

# Strategy for Multi-Project Management

By Gerald I. Kendall

## A Theory of Constraints Approach

As organizations get ready to implement their 2001 strategies, project management is on many executives' minds. The record of many companies in getting projects completed on time, on budget and within specifications is abysmal. The Theory of Constraints offers an excellent solution—Critical Chain.

The major benefits of Critical Chain come through a holistic approach to all of the projects in an organization—the multi-project solution. In parallel with Critical Chain, over the past several years, a paradigm called the Project Management Office (PMO) has evolved. This approach advocates a corporate function that sets standards, delivers training and offers support for project management across an organization. The Project Management Office and multi-project Critical Chain go hand in hand.

The resistance of executives and managers to these exciting new approaches is extremely high. Most executives are very

resistant towards any suggestion that involves an increase in overhead. The past experience of executives leads them to believe that the cost side of the equation always comes true, while the benefits often do not.

The Project Management Office (PMO), in combination with multi-project Critical Chain, implemented correctly, is a win-win solution. The company should benefit significantly in its bottom line, every project team should benefit, internal users from every functional area should benefit and the customer should benefit.

If the benefits are so obvious, why, then, should the concepts be so difficult to sell and implement correctly?

There are two key reasons:

The people who are selling these ideas are very enthusiastic about the benefits. This enthusiasm leads them to present to the executives in the wrong sequence and push too hard. The more enthusiastic the advocates, the greater the resistance on the other side.

There are some key omissions in the strategy the executives recognize as critical to translating the idea into ongoing bottom line benefits.

Therefore, the strategy to successfully sell the concepts to executives is twofold. First, presentations must deal with each layer of resistance in the correct sequence.

The other key aspect of the strategy involves the correct measurement. From the executive point of view, the correct measurement is one that is likely to meet the bottom line and other goals of the organization.

The sequence of selling executives and a set of measurements for the PMO, including a Critical Chain approach, is suggested below.

### Layers of Resistance

#### Layer 1—People do not agree with you on the problem.

One of the biggest reasons for people failing to sell their ideas is that they jump, much too quickly, into their solution. Before doing this, there are several layers of resistance that must be dealt with in sequence.

Layer 1 is that people do not agree with you on **the** problem. Before we can overcome this layer of resistance, we must distinguish between the many symptoms of a problem, and **the few root causes**.

In any review of project management

**“Tell me how  
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and I’ll tell you how  
I will behave.  
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problems, each executive looks at these problems from his/her own very unique perspective.

For example, the financial executive hates the problem of projects being over budget as much as having an internal rate of return lower than if the money had been invested in the bank.

For Marketing executives, the worst problem may be that their projects are constantly being delayed by conflicts over resources.

The Information Technology people see many projects starting and stopping, with priorities constantly changing. In many organizations, over 30% of I.T. projects are started and then abandoned. Resources are multitasked and precious time is often wasted moving from one project to another to another, even within the same week.

Similarly, sales, engineering, production, operations and logistics and other functional executives have their own opinion as to what the biggest problem is in



managing projects.

Before even beginning to talk about Critical Chain or the PMO, the advocates must get the executive team to agree that their biggest problem will be addressed.

The Theory of Constraints approach to doing this is by showing how each of the problems described above is related to the common, underlying root causes. Simple, clear cause-effect logic is essential.

In organizations without a holistic approach, each project is an entity unto itself. Projects are typically sponsored by functional executives, or sometimes even at lower levels in the organization. Each project, therefore, focuses on what will help that functional area, often in direct conflict with, or to the exclusion of, having an overall beneficial effect on the entire company. For an excellent example, see the book *Necessary But Not Sufficiently* by Eliyahu M. Goldratt.

Organizations work this way because of the corporate measurements on functional executives that lean heavily towards improvements in each area. The assumption is that improvements in each area add up to a big improvement across the entire organization. This assumption is wrong.

At the very least, all of these projects, initiated separately, will come in conflict with each other over resources. The unavoidable result will be terrible multi-tasking of resources, extended cycle time of projects and a much smaller number of projects completed than the organization's potential.

Further, the organization's training dollars are no longer leveraged by being tied directly to solving these problems.

These measurements, skills and policies are the source of all of the project management problems described above.

The Theory of Constraints Current Reality Tree shows this logic and develops agreement on the root problem. Simulation exercises can also help gain buy-in to the root problems.

**Layer 2—People do not agree with**

**Before even beginning to talk about Critical Chain or the PMO, the advocates must get the executive team to agree that their biggest problem will be addressed.**

**you on the direction of the solution.**

Once you have agreement on the problem (i.e., the root problems), the next layer of resistance is that people do not agree on the direction of the solution.

For example, one executive may feel that, rather than establishing a PMO and implementing Critical Chain, his/her direction for a solution is to have the executive team do this function in their "spare time."

There is always more than one way to overcome a problem. What the TOC advocates must show, at this point, is that there is a conflict between these different directions, and that some directions have serious negative effects. The Conflict Cloud, and its underlying assumptions, works wonders in executive meetings to explore the assumptions underlying opposing directions.

For example, assuming the conflict exists between the executives and the people advocating for a TOC approach, both sides will easily agree that they have a common objective—"More improvement from project work." To achieve this, one necessary condition is that projects are aligned at the functional level to avoid conflicts. Another necessary condition is that project management practices are improved everywhere.

In this example, the conflict arises over how to achieve these necessary conditions. Only when the advocates can prove that both needs can be met with a PMO/TOC combined approach, can you move on to

address layer 3.

**Layer 3—People do not agree with you on the solution**

The next stage is "prove it!" Prove that the implementation of a PMO with Critical Chain will eliminate all of the problems and result in meeting the needs discussed above.

The Theory of Constraints tool used to accomplish the logic construction is the Future Reality Tree

**Layer 4—People believe that the solution will lead to negative side effects**

Once you have reached this layer of resistance, don't blow the executive support by ignoring these concerns or expecting praise. The executives are saying that they agree that the solution will overcome their problems. However, they believe that some new negative consequences will result from the solution.

We want to understand exactly which part of the solution leads to the negatives, and under what circumstances. The negative branch logic is "feedback" to the executives – it confirms that we understand their fears. At the same time, this technique makes it easier to identify where some additional ideas are needed to overcome the negatives.

**Layer 5 – People see obstacles to implementing the TOC approach**

At this stage, the advocates need only document (rigorously) all of the obstacles that the executives see, and give the executives the first shot at how they would like to overcome the obstacles. In Theory of Constraints terms, this is defining the Prerequisite Tree. Every obstacle is converted to an intermediate objective.

This is an excellent layer of resistance to arrive at, since we can move from this stage directly to an approved project plan and charter to implement the PMO with Critical Chain.

**Strategy - Measurements**

"Tell me how you measure me, and I'll tell you how I will behave. If my measurements

are unclear, no one can predict how I will behave, not even me". —Dr. Eli Goldratt

There are always projects required to accomplish an organization's annual goals. The more projects completed, the better the chances of meeting or exceeding those goals.

In this respect, there are two key measurements for the PMO. The correct approach is a combination of both factors.

**Project Net Profit \$**—If the PMO is successful, the volume of profit \$ should increase from year to year. This should come from more projects being completed, better management of resources, fewer overruns, etc.

**Project Cycle Time, in Days**—The shorter the cycle time, the more projects the organization can complete, the faster the investment is returned to the organization.

The combination of the two is a ratio, which I will call Project Dollar Days. It is the total project net profit \$ from all projects, divided by the total number of days duration of project cycle time required to generate those dollars.

For example, assume that last year, the company attributed \$5,000,000 net increase in profits (net present value) to the projects they implemented. Assume that the total days duration of all projects combined was 10,000. Then the Project Dollar Days works out to \$500. Every day that's elapsed on a project was worth, on average, \$500 to the company's bottom line.

If, after the PMO is implemented, the project net profit dollars increases the following year to \$8,000,000 and the total days duration decreases to 8,000, then the project dollar days have doubled to \$1,000. If the baseline doesn't exist, it needs to be created.

Remember that the projects themselves are being managed today without a PMO. To say that the PMO is adding value to the process, we must have this ratio (or something equivalent) improving each year.

## Consider quality, for example. What is the impact of a project that produces a poor quality product or service?

What about other benefits that a TOC approach brings to an organization? For example, the probability of projects completing on time, on budget and within scope should significantly increase. If the organization has better trained project managers, with better skills for managing teams, this will also have a significant impact on project success.

That is the beauty of having the right measurement. All of these benefits, and more, are reflected in the Project Dollar Days measurement.

Consider quality, for example. What is the impact of a project that produces a poor quality product or service? There will be rework. This will hurt the Project Dollar Days measurement. Therefore, this measurement will also contribute inherently to the right kinds of quality initiatives from the PMO.

What about projects that do not identify a bottom line? Today, there are far too many of those projects on the books of most organizations. If a project should contribute to the bottom line, but if the project sponsor can't approximate the value, it usually means that the sponsor does not understand the cause-effect link between the project and its ultimate benefits. This is a good candidate for a project to kill.

There are projects that are truly not going to generate a tangible dollar value to the organization. In order to get control of the project environment, all projects should come under the PMO. Remember

that there are two measurements – one for dollars, and one for days. The non-ROI projects should still be completed in fewer days than before. So the measurement still holds. Also, if the company has too many non-ROI projects in a given year, the company will suffer consequences. The PMO is a good organization to be a watchdog on the balance of projects, and to raise the red flag when too many projects without explicit value are being undertaken.

With this kind of measurement, well thought out in advance, the idea of implementing a PMO should be accepted more quickly by executives.

### Conclusion

In summary, the creation of a PMO with Critical Chain, as an integral part of Project Management improvement, must be sold to the executive level by overcoming the layers of resistance that are frequently present. Among the selling points is the ability to see bottom-line results through an effective measurement system.

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