

Name Asim Ali

ID 7763

Sec C

Sem'str 8

Pap'r : Construction
Project Management

Teacher Engr. Zeeshan Ahmad

①

Q.No 1:

You have a team of project managers reporting to you. Recently a new manager relatively inexperienced has joined your team. Considering his level of experience you assign him to a small project. Considering low complexity and few stakeholders involved. You envision the project to have no surprises or hiccups. You have identified the number of communication channels to be only 6. However with increase in scope of work 2 additional stakeholders who need to be communicated with ^{join the} team. You ask the manager to identify the number of communication channels now?

Given Data:

Number of communication channels = 6

Additional Stakeholders = 2

Required :-

(2)

Identify the number of communication channels after increasing the scope of work?

Solution:

As we know the formula :-

$$\text{No. of communication channels} = \frac{n(n-1)}{2}$$

Now for six communication channels in which the number of people involved

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

By cross multiplication

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

$$12 = n^2 - n$$

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

By factorization method

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

Taking n^3 common

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

(3)

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

$$(n-4) = 0$$

$$n = 4$$

$$n+3$$

$$n = -3$$

So the number of people involved
= 4

As: There are additional Stake
holder's so that number of people
are :

$$n = 4 + 2$$

$$n = 6$$

Now, the required communication

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

Putting $n = 6$

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

(4)

$$= \frac{6(5)}{2}$$

$$= \frac{30}{2}$$

$$= 15$$

New Communication channel = 15

Ans.

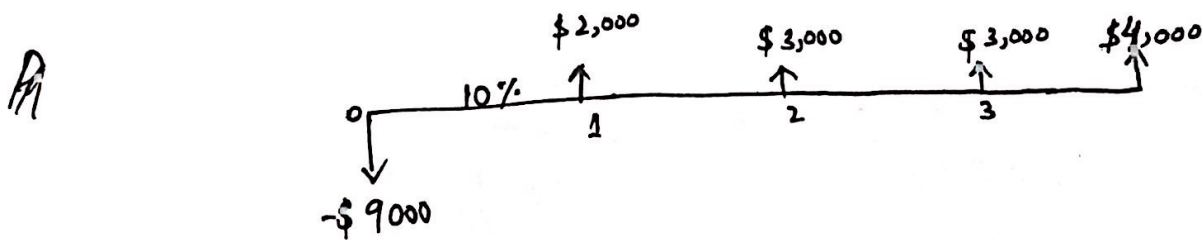
\$ 80,000.00	90%	\$ 90,000.00	\$ (40,000.00)	1.13	0.90	\$ (10,000.00)
\$ 125,000.00	80%	\$ 80,000.00	\$ (45,000.00)	0.64	0.80	\$ (20,000.00)
\$ 75,000.00	50%	\$ 50,000.00	\$ (25,000.00)	0.67	0.50	\$ (50,000.00)
-	0%	-	-	0.00	0.00	\$ (120,000.00)
-	0%	-	-	0.00	0.00	\$ (100,000.00)
-	0%	-	-	0.00	0.00	\$ (100,000.00)
-	0%	-	-	0.00	0.00	\$ (100,000.00)
-	0%	-	-	0.00	0.00	\$ (100,000.00)

Comment :-

The Project is behind
Schedule and over budget

Q.No. 2

Q: 3
 A company ^① is planning to invest 9000\$ in a project today. The project is expected to have life of Four years. The expected cash flow for next four years is shown and the discount rate is 10%. Calculate Net present value (NPV) and comment on the result?



Ans: As we know that

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

$$\dots + \frac{C_T}{(1+r)^T} \longrightarrow \text{Main formula eq (i)}$$

②

Given data

Formula data:

- C_0 = Initial Investment

C = Cash Flow

r = Discount Rate

T = Time

$$C_1 = 2,000$$

$$C_2 = 3,000$$

$$C_3 = 3,000$$

$$C_4 = 4,000$$

(3)

$$PV_0 = -C_0$$

$$PV_0 = -9,000$$

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

$$PV_1 = 1818.18$$

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

$$PV_2 = 2479.34$$

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

$$PV_3 = 2253.94$$

$$PV_4 = \frac{C_4}{(1+r)^4} = \frac{4,000}{\left(1 + \frac{10}{100}\right)^4}$$

$$PV_4 = 2732.05$$

④
Put these values in eq (i)

we get

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

$$NPV = -9,000 + 1818.18 + 2497.34 + 2253.94 + 2732.05$$

$$NPV = \$ 2803.51$$

Conclusion (Comments)

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

In this question the NPV of \$ 2803.51 suggests that the combined PV of all cash inflows exceeds the PV of cash outflows by \$ 283.51

Net Present V = ^⑤ Present Commulative
of all Cash

Investment = 9000\$ time = 4 years

Year	Inf/w	Discount rate	Comulative
1	2,000	1800	1800
2	3,000	2700	4500
3	3,000	2700	7200
4	4,000	3600	10800

$$NPV = 10800 - 9000$$

$$NPV = 1800$$

$NPV \geq 0$ Accept the investment.

Q: 4 Being a Project Manager, how would you identify the stake holders by Power/Interest Matrix?

Ans: Power / Interest Matrix:

→ The Power / Interest Matrix is a simple tool that helps to categorize project stake holders with increasing power and interest in project.

→ The matrix helps to focus on the key stakeholders who can make or break the project. In turn, this power / interest matrix help us in stake holder prioritization.

LOW

A
Minimal
effort

C
Keep
Satisfied

Power / Interest Matrix:

Stakeholders in Group A:

Need only minimum effort and monitoring.

Stakeholders in Group B:

Should be kept informed as they may be able to influence more powerful stakeholders.

Stakeholders in Group C:

Are powerful, but level of interest is low.

Generally expected to be passive, but may move into group D on issue of particular interest.

Stake holders in group D:

Are both
Powerful. Their co-operation is
of key importance for
new strength.

Q:5 For a project residential house what are the different stages to be considered in the risk management checklist?

Ans:

Checklist for Risk Management

Stage 1 Initiation

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

Stage 2 Proposal Familiarization

- * Specify objectives and criteria.
- * Familiarise the team with the proposal assemble documentation and define the key objectives.
- * Assess the proposal in relation to the Agency's objectives and define the key objectives
- * Assess the Proposal in relation to the Agency's objectives and strategies.
- * Determine assessment criteria for proposal.
- * Define key elements (target do-so elements, items or activities) to structure risk analysis.

Stage 3 Risk Analysis

Identify risks

- * Prepare a comprehensive Schedule of risks 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

- * Rank risks to reflect impacts and likelihoods

* Where applicable, estimate risk factors.

- * Discard / accept minor risks
- * Identify moderate risks for management measures.

Identify major risks for detailed risk action planning

Stage 4 Risk Response Planning

▣ Identify feasible responses.

▣ For each moderate and major risk, identify the feasible responses

▣ Responses may include:

- a) Risk prevention
- b) Impact mitigation
- c) risk transfer and insurance
- d) risk acceptance

- ▣ Describe each feasible response and list main assumptions
- ▣ select the best response
- * Evaluate the benefits, and costs for each response
- * Select the preferred response

Stage 5 Reporting:

For designated proposals, produce the risk management plan

For other projects, collate and summarize risk action schedules and measures

Stage: 6

Risk Management Implementation

Implementation measures and
action strategies

Monitor the implementation

- a) Assign responsibilities.
- ⑥ Timing.

Under take periodic review and
Performance evaluation.