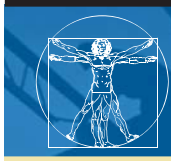


The Seven Most Common Errors in CPM Scheduling



Critical Path Method (CPM) Scheduling is an invaluable tool to the construction industry. However, despite more than 40 years of use, many seasoned professionals are still committing some common CPM errors, errors that dilute the effectiveness of even the most carefully constructed CPM schedule.

1. Lack of buy-in by the project team.

Over the past five years, more owners and general contractors have incorporated CPM scheduling into their construction project plans. However, their enthusiasm is not always matched by their project team. Getting buy-in from other members of the project team such as the project manager, superintendent, architect, and subcontractors, can sometimes prove difficult. Failure to get all parties on board may result in a well-executed schedule that rarely gets used.

2. Personnel ill-equipped to create a CPM schedule.

CPM, when properly executed, is a sophisticated tool that can save a client considerable time and money. However, oftentimes the contractor turns the scheduling over to an inexperienced team member. This person may have some CPM software knowledge, but lacks the kind of seasoned judgment that makes a plan work. The result is a schedule that contains flaws that can cause significant problems.

3. Inadequate software for the job.

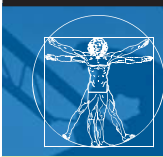
There are many CPM scheduling software packages available for purchase, some of which are sophisticated and capable of handling multi-million dollar projects, and some of which are too simplistic to be of use to anything but a small construction job. If your construction project needs “serious” scheduling, such as a \$15 million school or a \$50 million hospital, you need a software package capable of delivering more comprehensive reports and doing more complicated analyses. Choosing a software package that is less than what is needed is a sure way to cause scheduling problems.

4. Abuse of the scheduling software.

As the adage goes “garbage in, garbage out.” Someone who knows how to manipulate scheduling software can wreak havoc with a project’s successful completion. A CPM scheduler can choose different technical options, such as logic override, lead and lag calculations, or constrained dates when working with the schedule. If the scheduler’s constrained dates are artificial (chosen to create a certain result on paper), then the CPM is useless. After all, its purpose is to reflect realistic start and completion dates for the project’s activities. Team members who rely on a manipulated schedule to make decisions are misled, often with disastrous and costly results.



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5. Inadequate incorporation of changes into the CPM schedule.

A CPM schedule is a dynamic tool. As changes are made to a construction project, the CPM schedule must be accurately and continuously updated to reflect these changes. Unfortunately, all too often the schedule administrator does not incorporate the changes, or waits until the end of the job when it is too late. Regular monthly updates to the CPM schedule, including current and proposed changes, helps ensure that the changes on the project are correctly assessed and accommodated.

6. Lack of communication during the construction project.

It is not enough for the contractor to provide monthly updates of the CPM schedule and to produce updated reports. If this information is not communicated to the project team, or if the information is difficult to decipher, then the updates are useless. Oftentimes numerous long and confusing computer reports are issued that eventually cease to be read. One solution to information overload is a short (three- to four-page) written management analysis report that summarizes all the CPM information—what has been accomplished on the project, what still needs to be done, whether the project is on time or behind schedule, and what the next critical activities are that need to be addressed. With this kind of summary, team players are kept up-to-date with easy-to-digest and understandable reports.

7. Failure to maintain a comprehensive schedule for claims prevention.

Over the years, the purpose of the CPM schedule has broadened from a planning and scheduling tool to a way of protecting the project team in the event of a dispute. Used this way, a CPM schedule can be likened to an insurance policy, because it provides a record of a project's construction history. This history can be invaluable when tracing back the party responsible for a particular problem on a project. With a comprehensively planned CPM schedule and regular updates that contain all change orders, you have produced a file of information that can help prevent costly claims.

Conclusion:

A CPM schedule is a vital tool for well-managed, timely, and cost-effective construction. However, it is only as effective as it is used. Avoiding the seven errors listed here will go a long way to ensuring a successful construction project.

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