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INTEGRATION MANAGEMENT

PROJECT MANAGEMENT COURSE

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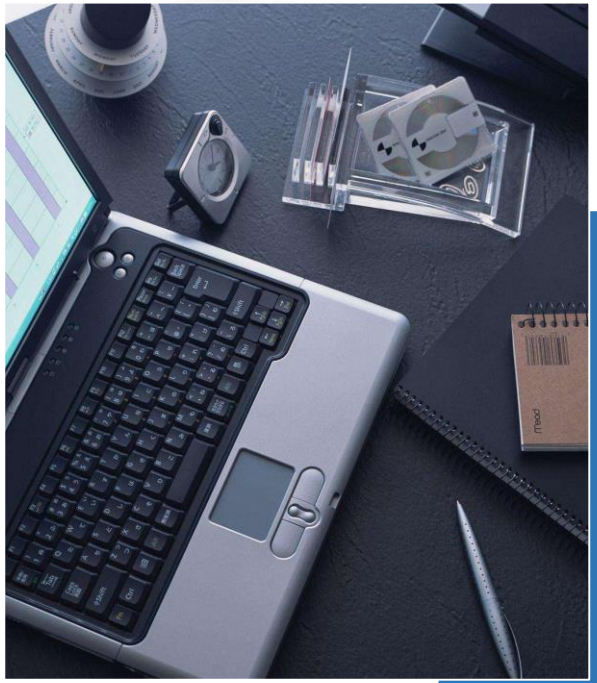


INTEGRATION MANAGEMENT

- It is the primary role of the project manager
- It is the process of pulling the pieces of the project together in a cohesive whole.
- It is balancing all the process in all the knowledge area (scope, schedule, cost, quality, resources, procurement, communication, risks, etc...)

❖ FACTORS TO DECIDE HOW TO FINANCE THE PROJECT

PAYBACK PERIOD

PBP = INVESTMENT/ CASH SAVING

RETURN ON INVESTMENT (ROI)

ROI = ((Revenue– Cost) / Cost) x100

COST BENEFIT ANALYSIS

COB=REVENUE/ COST

PRESENT VALUE

$$PV = \frac{\text{Future Value}}{(1+r)^{t}}$$

1. Payback Period: This term refers to the number of time periods it takes to recover your investment in the project before you start accumulating profit.

Question: you have two projects: A with a payback period of 3 years and B with 6 years which one you prefer?

EXAMPLE

PAYBACK PERIOD= INVESTMENT / ANNUAL CASH SAVING

Example: A project requires an initial investment of $200,000 and will generate cash savings of $75,000 each year for the next five years. What is the payback period?

SOLUTION : PBP= 200,000/ 75,000 = 2.67 years

2- RETURN ON INVESTMENT (ROI) :

Return on Investment (ROI) is a popular profitability metric used to evaluate how well an investment has performed.

You purchase your home for $1,000, 000. After living in your home for three years, you sell it for $1,120,000. The result, after three years, your home increased in value by $120,000.

$$\text{ROI} = \frac{(\text{REVENUE} - \text{COST})}{\text{COST}} \times 100$$

$$\text{ROI} = \frac{(\$1{,}120{,}000 - \$1{,}000{,}000)}{\$1{,}000{,}000} \times 100 = 12\%$$

2- COST BENEFIT ANALYSIS :

It compare the cost to the benefit/ if the COB is greater than 1, means project is profitable. CBA= (Revenue/ Cost) > 1 so project is ok
If CBA < 1 so project is not ok.

You purchase your home for $1,000, 000. After living in your home for three years, you sell it for $1,120,000. The result, after three years, your home increased in value by $120,000.

COB= REVENUE/ COST ⇒ **COB= 1,120,000 / 1,000,000 = 1.12**

COB > 1 Which means the profit is accepted.

PRESENT VALUE

- Present value represent the current value of a future cash flow

C

Future Value: returned amount of an investment
r = rate of interest
T: time of period of investment

EXAMPLE

You invested a $60,000 in a project . You have a rate of interest with 5% per year. Calculate the future value for 5 years ? Calculate the net present value?

SOLUTION

Interest : (60,000 x 5%) = 3,000 $ / Year and 15,000$ / 5years

So Future Value= 60,000 +15,000 = 75,000 $

Present Value:

PV= $\frac{75{,}000}{(1+r)^5}$ So PV= $\frac{75{,}000}{(1+0.05)^5}$ So PV= 75000/ 1.276 = **58,777.4 $**

❑ Depreciation: the assets of the organization such equipment, lose value within the time.

- **Straight Line depreciation:** With straight-line depreciation, the same amount of depreciation is taken each year.

  Example: A $ 1,000 item with a 10-year useful life (the value of an item at the end of its life) would be depreciated at $ 100 per year

- **Accelerated Depreciation**: Accelerated depreciation depreciates faster than straight-line depreciation.

  Example: A $1,000 item with a 10-year useful life and no salvage value (the value of an item at the end of its life) would be depreciated at $180 the first year, $150 the second, $130 the next, and so on.

THE RELATIONSHIP BETWEEN KNOWLEDGE AREA AND PROCESS GROUPS

Knowledge Area	INTIATING	PLANNING	EXECUTING	MONITORING & CONTROLING	CLOSE OUT
Integration Management	Develop project charter	Develop Project Management Plan	Direct & Manage project work Manage project Knowledge	Monitor & control project work Perform integrated change control	Close phase or Project

PROJECT CHARTER

It is the process of developing a document that formally authorizes the existence of a project and provides the project manager with the authority to apply organizational resources to project activities. the project charter involves planning the project at a high level to assess whether it is feasible within the given constraints.

Project title & Description of the project

Assigned Project Manager & Authority Level

Business case, An approximate schedule, a budget estimate,

Key Stakeholder list & requirement

Over All project risk & Over all project requirement

DEVELOP PROJECT MANAGEMENT PLAN

A project management plan is a document used to describe every phase of a project. It integrates all the individuals management plans into cohesive whole. It is sets of plans and baselines and not just a schedule. Project management plan can contain the following documents.

- Introduction to the project
- Project Management approach
- Project scope
- Milestone List
- Schedule Baseline & WBS
- Change Management Plan
- Communication Management Plan
- Cost Management Plan
- Procurement Management Plan
- Quality Management Plan
- Risk Management Plan
- Risk Register
- Staff Management Plan

❑ DIRECT & MANAGE PROJECT WORK

It is the process to accomplish the management plan and produce the deliverables. It involves managing people, and engage them in the project to complete the work. Project manager improves process, remove roadblocks that prevent the team to complete the work.

❑ MANAGE PROJECT KNOWLEDGE

Project manager should use the knowledge the organization has accumulated over the time. Such knowledge should be accessible for the teams. All teams should share info and knowledge with each others.

DIRECT & MANAGE PROJECT WORK

EXECUTION PROCESS GROUP

❑ MONITOR & CONTROL PROJECT WORK

It is a formal effort by the project manager to monitor and control how the project management plan and knowledge process area are going. in this stage the project manager monitor how the knowledge areas interact with each other, for example scope may can be completed but not within the required quality or not according to the schedule.

❑ PERFORM INTEGRATED CHANGE REQUEST

Project manager has to control the change request that might be raised during the project execution. It is not necessary to accept all raised change request. But all stakeholders should decide the necessity of the change

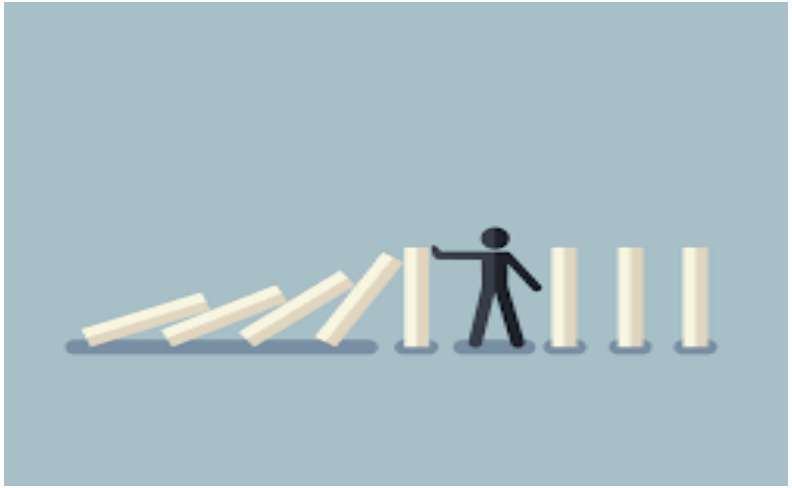
❑ CLOSE PROJECT OR PHASE

A project manager must get formal acceptance of the project and its deliverables, issue a final report that shows the project has been successful, issue the final lesson learned, and index and archive all the project records

MONITOR & CONTROL

CORRECTIVE ACTION:

A corrective action is any action taken to bring expected future project performance in line with the project management plan. Corrective actions are taken when the project has deviated from the planned scope, schedule, cost, or quality requirements.



PREVENTIVE ACTION:

Preventive action means dealing with anticipated or possible deviations from the performance measurement baseline and other metrics. The process for taking preventive action is not as clear as it is for taking corrective actions.

REVIEW TOOLS AND TECHNIQUES SHEET

❖ EXPERT JUDGMENT

Expert judgment is a technique in the project planning process that refers to making a judgment based on skill, expertise, or specialized knowledge in a particular area. The expertise can be based on an individual's training or educational background, career experience, or knowledge of the product/market

FACILITATION TECHNIQUE

Facilitation brings together stakeholders with different perspectives, such as product designers and end users, to talk about the product and, ultimately, define requirements. This technique uses a consensus approach, which achieves general agreement about a decision.

❖ ENTREPRISE ENVIROMENTAL FACTORS

Enterprise environmental factors external to the organization include governmental or other rules and regulations that apply to the performing organization. However, enterprise environmental factors are generally outside the control of the project team.

❖ Organizational Process Assets

❖ Assumption Log:

It is an important part of communication to understand what your management and stakeholders believe to be true about the project—these are assumptions. Assumptions are comparable to expectations, as they may not be entirely based on fact. Stakeholders may not realize they are making assumptions, and therefore may not articulate them when communicating their requirements. Incorrect assumptions introduce risk to the project, so they must be identified and managed by the project manager. The assumption log is a frequent input to planning processes, and updates to the log are outputs of many planning and control processes.

❖ DATA GATHERING

A- Brainstorming:

It is a technique used to generate and collect multiple ideas related to project and product requirements.

B- Interviews:

It is a formal or informal approach to discover information from stakeholders by talking to them directly

❖ Approved Change Request:

An output of the Perform Integrated Change Control process, and include those requests reviewed and approved for implementation by the change control board (CCB).

❖ Work performance data, information and report:

For example, let's say a project team performs their assigned work according to the project management plan. They provide information and data on their progress: a certain activity took 10 hours and was completed on July 21st. This is work performance data. The next step is to look at how this data compares to the project management plan (in this case, the project schedule). The activity in this example was estimated to take 12 hours, with an estimated completion date of July 22nd. You need to analyze why this activity took less time than planned and what this will mean for the rest of the project. Why was the work completed early? Will this mean improved performance for the rest of the project?

❖ Issue LOG:

Issue log is a document that you use during the execution process to record project issues and details about their resolution, including who is responsible for resolving each issue and the expected timeline.