Schedule Variation and Cost in Project Management
A Casestudy of Residential G+4 Apartment Bengaluru

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Abstract—The main objective of the project is to achieve the goal by completion of residential project of G+4 on time schedule where the project was set back for a month are so by improper planning and risk management later now reworking with new strategic planning of activity resources cash flow. Further the project is taken in a right direction and ahead of schedule by the help of management software primavera.

Keywords—Component; Formatting; Style; Styling; Insert (Key Words)

I. INTRODUCTION
In general a project is a designed set of interrelated activities to be accomplished over a fixed stipulated time and within certain budget and the relevance of data, abilities, tools and procedures to project events to meet up project scope is known as project management. But due to improper risk identification and management a project may tend to delay and exceed the budgeted cost. In order to determine the variation in the scheduled duration and cost. Consecutive arrangement of the planned events, representative durations with the early start and early finish dates for individual event is determined after the scheduling and overall cost for the resources required to complete the specified project is determined with the help of project planning management software primavera software p6.

II. EASE OF USE
A. Importance of Project management
Identifying requirements and managing the challenging demands for quality, ultimate output of project, duration and budgeting Adapting the detailed specifications, strategies, and approach to the different concerns and outlook of various shareholders.

B. Life Cycle of Project
It is broadly classified into two categories.
• Project Life Cycle Management
• Project Life Cycle
• Product life cycle Management (PLM)
It’s a new age concept that has come into the venture primarily due to spurt in technological advancements over the past few years. PLM includes implementing technologies like Portfolio Management, Program Management and Product Data Management.

• Project life cycle for a Construction Project
  ✓ Mobilization
  ✓ Excavation
  ✓ Foundation
  ✓ Walling
  ✓ Roofing
  ✓ Plastering
  ✓ Painting

C. Project Content
• Phase1: Forecasting, Scheduling, Resource Analysis and budgeting plan-(4M).
• Phase2: Communication, Updating Progress between Base plan and Actual performance.
• Scheduling
  ✓ Forecasting events and relationship between predecessor and successor.
  ✓ Preparing the Network Diagram. CPM, PERT, PDM
  ✓ Forecasting the critical path to start the project duration as per schedule.
  ✓ Assuming the project completion date.

• Resource Analysis
  ✓ Men, Material, Machinery & facilities
  ✓ Identifying over allocated resources
  ✓ Analyzing resource over allocation, work done in hourly basis, resolving over allocation by leveling resources, exercising better control over distribution of resources

• Cost Estimation
  ✓ Estimation of total project cost prior to execution of the project.
  ✓ Including various cost factors Fixed cost, baseline cost, actual cost etc.,

• Tracking Project Progress
  ✓ Editing the schedule based on project progress
  ✓ Earned value analysis BCWP,ACWP,BCWS
  ✓ Determining variances from the baseline plan i.e., schedule, cost variances
  ✓ Analyzing Project performance.

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Monitoring & Report Generation
- To capture, analyze and report project performance, usually as compared to plan.
- Both tabular as well as graphical reports are used to monitor the project performance.

III. METHODOLOGY

A. Risk management
For Our Residential Project we have adopted the risk management method to assume project duration later sequencing it into order to find critical path also forecasting the cost variations to assume and what risk management is all about is as follows:

- Risk Identification
  - Literature of product and other forecasting scope and historic information related to project
  - To do list of flow chart interviewing
  - Identifying of risk management, prospective hazard tasks and risk indications effort to other development in project.

- Risk Quantification
  - Stake holder risk forbearance, cradles of risk, prospective risk tasks, inflation budget estimating activity durations
  - Anticipated financial price, statically quantities, decision hierarchy professional conclusion
  - Prospects to purse threats, Chances to pay no attention to threats and accept.

- Risk Response Development
  - Prospects to purse threats, Chances to pay no attention to threats and accept
  - Procurement ,critical planning, substitute tactics, insurance
  - Risk management plan, input to other plans, eventuality plans, inverse contractual deed.

B. Steps involved in progress of project by primavera
- Creating a New OBS: In an organization where top level management peoples designation is described under their professional experience is run into hierarchy level.

- Creating a New EPS: The Enterprise Project Structure categorizes work in the organization, a hierarchical based structure that represents how projects are organized.

- Creating a WBS: The group of events and tasks in a project segregating or identifying into small work packages depending upon their merits is assigned in project.

- Creating calendars:
  - Creating a new calendar or Modify to edit an existing one.
  - Choosing the Calendar that we want to use as a template for new Projects.
  - Modify the Work Week add work/non-work days.
  - Check the “Default” Box to make the default Calendar for all future projects.
• Adding Activities: Activities are the primary work elements of project and they can further divided into steps. Activities are the lowest level of WBS.

![Fig -5: Activities tool bar](image)

• Duration: It's the basis for estimating the selected activity’s completion time which helps to determine whether the schedule, resource availability or cost are most important when updating activities.

<table>
<thead>
<tr>
<th>Events</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foundation</td>
<td>44 days</td>
</tr>
<tr>
<td>Ground floor floor</td>
<td>37 days</td>
</tr>
<tr>
<td>First floor</td>
<td>58 days</td>
</tr>
<tr>
<td>Second floor</td>
<td>58 days</td>
</tr>
<tr>
<td>Third floor</td>
<td>58 days</td>
</tr>
<tr>
<td>Fourth floor/Terrace</td>
<td>73 days</td>
</tr>
</tbody>
</table>

![Fig -6: Duration](image)

• Assigning Activity logic Relationships:
  ✓ Adding the "Relationships" tab.
  ✓ Assigning to add Predecessors / Successors.
  ✓ Selecting the Predecessor /Successor from the list.

![Fig -7: Assigning activity logic relationships](image)

• Scheduling: Its determination of timing of events in the project it also provides comparison of actual progress against plan and identifies deviations from the plan.

![Fig -8: Scheduling](image)

• Resources: Assigning of generic resources to activities is to find out the total labour, material and equipment cost of the project.

![Fig -9: Assigning resources](image)

• Spreadsheet: It provides the value of budgeted units based on the number of resource assigned to the particular activity and it display each and every day requirement of resources like labor, non labor, materials.

![Fig -10: Spreadsheet](image)

• Tracking: It provides a summary of scheduled progress and cost and also enables to track actual progress i.e. physical progress in site against the baseline. It indicates weather project is on schedule or behind the schedule.
ACKNOWLEDGEMENT

I gratefully acknowledge the guidance and support of all the people who helped us in completing this Project Phase one report.

I owe deep sense of gratitude to our institution, NMAMIT, Nitte for having given an opportunity to learn and complete this report.

I express sincere gratitude to Dr. Srinath Shetty, K, HOD, Department of civil engineering, NMAMIT, Nitte for his kind support.

I would extend my gratitude to our respected Guide, Mr. Akshay N K, Assistant Professor, Department of civil engineering, NMAMIT, Nitte for their valuable support and guidance.

I would also thank all the teaching staff of our department for their valuable suggestions and support. Thanks to people at NMAMIT, Nitte for their constant inspiration.

Finally, I would like to extend our heartfelt thanks to Mr. Shanmuga Sundar Reddy (CEO), Mr. Manjunath G (PM) and all Employee in C Line constructions for being very helpful, humble and friendly, helping me to learn during my Project period.

REFERENCES


