

Q#01 (ONE) :-

(1)

Given Data :

Number of Communication channel = 6

Additional stake holder = 2

Required Data:

Identify the number of Communication Channels after increasing the scope of work = ?

Sol: As we know that

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

The number of people involved in six communication channels

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

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

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

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

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

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

$$(n-4) = 0$$

$$\boxed{n = 4}$$

$$n+3 = 0$$

$$\boxed{n = -3}$$

So the number of people involved = 4

As there are additional stake holders

So total number of people are

$$n = 4 + 2$$

$$\boxed{n = 6}$$

Now

The Required Communication

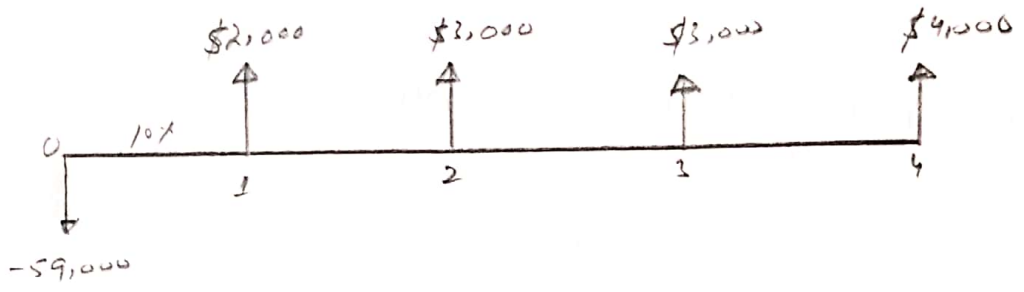
$$\text{Channels} = \frac{6(6-1)}{2}$$

$$= \frac{3 \times 5}{2} = 3(5)$$

New Communication Channels = 15 Ans.

Q#03:-

Sol:-



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

$$P_{V0} = -C_0$$

$$P_V = -9000$$

$$P_{V1} = \frac{C_1}{1+r} = \left( \frac{2000}{1 + \frac{10}{100}} \right)$$

$$P_{V1} = 1818.18$$

$$P_{V2} = \frac{C_2}{(1+r)^2} = \frac{3000}{\left(1 + \frac{10}{100}\right)^2}$$

$$P_{V2} = 2479.34$$

- C<sub>0</sub> = Initial Investment
- C = Cash flow
- r = Discount Rate
- T = time
- C<sub>1</sub> = 2000
- C<sub>2</sub> = 3000
- C<sub>3</sub> = 3000
- C<sub>4</sub> = 4000

(3)

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

$$PV_3 = 2253.94$$

$$PV_4 = \frac{C_4}{(1+r)^4}$$

$$= \frac{4000}{(1+\frac{10}{100})^4}$$

$$PV_4 = 2732.05$$

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

$$= -9000 + 1818.18 + 2479.39 + 2253.94 + 2732.05$$

$$NPV = \$283.51$$

Q#05:

Answer: For a project of residential house the different stages to be considered in Risk Management checklists are;

Stage #01: Initiation:

- (1) Assemble Risk Management Resources
- (2) Appoint the team leader and ensure a breadth of skills/experience within the team
- (3) Assign Risk Management Responsibilities appropriate to task

## Stage #02: Proposal Familiarization

(4)

- (1) Specify objectives and criteria
- (2) Familiarise the team with the Proposal, Assemble documentation and define the key objectives
- (3) Assess the Proposal in relation to Agency's objectives and strategies
- (4) Determine assessment criteria for Proposal
- (5) Define key elements (target 20-50 elements, items or activities) to structure risk Analysis

## Stage #03: Risk Analysis

- 1) Identify Risks
- 2) Prepare a comprehensive schedule of risks for each element
- 3) Describe each risk and list the main assumptions
- Assess risk likelihoods and consequences
  - 1) Assemble data on risk and their consequences
  - 2) Assess risk likelihoods
  - 3) Assess risk impacts
- Identify significant risks
  - 1) Rank risks to reflect impacts and likelihoods
  - 2) where applicable, estimate risk factors
  - 3) Discard/accept minor risks
  - 4) identify moderate risks for management measure
- Identify major risks for detailed risk action Planning.

## Stage #04: Risk Response Planning (5)

- identify feasible Responses
- For each moderate and major Risk, identify the feasible responses
  - Responses may include
    - 1) Risk prevention
    - 2) impact mitigation
    - 3) Risk transfer and insurance
    - 4) Risk acceptance
- Describe each feasible response and list main assumptions
  - select the best response
    - 1) Evaluate the benefits and costs for each response
    - 2) select the preferred response.

Q#04:-

Ans: 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. The table will identify the people who might be stakeholders in your job or in your project

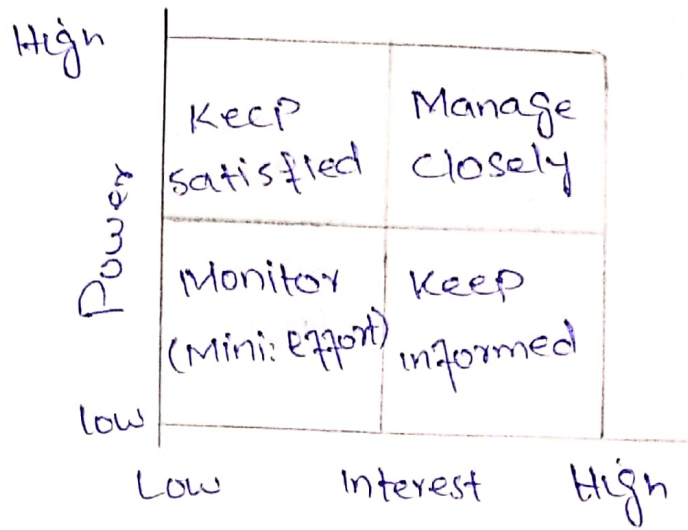
P-I-O

Your boss	Shareholders	Government
Senior executives	Alliance Partners	Trades associations
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 and organizations that are affected by your work. Some of these may have the power either to block that work or to advance it. 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 stakeholder and classify them according to their power over your work & their interest in it



The position that you allocate to stakeholder on the grid show you the action you need to take with them.

### 3)- Understand your key stakeholders.

You now need to discover how your key stakeholder feel about your project you also need to work out how best to engage them, and how to communicate with them.

Questions that can help you understand your stakeholder include.

- 1) what financial or emotional interest do they have in the outcome of your work? is it positive or -ve?
- 2) what motivates those most of all?
- 3) what information do they want from you.
- 4) what is their current opinion of your work?
- 5) if they aren't likely to be positive what will win them around to support your project?
- 6) who else might be influenced by their opinions? Do these people become stakeholders in their own right?

(8)  
 A Simple way to Summarize the level of backing you have from your stakeholder, is to color-code them. For example; Show advocates and Supports in green, blockers & critics in red, and those who are neutral in orange.

Q #02 ::

Ans:

BCWS	ACWP	% Progress	BCWP = EV
100,000	120,000.00	100%	$100,000 \times \frac{100}{100} = 100,000$
100,000	110,000.00	100%	100,000
100,000	80,000.00	90%	$100,000 \times \frac{90}{100} = 90,000$
100,000	125,000	80%	80,000
100,000	75,000	50%	50,000
100,000	0	0	0
100,000	0	0	0
100,000	0	0	0
100,000	0	0	0
100,000	0	0	0
100,000	0	0	0
<hr/> 100,000	<hr/> 510,000		<hr/> 320,000



(9)

Cost Variance = EV - AC (Actual cost)

1)  $100,000 - 120,000 = -20,000$

2) ~~100,000~~  $100,000 - 110,000 = -10,000$

3)  $90,000 - 80,000 = 10,000$

4)  $80,000 - 125,000 = -45,000$

5)  $50,000 - 75,000 = -25,000$

6)  $0 - 0 = 0$

7)  $0 - 0 = 0$

8)  $0 - 0 = 0$

9)  $0 - 0 = 0$

10)  $0 - 0 = 0$

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$\Sigma = -90,000 \Rightarrow$  over Budget

$$CPI = \frac{EV}{AC} = \frac{320,000}{510,000} = 0.62$$

It has Spent 38% more than it should Spent till this date

# Schedule Variance = EV - PV

(10)

$$1) 100,000 - 100,000 = 0$$

$$2) 100,000 - 100,000 = 0$$

$$3) 90,000 - 100,000 = -10,000$$

$$4) 80,000 - 100,000 = -20,000$$

$$5) 50,000 - 100,000 = -50,000$$

$$6) 0 - 100,000 = -100,000$$

$$7) 0 - 100,000 = -100,000$$

$$8) 0 - 100,000 = -100,000$$

$$9) 0 - 100,000 = -100,000$$

$$10) 0 - 100,000 = -100,000$$

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$$\Sigma = -580,000 \Rightarrow \text{Behind schedule}$$

$$SPI = \frac{EV}{PV} = \frac{320,000}{1,000,000} = 0.32$$

This project must have 68% accomplished more than actually has at this point

So this project is behind  
Schedule and over budget.