

# History of pert theory and cpm

[Business](#), [Management](#)



Overview of History of PERT Theory and CPM History of Pert Theory Pert theory, which is also referred to as the project evaluation and review technique was established in 1957. It is a project management tool or technique that can be used to handle the whole project. The tool or technique was developed by the government contracting company Booz Allen Hamilton in Virginia in coordination with the Navy of United States Of America (Klastorin, 2003).

The objective behind establishing Project Evaluation & Review Technique was to support the project of U. S. Navy's Polaris Submarine (Honsinger, 2009). After one year of establishing Project Evaluation & Review Technique i. e. in 1958, the technique became useful in the Fleet Ballistic Missile Program. The Fleet Ballistic Missile Program had suppliers, contractors and other related parties to work on this particular project. At that time, the total number of contractors, suppliers and other related parties were around 3000 (Newell & Grashina, 2003).

In order to control, as well as, to plan cumbersome or highly technical projects, arrow diagram usage implemented. The evolution of arrow diagram technique was in the shape of Project Evaluation & Review Technique. In other words, the arrow diagram technique was later changed into the Project Evaluation & Review technique, also referred to as the later version of arrow diagram technique. After the World War II, the use and need for large scale project management had increased significantly. One of the major reasons was the Disaster Management or Recovery Projects. Therefore, Project Evaluation & Review Technique started to use not only for the Government, but also for the large Corporations.

The main idea behind the inculcation of the technique was the management of large scale projects, particularly for navy projects but due to the significant increase in the need for the project management, the PERT became increasingly important for the large corporations' projects.

#### History of CPM

In the same period when PERT theory was being worked on, another similar technique was introduced with the name of CPM, short for Critical Path Method. Critical Path Method was introduced by the company known as Du Pont De Nemours & CO. (Thayer, 1996). The Company was a manufacturing concern. The Objective of establishing the Critical Path Method technique was to make the Apollo Space Program successful, where it was extensively used. In Other Words, Du Pont De Nemours & Co significantly contributed or provided material to the Apollo Space Program of U. S Navy to support the Project Evaluation and Review technique.

The Company is considered the primary developer of body armour. The creation of Flake Jacket for Britain's Royal Air Force was also considered as the major contribution by the company in World War II. The other core reason for developing the Critical Path Method technique was to schedule the activities of the project. Critical Path Method was an algorithm, based on mathematics. During the year of Implementation, Critical Method technique saved around \$1, 000, 000 million of the company (Hendrickson, 2008).

Incorporating the Critical Method Technique in the management of Plant maintenance project made the project more efficient and economical. The Critical Path Method was initially developed with the intent to use it in the construction project; afterwards, critical path method became useful in

various other projects (Stelth, 2009). Some of the examples of other projects are as follows

- a) Product Development
- b) Research Projects
- c) Engineering
- d) Construction

There are various other projects that used the critical path method technique, but the only requirement for projects to use this technique was interdependent activities (Adigoke, 2011), with independent activities, it didn't prove very successful. In other words, any project that can make its separate activities interdependent can use the Critical Path Method Technique for the purpose of establishment of efficient project Planning.

Both the PERT theory and CPM are extensively used in project management. Figure I shows the colored chart for PERT technique. This chart represents five milestones (10 through 50) for six tasks (A through F). Two critical paths have been incorporated in this chart. For the time line of seven months, there is a choice for activities B and C, or A, D, and F. There is one crucial think to point out that the activity E is sub-critical and has a flexible time line (technically known as float) for one month.

Figure I

PERT Chart1

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