Ćatović at International Burch University undertook research into the effectiveness of the use of CPM within the furniture manufacturing industry. The study assessed how the implementation of CPM affected the completion time of projects within the industry. Overall the study concluded that CPM is paramount in planning and coordinating a number of activities, developing a realistic schedule, and subsequently monitoring the progress of the project (Göksu and Ćatović, 2012).

A critical path enables a project to be structured and organised, reducing risks and assessing budgets. It defines all tasks that must be finished in order to complete the project – a certain task cannot be started until others have finished (Darnall *et al,* 2016). Once a time frame has been allocated to each prioritised task, the critical path can be formed as the string of activities that add up to the longest overall duration, meaning it is the shortest time possible to complete the project (Slate, 2018)

Delays in tasks on the critical path have a direct impact on the project completion date. A project can have several, parallel critical paths (Usmani, 2020). An activity on the critical path cannot be started until its predecessor activity is complete; if it is delayed for a day, the entire project will be delayed for a day unless the activity following the delayed activity is completed a day in advance (Smith et al, 2008)

The critical path method covers five steps:

1. Developing the project network
2. Constructing the project network
3. The computation process of forward / back pass and slack
4. Critical path identification
5. Update of project progress

(Roseke, 2016; Jonsdottir, 2018).

A project network is created by allocating each task to a particular employee or team, each of these tasks have a deadline that is required to be met in order for the next task to begin. The individual employee or team retains the responsibility for managing their assigned task, and ensuring it is completed for the prearranged deadline (McIntosh, 2017). The more critical a task is, the higher the priority is for the company, meaning more company resources can be used on it (Roseke, 2016)

A basic example of a critical path is, activity X takes four months to complete, activity Y also takes four months to complete, yet it cannot begin until activity X is completed. Meanwhile, activity Z will take three months to do, but is not dependent on either activity X or Y. We can understand that the quickest time the project will take to be completed is eight months, as activities X and Y take four months each, and one cannot commence until the other is complete. In order to meet the eight-month time frame it is vital that activity X is started first so activity

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