



EPICENTRAL

A Newsletter from Epicenter Development Group highlighting ideas that improve organizations

Welcome to Epicenter Development Group's newsletter, EPICentral. The purpose of this newsletter is to highlight fundamental ideas that have helped organizations develop and maintain great manufacturing and service operations. We hope that you find our EPICentral newsletter helpful, and we would welcome your comments on its content.

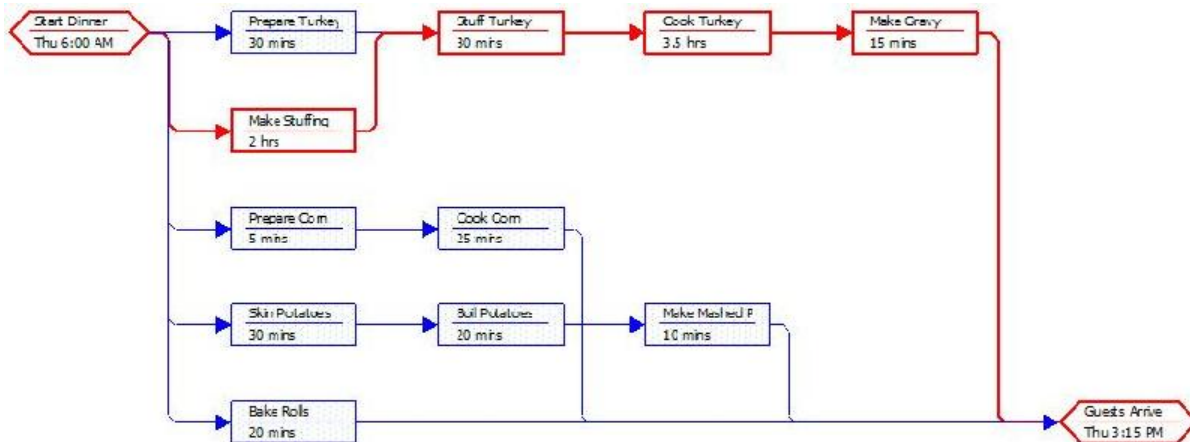
Critical Path Analysis: The "How-To-Prioritize" Tool for Projects

Imagine you're cooking a big Thanksgiving dinner - Turkey, mashed potatoes, the whole works. Your guests will be arriving in six hours and you want to make sure that everything is done on time. What's the first thing you need to get started to make sure that you're successful. This month's article is about Critical Path Analysis - a method for knowing what few, critical items to focus upon to be successful in both your projects and at work.

Critical Path Analysis revolves around the idea that, among the activities required to get from the start to the finish of a project, there is one "critical path" that controls the overall project timing. Delay an activity along the "critical path" and you delay the whole project. Conversely, if you find a way to save time along the "critical path" then you can finish your project earlier.

Identifying the Critical Path

1. Step #1: Identify all of the tasks required to complete the project.
2. Step #2: Estimate the time required to complete each task listed.
3. Step #3: Determine the relationship between the tasks and draw a network diagram (see example below).
 - o Notice that task relationships can be sequential (one follows another) or parallel (can be done at the same time). There are also a variety of other relationship rules that can be used which we won't cover in this article.
4. Step #4: Identify the critical path as the path from project start to project finish that requires the most amount of time.
 - o The example below identifies the critical path for making a Thanksgiving dinner (in red). In this case, the critical path involves the time to make the stuffing, stuff the turkey, cook the turkey and, then, make the gravy. These four activities essentially control the time to complete the "project" and, in our example, when dinner will be served.



Considerations:

- Critical Path Analysis is a great tool for understanding what project tasks need to be prioritized, how to best assign resources to projects, and what deadlines are required for project tasks.
- Note that the critical path can change throughout the project when task completion times slip.
- There are a variety of ways to shorten the project duration, and they all revolve around the critical path (eliminate or combine tasks, reduce task duration with additional staffing, etc.).
- There are a number of computerized tools available and that Epicenter uses to generate network diagrams such as MS Visio, MS Project and Primavera. Some, such as MS Project, will automatically generate a Critical Path Analysis based upon the network diagram.

Next Steps

If you would like more information on this topic or other similar types of tools, please contact Bill Proctor with your request at wproctor@epicentergroup.com or 216-702-0952. You can also find previous issues of EPICentral at [Newsletters](#).

Mr. Proctor also speaks on a variety of problem-solving and system design topics that can help companies significantly increase the success and profitability of their businesses. If you are interested in having Bill speak at one of your upcoming meetings/events or would like more information on any of the speaking topics, please visit [Speaker Services](#) or you can email sales@epicentergroup.com.

Epicenter Development Group is a unique consulting firm that seamlessly integrates the disciplines of Systems Engineering and Organizational Analysis & Development to create practical design solutions to your toughest challenges. It is on the cutting edge of problem-solving solutions and the creator of a unique process called GreenRoom Engineering. This process adds greater

value and cost savings for clients as compared to traditional engineering methods.

William Proctor, Epicenter's founder and president, has provided services around the country to more than 100 companies consisting of a variety of organizations; and Epicenter continues to grow as a resource for firms of all sizes.

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