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Section A

Exam Final Term

Subject Construction Management

Semester 8th

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Q1

Given data:-

Number of communication channels = 6

Additional stake holders = 2

Required data:-

Identify the number of communication channel after increasing the scope of work = ?

Solution:-

As we know that;

Number of communication channel = $\frac{n(n-1)}{2}$

The number of people involved in six communication channels

$$\Rightarrow 6 = \frac{n(n-1)}{2}$$

$$\Rightarrow 12 = n(n-1) = n^2 - n$$

$$n^2 - n - 12 = 0$$

$$n^2 - 4n + 3n - 12 = 0$$

$$n(n-4) + 3(n-4) = 0$$

$$(n-4)(n+3) = 0$$

$$(n-4) = 0 \quad \text{or} \quad n+3 = 0$$

$$n = 4$$

$$n = -3$$

So the number of people involved = 4

As; There are additional stake holder's

So total number of people are;

$$n = 4 + 2$$

$$n = 6$$

Now, the required communication

$$\text{Channel} = \frac{6(6-1)}{2}$$

$$= \frac{3 \times 6(6-1)}{2} = 15$$

New communication

$$\text{channel} = 15 \text{ Ans}$$

Work Package	BWWS	ACWP	Progress %	BCWP	CV EV-AC	CI EV/AC	SI EV/PV	SV EV-PV
1	\$ 100,000	\$ 120,000	100%	\$ 100,000	\$ 20,000	0.83	1.00	\$ -
2	\$ 100,000	110,000	100%	\$ 100,000	10,000	0.91	1.00	\$ -
3	\$ 100,000	20,000	90%	\$ 90,000	10,000	1.13	0.90	\$ 10,000
4	100,000	125,000	80%	\$ 80,000	45,000	0.64	0.80	20,000
5	100,000	75,000	50%	\$ 50,000	25,000	0.67	0.50	50,000
6	100,000	\$ -	0%	\$ -		0.00	0.00	100,000
7	100,000	-	=	-		0.00	//	100,000
8	100,000	-	=	-		//	0.00	100,000
9	100,000	-	=	-		//	//	100,000
10	100,000	-	=	-		//	//	100,000
BAC						//		

Comment:

The project is behind schedule
& over budget.

Q3

Solution:-

$$NPV = -C_0 + \frac{C_1}{1+r} + \frac{C_2}{(1+r)^2} + \dots + \frac{C_n}{(1+r)^n}$$

$$PV_0 = -C_0$$

$$PV_0 = -9000$$

-C₀ = Initial investment

$$PV_1 = \frac{C_1}{1+r} = \left(\frac{2000}{1 + \frac{10}{100}} \right)$$

C = Cash flow

r = Discount Rate

$$PV_1 = 1818.2$$

T = Time

$$C_1 = 2000$$

$$PV_2 = \frac{C_2}{(1+r)^2} = \frac{3000}{\left(1 + \frac{10}{100}\right)^2}$$

$$C_2 = 3000$$

$$C_3 = 3000$$

$$PV_2 = 2479.34$$

$$C_4 = 4000$$

$$PV_3 = \frac{C_3}{(1+r)^3} = \frac{3000}{\left(1 + \frac{10}{100}\right)^3}$$

$$PV_3 = 2253.94$$

$$PV_4 = \frac{C_4}{(1+r)^4} = \frac{4000}{\left(1 + \frac{10}{100}\right)^4}$$

$$PV_4 = 2732.05$$

$$NPV = -C_0 + \frac{C_1}{1+r} + \frac{C_2}{(1+r)^2} + \frac{C_3}{(1+r)^3} + \frac{C_4}{(1+r)^4}$$

$$= -9000 + 1818.18 + 2479.34 + 2253.94$$

$$+ 2732.05$$

$$NPV = \$ 283.51$$

Q4:

1) Identify your stakeholders

Start by brainstorming who your stakeholders are as part of this, think of all the people who are affected by your work, who have influence or power over it or have an interest in its successful or unsuccessful conclusion.

- | | | |
|-----------------------|-------------------|--------------------|
| your boss | shareholders | Government |
| Senior executives | Alliance partners | Trades association |
| your co-workers | suppliers | The press |
| your team | Lenders | Interest groups |
| Customers | Analysts | The public |
| Prospective customers | Future recruits | The community |
| your family | Key contributors | Key advisors |

2) Prioritize your stakeholders

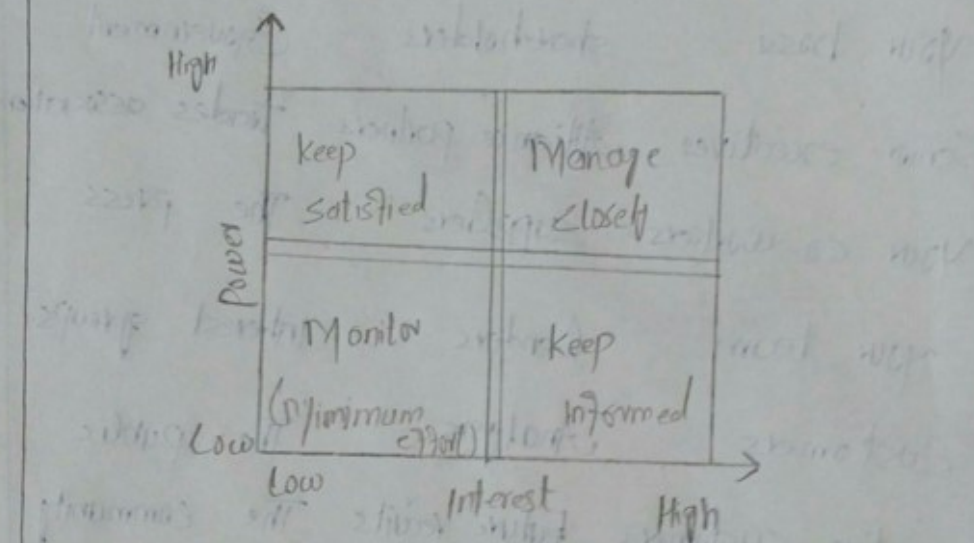
you may now have a list of people in organization that are affected by your work. Some of these may have the power either to block that work or to advance.

Some may be interested in what you are doing, while others may not care. So you need to work out who you need to prioritize.

you can map out your stakeholders, & classify them according to their power over your work & their interest in it on a power / interest.

Figure :- 01

Power/interest Grid for Stakeholder Prioritization



⇒ High power, highly interested people :- you must fully engage these people, & make the greatest efforts to satisfy them.

⇒ High power, less interested people :- you put enough work in with these work to keep them satisfied, but not so much that they become bored with your message.

⇒ Low power, highly interested people :- put enough adequately inform these people, & talk to them to

ensure that no major issues are arising.

* Low power, less interested people.

Again, monitor these people but don't bore them with excessive communication.

(3) Understand your Key Stakeholders:-

You now need to discover how your key stakeholders feel about your project.

Questions that can help you understand your stakeholders include:

- > What financial or emotional interest do they have in the outcome of your work? Is it positive or negative?
- > What motivates those most of all?
- > What information do they want from you, & what is the best way of communicating with them?
- > What is the current opinion of your work? Is it based on good information?
- > What influences their ~~opinion~~ opinions generally, & who influences their opinion of you?
- > If they aren't likely to be positive, what will win them around to support your project?

→ Who else might be influenced by
their opinions? Do these people become
Stakeholders in their own right?

you can ask Stakeholders these
questions directly

Q5 - Checklist for Risk Management:-

Stage -- 1

- ⇒ Assemble Risk Management resources.
- ⇒ Appoint the team leader & ensure a breadth of skills within the team.
- ⇒ Assign Risk Management responsibilities appropriate to tasks.

Stage -- 02 Proposal Familiarization

- ⇒ Specify objectives & criteria.
- ⇒ Familiarise the team with the proposal assemble documentation & define the key objectives.
- ⇒ Assess the proposal in relation to the agency's objectives & strategies.
- ⇒ Determine assessment criteria for proposal.

Stage -- 03 Risk Analysis

- * Identify risks:-
- ⇒ Prepare a comprehensive schedule of risk for each element.
- ⇒ Describe each risk & list the main assumptions.

- * Assess risk likelihoods \approx consequences.
- \rightarrow Assemble data on risk \approx their consequences.
- \rightarrow Assess risk likelihoods.
- \rightarrow Assess risk impacts.

* Identify significant risks.

- \rightarrow Rank risks to reflect impact \approx likelihoods.
- \rightarrow Where applicable, estimate risk factors.
- \rightarrow Discard / accept minor risks.

Stage - 04 Risk Response Planning.

* Identify feasible response.

- \Rightarrow For each moderate \approx major risk, identify the feasible response.

\Rightarrow Response may include:-

- a) Risk prevention
- b) Impact mitigation
- c) Risk transfer \approx insurance
- d) Risk acceptance

Selected the best response:-

- \rightarrow Evaluate the benefits \approx costs for each response.
- \rightarrow Select the preferred response.