

ID 7274

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Subject : Construction Management

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Q No 1

Given data:

Number of communication channels = 6

Additional stake holders = ?

Required data:

Identify the number of communication channels 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 channel  $\Rightarrow$

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

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

$$x^2 - x - 12 = 0$$

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

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

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

$$n-4 = 0$$

$$n+3 = 0$$

$$n = 4$$

$$n = -3$$

So the Number of People Involved

$$\boxed{= 4}$$

As: There are 2 additional stake holders so total number of people area:

$$n = 4 + 2$$

$$n = 6$$

Now the required communication

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

$$= \frac{36(6-1)}{2} = 3(5)$$

New

communication

channel

$$\boxed{= 15}$$

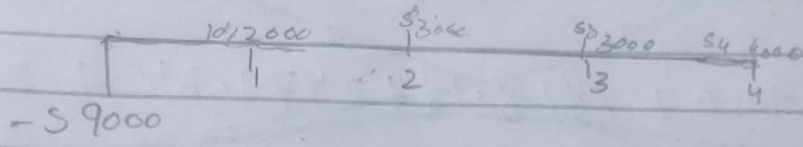
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Work Package	BWS Planned (PV)	Actual cost AC	Progress %	BCWP Earned Value	(CV) EV-AC	CPI EV/AC	SPI EV/PV	SV EV-PV
1	\$ 100,000.00	\$ 120,000.00	100%	\$ 100,000.00	\$ (20,000.00)	0.83	1.00	\$
2	\$ 100,000.00	\$ 110,000.00	100%	\$ 100,000.00	\$ (10,000.00)	0.91	1.00	\$
3	\$ 100,000.00	\$ 80,000.00	90%	\$ 90,000.00	\$ (10,000.00)	1.13	0.90	\$ (10,000.00)
4	\$ 100,000.00	\$ 125,000.00	80%	\$ 80,000.00	\$ (45,000.00)	0.64	0.80	\$ (20,000.00)
5	\$ 100,000.00	\$ 75,000.00	50%	\$ 50,000.00	\$ (25,000.00)	0.67	0.50	\$ (50,000.00)
6	\$ 100,000.00	\$	0%	\$	\$	0.00	0.00	\$ (100,000.00)
7	\$ 100,000.00	\$	0%	\$	\$	0.00	0.00	\$ (100,000.00)
8	\$ 100,000.00	\$	0%	\$	\$	0.00	0.00	\$ (100,000.00)
9	\$ 100,000.00	\$	0%	\$	\$	0.00	0.00	\$ (100,000.00)
10	\$ 100,000.00	\$	0%	\$	\$	0.00	0.00	\$ (100,000.00)

Comment =

The Project is behind schedule and over budget.

Q3



Soln:

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

$$PV_0 = -C_0$$

$$PV_0 = -9000$$

$$PV_1 = \frac{C_1}{1+r} = \frac{2000}{1 + \frac{10}{100}}$$

$$PV_1 = 1818.18$$

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

$$PV_2 = 2479.34$$

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

$$PV_3 = 2253.94$$

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

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

$$PV_4 = 2732.05$$

- C = cash flow
- r = Discount rate
- T = Time
- C1 = 2000
- C2 = 3000
- C3 = 3000
- C4 = 4000

⑥

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

$$= -9000 + 1818.18 + 2479.34 + 2253.94 + 2732.05$$

$$= NPV = \boxed{\$ 283.51}$$

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Q4 Being a Project Manager, how would you identify the stake holders by Power / Interest Matrix.

classifies stakeholders in relation to their Power and the extent to which they are likely to show interest in the actions of the organisation.

can be used to indicate the nature of the relationship which should be adopted with each group.

Power / Interest Matrix:

		Level of Interest	
		Low	high
Power	Low	A Minimal	B Keep informed
	high	C Keep Satisfied	D Key Players

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## Power / Interest Matrix.

- ∴ Stake holders in group A : Need only minimum effort and Monitoring
- ∴ Stake holders in group B : Should be kept informed as they may be able to influence more powerful stakeholders.
- ∴ Stake holders in group C : Are powerful but level of interest is low.
- ∴ Stake holders in group D : Are both powerful and interested.

Their co-operation is of key importance for new strategies.



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

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.

Q5 For a project of residential house what are the different stages to be 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 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.

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★ Determine assessment criteria for Proposal

★ Define key element (target 20-50 elements, items or activities).

Stage 3

Risk Analysis:

Identify risk:

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.

Stage 4:

## Risks Response Planning

Identify feasible responses:

For each Moderate and Major, risk

Identify the feasible responses -

a) Risk Prevention.

b) Impact Mitigation.

c) Risk transfer and insurance

d) Risk acceptance:

★ 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.

Implement measures and action  
strategies

→ Monitor the implementation

a) Assign responsibilities.

b) Timing

→ undertake periodic review  
and performance evaluation.