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Section A

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?

ANS:

No of communication channel = $n(n-1)/2$

the no of people involved in six communication channel are

$$6 = n(n-1)/2$$

$$12 = n^2 - n$$

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

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

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

$$n-4 = 0 \quad n+3 = 0$$

$$n = 4 \quad n = -3$$

So the no of people involve is = 4

as there are additional stake holder's

so total no of people are

$$n = 4 + 2$$

n= 6

now required communication channel = $6(6-1)/2$

=15

ANS : NEW COMMUNICATION CHANNEL = 15

Q= 2

1. If you have a project of 10 packages for each package planned value, Actual cost and percentage of completion is given. Calculate the earned value, cost variance, schedule variance, cost performance index and schedule performance index? (Comment if the project is ahead/behind schedule or over/under budget).

Work Package	BCWS	ACWP	% Progress	BCWP
	Planned Value	Actual Cost		Earned Value
1	\$100,000.00	\$120,000.00	100%	
2	\$100,000.00	\$110,000.00	100%	
3	\$100,000.00	\$80,000.00	90%	
4	\$100,000.00	\$125,000.00	80%	
5	\$100,000.00	\$75,000.00	50%	
6	\$100,000.00	\$0.00	0%	
7	\$100,000.00	\$0.00	0%	
8	\$100,000.00	\$0.00	0%	
9	\$100,000.00	\$0.00	0%	
10	\$100,000.00	\$0.00	0%	
BAC				

Solution

As we know that

work package	BCWS (P.V) \$	ACWP AC\$	% progress	BCWP Variance	Cost Variance	Schedule Variance	Cost performance index	schedule performance index
1	100,000	120,000	100	100,000	-20000	0	0.83	1
2	100,000	110000	100	100,000	-10000	0	0.91	1

3	100,000	80000	90	90000	10000	-10000	1.13	0.9
4	100,000	125000	80	80000	-45000	-20000	0.64	0.8
5	100,000	75000	50	50000	-25000	-50000	0.67	0.5
6	100,000	0	0	0	0	-100000	0	0
7	100,000	0	0	0	0	-100000	0	0
8	100,000	0	0	0	0	-100000	0	0
9	100,000	0	0	0	0	-100000	0	0
10	100,000	0	0	0	0	-100000	0	0

Comment:

On the basis of CPI

According to thumb rules;

.workpackage 1,2,4 and 5 are over budget because CPI value is less than 100%

.workpackage 3 is under budget because CPI value is greater than 100%

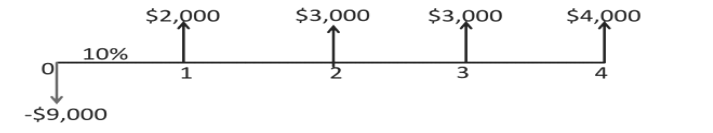
On the basis of SPI

According to thumb rules

.work package 1 and 2 are on the schedule

.work package 3,4 and 5 are behind schedule

1. A Company is planning to invest 90000\$ 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?



solution

As we know that

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

$$Pv_0 = -c_0$$

$$Pv_0 = -9000$$

$$pv_1 = \frac{C_1}{1+r} = \frac{2000}{1+10/100}$$

$$pv_1 = 1818.18$$

$$Pv_2 = \frac{C_2}{(1+r)^2} = \frac{3000}{(1+10/100)^2}$$

$$pv_2 = 2479.34$$

$$Pv_3 = \frac{C_3}{(1+r)^3} = \frac{3000}{(1+10/100)^3}$$

$$Pv_3 = 2253.94$$

$$Pv_4 = \frac{C_4}{(1+r)^4} = \frac{4000}{(1+10/100)^4}$$

$$Pv_4 = 2732.05$$

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

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

$$Npv = \$283.51$$

- C_0 =Initial investment

C=cash flow

r=Discount rate

T=Time

$C_1=2000$

$C_2=3000$

$C_3=3000$

$C_4=4000$

Q=4

Being a Project Manager, how would you identify the stake holders by power/interest Matrix?

ANS :

1 Identify Your Stakeholders

Start by Brain storming 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 projects:

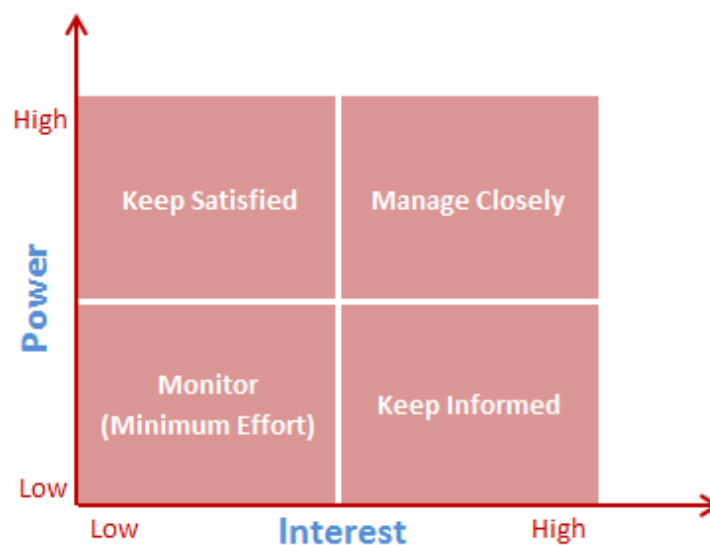
Your boss	Shareholders	Government
Senior executives	Alliance partners	Trades associations
Your co-workers	Suppliers	The press
Your team	Lenders	Interest groups
Customers	Analysts	The public
Prospective customers	Future recruits	The community
Your family	Key contributors	Key advisors

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 stakeholders, and classify them according to their power over your work and their interest in it, on a Power/Interest Grid (see figure 1). (Our interactive screen app makes this step easy to accomplish, or you can download a template of the grid by clicking on the "download template" button at the end of this article.)

Figure 1: Power/Interest Grid for Stakeholder Prioritization



The position that you allocate to a stakeholder on the grid shows you the actions you need to take with them:

- High power, highly interested people (Manage Closely):** you must fully engage these people, and make the greatest efforts to satisfy them.
- High power, less interested people (Keep Satisfied):** put enough work in with these people to keep them satisfied, but not so much that they become bored with your message.
- Low power, highly interested people (Keep Informed):** adequately inform these people, and talk to them to ensure that no major issues are arising. People in this category can often be very helpful with the detail of your project.
- Low power, less interested people (Monitor):** again, monitor these people, but don't bore them with excessive communication.

Your boss, for example, likely has high power and influence over your projects and high interest in them. Your family, however, may have high interest in them, but won't have power over them.

- **Understand Your Key Stakeholders**

You now need to discover how your key stakeholders 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 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, and what is the best way of communicating with them?
- What is their current opinion of your work? Is it based on good information?
- Who influences their opinions generally, and who influences their opinion of you? Do some of these influencers therefore become important stakeholders in their own right?
- If they aren't likely to be positive, what will win them around to support your project?
- If you don't think that you'll be able to win them around, how will you manage their opposition?
- Who else might be influenced by their opinions? Do these people become stakeholders in their own right?

You can ask your stakeholders these questions directly. People are often quite open about their views, and asking for their opinions is often the first step in building a successful relationship with them.

A simple way to summarize the level of backing you have from 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. See the diagram, below.

Q#5

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

Answer :

Stages of risk management

Answer

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
- Familiarize the team with the proposal, assemble documentation 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 20-50 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 risks

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:

 risk prevention

• impact mitigation

• risk transfer and insurance

• 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
- Develop management measures and action schedules
 - Specify Risk Management measures for moderate risks
 - Develop risk action schedules for major risks
 - Actions required (what is to be done?)
 - Resources (what and who?)
 - Responsibilities (who?)
 - Timing (when?)
- 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