

Project management case study examples

[Technology](#), [Development](#)



Critical path identification for any project- planning phase is a necessary requirement. Project managers can also apply the critical path methodology to determine the amount of float on various paths.

The critical path is simply all the tasks that determine the end date in a project schedule. If one of those tasks is late by one day, your project end date extends by one day. Often, there will be tasks that are not on the critical path; this is due to slack in the project schedule.

Referring to your current schedule, quickly identify the tasks that have some float compared to the tasks that have no slack. Slack is the amount of time a task can be delayed without impacting the start date of a subsequent task.

Although many projects have only one critical path, some projects may have more than one critical paths depending on the flow logic used in the project.

Most of the times if the delays mentioned above occur, project acceleration or re-sequencing is done to achieve the deadlines . Critical path method is based on mathematical calculations and it is used for scheduling project activities.

The original method was developed for construction work, but can be used for any project where there are independent activities, as in the case in question. The activities that have a direct impact are identified in the critical path method.

Key steps

- Specification of the activity

This involves the use of work breakdown structure (WBS) to identify the activities involved in the project, only the higher-level activities are used, the critical path method may become too complex to manage and maintain.

- Establishing the activity sequence
- Which task should take place before this task?
- Which tasks should be completed at the same time as this task?
- Which task should happen immediately after this task?

Drawing network diagram

After identifying a correct activity sequence, a network diagram is drawn, using softwares.

- Estimation for each activity

Direct input from work breakdown structure could be used. most of the companies use 3-point estimation method in estimation.

- Identification of the criteria

Four parameters of each activities of the network are determined

- Earliest start time (ES)
- Earliest finish time(EF)-ES + activity duration
- Latest finish time (LF)- Latest time an activity can finish without delaying project
- Latest start time(LS) -LF – activity duration
- Diagram progress show

The critical path is a live arte fact; and should be updated with actual values on the task completion.

The true probability is often lower due to minimized slack where accurate critical path is determined. As in this case, the probability of finishing the project on 30th sep is high, given an accurate critical path has been

developed. Resources should be highly focused on project activities that have much slack.

Conclusion

Critical path identification for any project planning phase is a necessary requirement. The project management is thus gives a correct completion date of the overall project and the flexibility float activities

Critical path diagram should be constantly updated.

Recommendations

Multi sequencing of the project activities will help to shorten the duration of completion.

Maximaly minimize slack for accurate use of time as a resource.