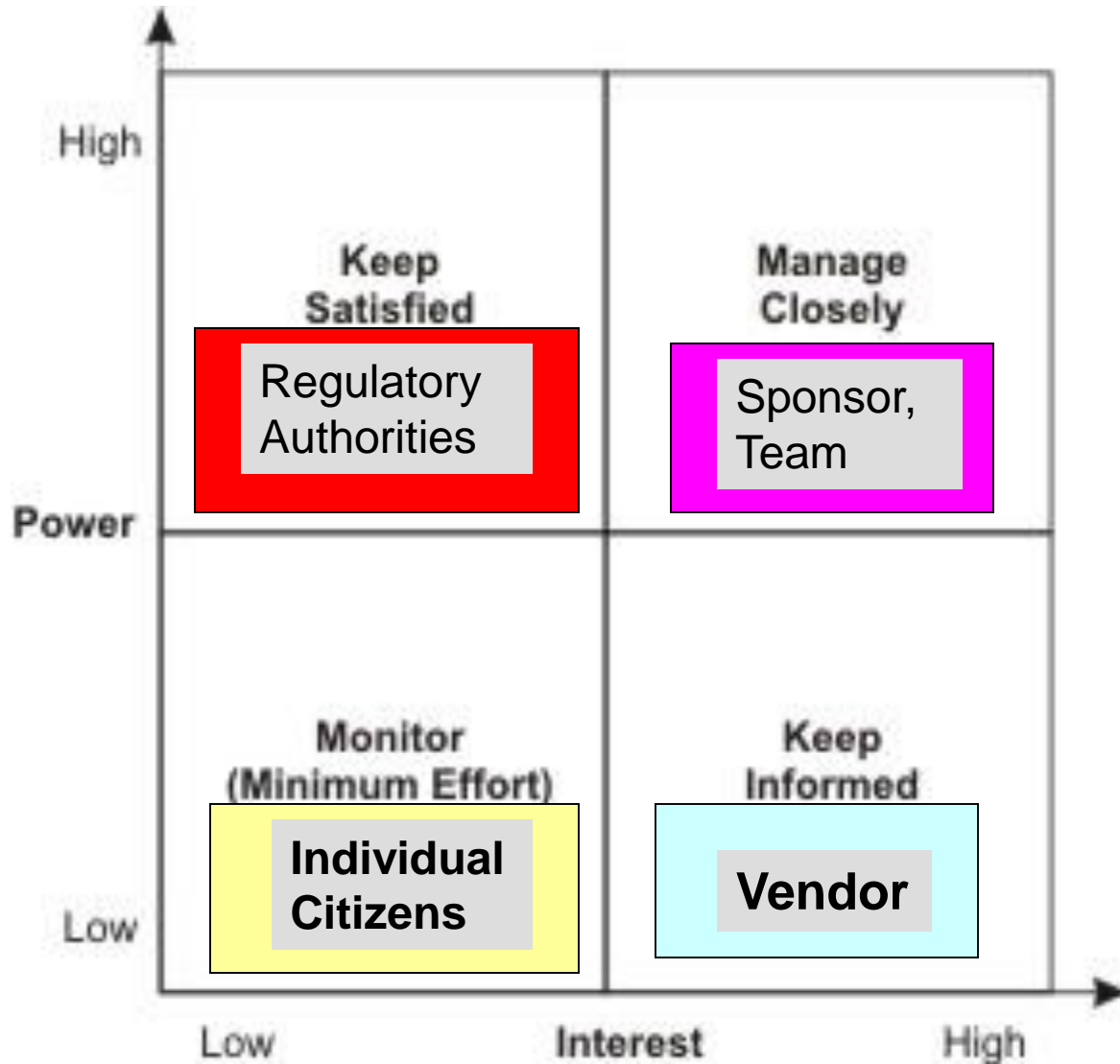
Definition

Developing appropriate management strategies to effectively engage stakeholders throughout the project lifecycle

Plan Stakeholders Management

1. Project Management Plan
2. Stakeholder Register
3. Enterprise Environmental Factors
4. Organization Process Assets

1. Expert Judgement
2. Meetings
3. Analytical techniques

1. Stakeholder Management Plan
2. Project Documents Updates

Definition

Process of communicating and working with stakeholders to meet their needs and addressing issues as they occur.

Manage Stakeholders Engagements

1. Stakeholder Management Plan
2. Communication Management Plan
3. Change Log
4. Organization Process Assets

1. Communication Methods
2. Interpersonal Skills
3. Management Skills

1. Issue Log
2. Change Requests
3. Project Management Plan Updates
4. Project Documents Updates
5. Organization Process Assets Updates

Interpersonal Skills

A project manager works with team. He need to ensure that stakeholders are aligned with project. The skills which helps him in managing group of people…

1. Leadership
2. Team Building
3. Motivation
4. Communication
5. Influencing
6. Decision Making
7. Political & Cultural Awareness
8. Negotiation

Management Skills

1. Presentation Skills

2. Negotiating Skills

3. Writing Skills

4. Public Speaking Skills

Definition

Monitoring overall project stakeholder relationships and adjusting strategies and plans to engage stakeholders.

Control Stakeholder Engagements

1. Project Management Plan
2. Issue Log
3. Work Performance Data
4. Project Documents

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1. Expert Judgement
2. Information Management Systems
3. Meetings

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1. Work Performance Information
2. Change Requests
3. Project Management Plan Updates
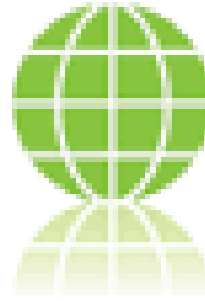4. Project Documents Updates
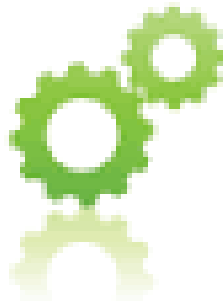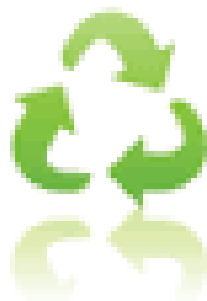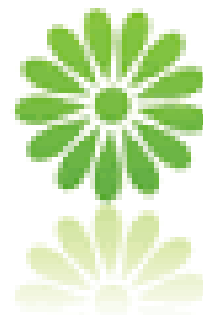5. Organization Process Assets Updates

Discussions !

Professional Responsibility

As

Integrated part of Complete project life cycle

RESPECT
demand it

Responsibility

honesty

FAIRNESS

Doing what is right to make sure others are treated as valuable members of society, sometimes means equal, but fairness does not always mean the same.
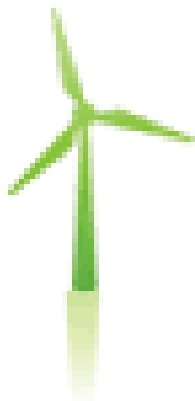
Honesty

Honesty is our duty to understand the truth and act in a Truthful manner both in our communication and in our conduct

1. We earnestly seek to understand the truth

2. We are truthful in our communications and conduct and provide in timely manner

3. We make commitments and promises in good faith (implied & explicit)

4. We do not engage on or condone behavior that is designated to deceive others

5. We do not engage in dishonest behavior with the intention of personal gain or at the expense of other.

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Responsibility

Responsibility is our duty to take ownership for the decisions we make or fail to make, the actions we take or fail to take & the consequences that result

1. Make decisions and take actions based on the BEST interests of society, Public safety and the environment

2. We accept those assignments that are consistent with our background, experience, skills and qualifications

3. We inform ourselves and uphold the policies, rules and regulations and laws that governs our work, professional and volunteer activities

4. We report unethical or illegal conduct to appropriate management & if necessary to those affected by the conduct

5. We bring violations of this Code to the attention of the appropriate body for resolution. We only file ethics complaints when they are substantiated by facts.

Respect

Respect is our duty to show a high regard for ourselves, others and the resources entrusted to us

1. We inform ourselves about norms and customs of others and avoid engaging in behaviors they might consider disrespectful

2. We listen to others points of view , seeking to understand them

3. We approach directly those persons with whom we have conflict

4. We conduct ourselves in a professional manner

5. We negotiate in good faith, do not exercise the power of our expertise or position to influence decisions

Fairness

Fairness is our duty to make decisions and act impartially & Objectively. Our conduct must be free from competing self interest , Prejudice and favoritism.

1. We demonstrate transparency in decision making and constantly re-examine our impartiality .

2. We provide equal access to information to those authorized & equal opportunities to qualified candidates

3. We do not discriminate against others based on, but not limited to , Gender, Race, Age, Religion, Disability, Nationality or Sexual orientation.

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Fairness

Conflict of Interest:

1. We proactively and fully disclose any real or potential conflicts of interest to the appropriate stakeholders.

2. When we realize that we have a real or potential conflict of interest :
    -   We refrain from engaging in the decision making process or otherwise
    -   attempting to influence outcome s, unless or until we have made full
    -   disclosure to the affected stakeholders.

3. We do not hire or fire, reward or punish, or award or deny contracts based on personal considerations. Including but not limited to Favoritism, Nepotism, or Bribery.

Ethics Quick Test

Texas Instruments "Ethics Quick Test" for making ethical decisions

✓ Is the action legal?

✓ Does it comply with your understanding of company values?

✓ If you do it, will you feel bad?

✓ How will it look in the newspaper?

✓ If you know it is wrong, do not do it.

✓ If you are not sure, ask.

✓ Keep asking until you get an answer.

Project Manager's Oath of **Professional Responsibility**

Professional Responsibility

- ✓ Ensure individual integrity

- ✓ Adhere to legal requirements and ethical standards

- ✓ Protect Stakeholders

- ✓ Share lessons learned and other relevant information

- ✓ Build capabilities of colleagues

- ✓ Advance project management professionalism

- ✓ Improve competencies as project manager

- ✓ Balance stakeholder interests in project

- ✓ Respect cultural ethnic and personal differences

- ✓ Ensure collaborative project management environment

- ✓ Comply with all organizational rules and policies

Professional Responsibility

- ✓ Provide accurate and truthful representations in cost estimates

- ✓ Provide accurate and truthful representations in project reports

- ✓ Report violations of policies, procedures and code of ethics

- ✓ Strive for fair resolutions

- ✓ Satisfy competing needs and objectives

- ✓ Interact with others in a professional manner

- ✓ Be responsible for satisfying the complete scope and objectives of customer requirements

- ✓ Maintain and respect confidential information

Professional Responsibility

- ✓ Ensure that a conflict of interest does not interfere with professional judgment

- ✓ Disclose conflict of interest to customer

- ✓ Disclose circumstances that could be construed as conflicts of interest

- ✓ Refrain from offering or accepting inappropriate payments, gifts, or other forms of compensation

- ✓ Adhere to all applicable laws or customs of the country where services are being provided

- ✓ Respect intellectual property developed or owned by others

- ✓ Act in a accurate, truthful and competent manner

Discussions !

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![Thank you!](handwritten note)

Hari P Thapliyal,

PMP, PMI-ACP, MCITP, Princ2 Practitioner, CSM, MBA, MCA, CIC, PGDFM

PMO Architect & Project Management Evangelist

Profile: http://in.linkedin.com/in/harithapliyal

For content related queries please contact me via

hari.Prasad@vedavit-ps.com