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SECTION: B

SUBJECT: Construction Management

SUBMITTED TO: Dr. Muhammad Zeeshan
Ahad

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(2)

Q1

Sol.

Given Data.

Number of communication channels = 6

Additional stake holder = 2

Required Data

Identify of number of communication channel after increasing the scope of work.

Solution: As we know that

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

=> The number of people involved in six communication channel

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

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

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

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

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

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

$$\Rightarrow (n-4) = 0 \quad (n+3) = 0$$

$$\Rightarrow n = 4$$

$$n = -3$$

\Rightarrow So the number of people involved = 4

As there are additional state holder

so that number are:

Now the required communication

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

(4)

$$= 3(5)$$

Now communication channel = 15 Ans

Q2:

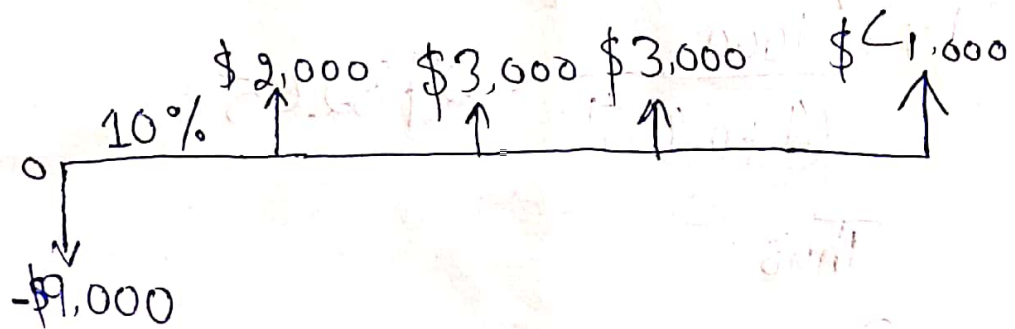
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Work Package	BCWS Planned Value (PV)	ACWP Actual Cost (AC)	Progress %	BCWP Earned Value (EV)	Cost Value (CV) EV-AC	Cost Performance Index (CPI) EV/AC	S. Performance Index (SPI) EV/PV	(Schedule Variance) (SV) EV-PV
1	\$ 100,000	\$ 120,000	100%	\$ 100,000	\$ 20,000	0.83	1.00	\$ -
2	\$ 100,000	\$ 110,000	100%	\$ 100,000	\$ 10,000	0.91	1.00	\$ -
3	\$ 100,000	\$ 80,000	90%	\$ 90,000	\$ 10,000	1.13	0.90	\$ 100,000
4	\$ 100,000	\$ 125,000	80%	\$ 80,000	\$ 45,000	0.67	0.80	\$ 20,000
5	\$ 100,000	\$ 75,000	50%	\$ 50,000	\$ 25,000	0.00	0.50	\$ 50,000
6	\$ 100,000	\$ -	0%	\$ -	\$ -	0.00	0.00	\$ 100,000
7	\$ 100,000	\$ -	0%	\$ -	\$ -	0.00	0.00	\$ 100,000
8	\$ 100,000	\$ -	0%	\$ -	\$ -	0.00	0.00	\$ 100,000
9	\$ 100,000	\$ -	0%	\$ -	\$ -	0.00	0.00	\$ 100,000
10	\$ 100,000	\$ -	0%	\$ -	\$ -	0.00	0.00	\$ 100,000

BAC

Q3

Sol.



Discount 10 %

$$PV = FV / (1+r)^n$$

For 1st year

$$Pv = \frac{2000}{(1+0.10)^1} = 1818.18 \$$$

For 2nd year

$$Pv = \frac{3000}{(1+0.10)^2} = 2479.34 \$$$

For 3rd year

$$Pv = \frac{3000}{(1+0.10)^3} = 2253.94 \$$$

For 4th year

$$Pv = \frac{4000}{(1+0.10)^4} = 2732.05 \$$$

Thus

$$Pv 0 = -9000 \$$$

$$Pv 1 = 1818.18 \$$$

$$Pv 2 = 2479.34 \$$$

$$Pv 3 = 2253.94 \$$$

$$Pv 4 = 2732.05 \$$$

$$NPV = 283.515 \text{ Ans}$$

So:

Comments:

→ A positive NPV means the combined PV of all cash inflows exceeds the PV of each outflows.

→ The NPV of 283.51 suggest that the combined PV of all cash inflows exceeds the PV of cash outflows by 283.51

→ This project is acceptable as its add profit of 283.51\$ to the company.

Q4: 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 successful or unsuccessful conclusion.

The table below identifies some of the people who might be stakeholders in your job or your project.

Your boss Shareholders Government

Senior executives Alliance partners Trades associations

Your co-workers Suppliers The press

Your team Lenders Interest group

Customers Analysts Public

Prospective customers Future recruits Community

Your family Key contributors Collaborators

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1

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M T W T F S

2) Prioritize your stakeholders.

You may have a list of people and organization that are affected by your work - some of these may have the power either to block that work or to advance so you need to look out like you need to prioritize.

You can map out your stakeholders and classify them according to their power on your work and their interest in it. On a power/interest grid. Our interactive screen App makes this step easy to accomplish or you can download of the grid by clicking on the download button at the end of this article.

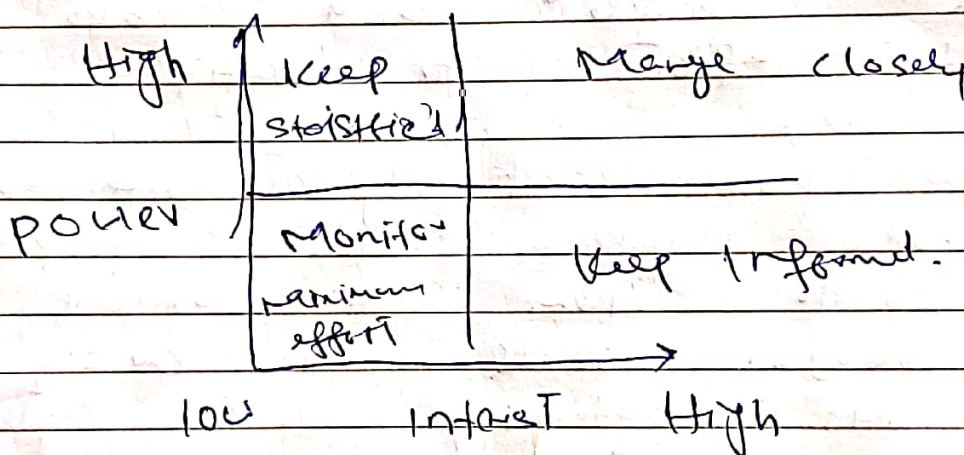
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Figure 1

power / interest grid for stakeholders

privilegiation



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M T W T F S

The position that you allocate to a stake holder on the grid shows you the actions you need to take with them.

⇒ High power highly interested people (orange) closely you must fully engage these people and make the greatest efforts to satisfy.

⇒ low power highly interested people actively inform these people and talk to them to ensure that no major issues arise. People in this category can often be very helpful with the detail of your project.

⇒ low power interested people actively monitor these people but don't bother them with excessive communication. You bias for example likely high power and influence over your projects them. You family however may have high interest in them but won't power over them.

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3) Understand your key stakeholders.

You need to know about your key stakeholders to discover your key project. You also need to work how best to engage them and how to communicate with them.

Questions that can help you understand stakeholders include

=> What financial or emotional interest do they have in your outcome? Is it positive or negative?

=> What motivates those most of all?

=> What information do they want from you and what is the best way of communicating with them?

=> What is your current opinion of your work? Is it based on good information?

(14)

(1)

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M T W T F S

⇒ What is current of your market?
it is good information?

⇒ Who influences the opinion generally
and who influences their opinion of
you? Do some of these influences
become important stakeholders in own
right?

⇒ If they are not to be positive,
what will be taken around
how will you manage?

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

You can ask your stakeholders these
question directly. people are often quite open
about their views and asking for their
you first step in building relationship
with them.

A simple way to summarize the level
of backing to have your stakeholders is
to color-code them. For example show
advocates and supporters in green, blockers
and critics in red and those who
are neutral in orange.

Darsi
Notes

Key Contributor categories

Q5

Ans:

For a project a residential house
what are the different stages to be
~~can~~ considered in the Risk Management
check list
check list for Risk Management

Stage: 1 Initiation

- Assemble Risk Management resources
- Appoint the team leader and ensure a breadth of skill/experience within team.
- Assign risk management responsibilities appropriate to risk.

Stage: 2 Proposal Familiarization

- Specify objectives and criteria
- Familiarize the team with the proposal assemble documentation and define the key objective.

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- > Assess the proposal in relation to the agency's objective and strategies.
 - > Determine assessment criteria for proposal
 - > Define key elements target 20-50 elements, items or activities to structure risk analysis.

Stage: 3 Risk Analysis

- > Identify risk
- > Prepare a comprehensive schedule of risk for each element.
- > Describe each risk and list the main assumptions.
- > Assess risk likelihoods and consequences
Assemble data on risk and their consequences.
- > Assess risk likelihoods
- > Assess risk Impacts.

Identify Significant risk

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- Rank risk to reflect Impact and likelihoods
- where applicable estimate risk factor
- Discard / accept minor risk
- Identify moderate risks for management measure
- Identify major risk for detailed risk action planning.

Stage 4 Risk Response Planning

- Identify feasible response
- For each moderate and major risk Identify the feasible responses.
- Responses may include.

(18)
(a) Risk Prevention

(b) Impact mitigation

(c) Risk transfer and insurance

(d) Risk acceptance

→ Describe each feasible response and list main assumptions.

→ ~~Step~~ Select the best response
Evaluate the benefits and costs for each response

→ Select the preferred response

→ Develop management measure and action schedules.

→ Specify Risk management measure for moderate risk

→ Develop risk action schedules for major risks.