PM

Monitoring and Controlling

Monitoring is collecting, recording and reporting information concerning any and all aspects of project performance that the PM or others in the organization wish to know.
They require significantly greater investment of time and energy early in the life of the project, but significantly reduces the extent and ~~loss~~ cost of poor performance and time or cost overruns.

Designing Monitoring System:

First step is to identify key factors to be controlled. PM must define precisely which specific characteristics of scope, cost and time should be controlled and then establish exact boundaries within which control should be maintained.
Best sources of items to be monitored are the project WBS, change of scope orders and the risk management plan.

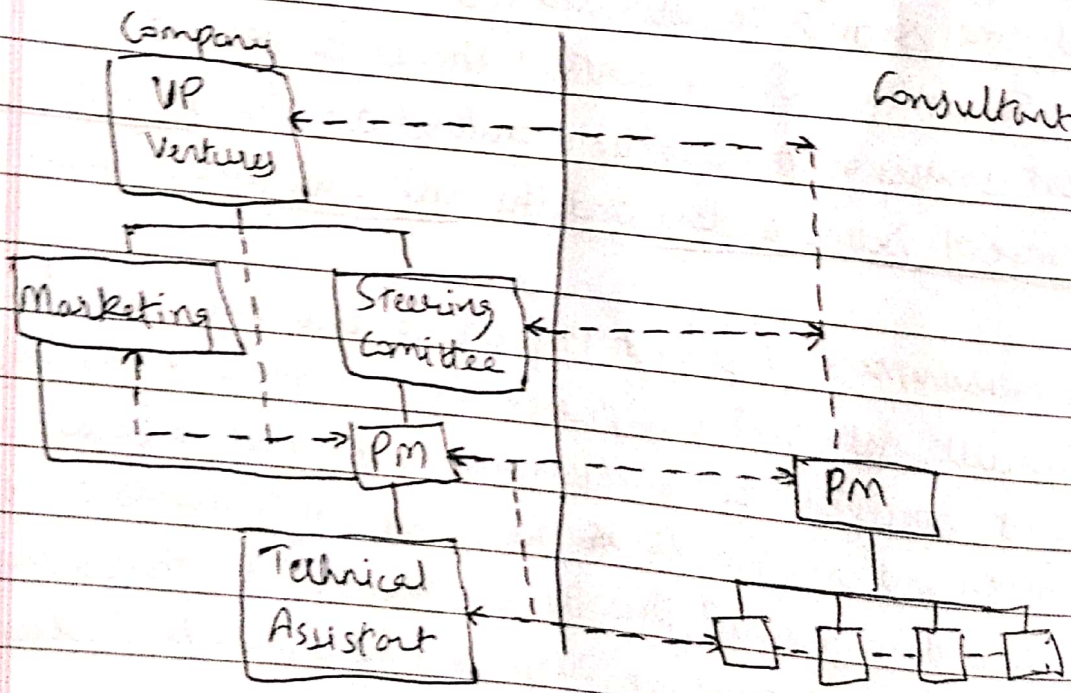
The measurement of project performance usually poses the most difficult data gathering problem. Eg. A communications software project specified that a telephone system had to locate a phone number and respond to the querier in 5 seconds or less. Is 5.1 seconds a failure? Does the spec mean less than 5 seconds every time or average response time should be 5 seconds?

We need to examine WBS to extract scope, time and cost goals. These goals should relate in some fashion to each of the different of details.

Reporting

Everyone concerned with the project should be appropriately integrated into the project reporting system.

Reports need not be of same depth or frequency for every level. Lower level personnel have a need for detailed info of individual tasks and factors affecting that task. Reporting frequency is high. For senior management levels, overview reports describes projects in aggregated terms unless management has a special interest in a specific activity or task. Reports are issued less often. In both cases, structure of reports should reflect WBS, with each management level receiving reports that exercise control at relevant level.



Reporting & information flows btw. organizations working on a common project

Reports should be scheduled in project plan.
Reports should be issued on time.

Benefits of detailed, timely reports delivered to proper people

1. Mutual understanding of goals of the project.
2. Awareness about progress of parallel activities and problems associated with co-ordination among activities.
3. Early warning signals of potential problems and delays in the project.
4. Minimize confusion associated with change by reducing delays in communicating the change
5. Higher visibility to top management, including attension directed to immediate needs of the project.
6. Keep client and other interested parties up to date on project status, particularly regarding project costs, milestones and deliverables.

Types of reports:

Routine: Issued on regular basis, but regular does not necessarily refer to the calender.

Exception Reports: Is issued when a decision is made on an exception basis and it is desirable to inform other managers as well to document the decision.

It could also be distributed to team members who will have prime responsibility for decisions or who have a clear "need to know".

Special Analysis: Used to ~~do~~ ~~do~~ disseminate the results of special studies conducted as a part of the project or as a response to special problems that arise during project.

All 3 types of reports are usually delivered in face to face meetings

Meetings.

Simple rules of meeting:

1. Should to have present start & stop times with well written agenda. Stick with both these times.
2. Make sure to do the homework before the meeting.
3. If you chair a meeting, take your own minutes. And distribute those as soon as possible.
4. Use meetings only for making group discussions or getting inputs for important problems. Avoid status & review meetings. Schedule meeting only when there is a clear need. eg. informing senior management.
5. Avoid attributing remarks or viewpoints to individuals in the minutes. It makes people wary about what they say in meetings & damps creativity. Do not report votes on controversial matters.
6. Avoid overly formal rules of procedure.
7. In case of serious problem or crisis, call a meeting for that purpose only.

Common reporting problems.

1. Too much details and unnecessary details.
2. Poor interface between project information system and parent firm's information system.
3. Poor correspondance between planning & monitoring systems.

X Earned Value Analysis:- Measure progres of the project
Whether the project is ahead of time or behind schedule or overbudget or unde budget.
Project should not be behind schedule or underbudget.

Project is 5 day long & cost 400 per day

Reporting (day)

400	400	400	400	400
1	2	3	4	5

At the end of 3rd day only 40% of work is done & it cost $1000

Find Earned Value & Decide

Actual cost work Performed

Actual cost ← AC (ACWP) = 1000

Earned value ← EV (BCWP) = 800

Planned value ← PV (BCWS) = 1200

BCWS → Schedule

Budgeted Cost Work Performed

CPI (Cost Performance Index) = BCWP(EV) / ACWP(AC) = 800/1000 = 0.8 < 1 overbudget

CV = EV - AC = 800 - 1000 = -200

if CV is -ve → overbudget

if CV is +ve → underbudget

Resource leveling, loading
Earned Value Analysis

Schedule Performing Index

$$SPI = \frac{BCWP\ (EV)}{BCWS\ (PV)}$$

$$= \frac{800}{1200} = 0.67 < 1$$

$$SV = EV - PV = 800 - 1200 = -400 < 1$$

behind schedule

EVA: Measure Progress of the Project

Activity	Predecessor	Duration (D)	Cost/day (C)	DXC Total cost estimation
A	-	2	300	600
B	A	3	400	1200
C	B	3	400	1200
D	B	2	200	400
E	D	3	100	300

Measure Progress of the Project
Field Report At the end 7th day

Activity	Annual Income (%)	Incurred Cost	AC ACWP	EV BCWP	PV BCWS
A	100	600	600	600	600
B	100	1400	1400	1200	1200
C	33	500	500	400	800
D	50	200	200	200	400
E	0	0	0	0	0
		Total	2700	2400	300

SPI = 0.8 < 1 CPI = 0.899 < 1 overbudget
SV = -600 CV = -300 overbudget

3.4 Resource Leveling

(Select any one case study explain the above topic) # day field report