

**Building a PMO to Last**  
*A Theory of Constraints Approach*  
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In my work in Asia, Australia, USA, Canada and Europe, in every company I visit, management is complaining about the number of projects that are on the go. Project managers are often angry about how unrealistic executives have become with their due date demands and resource allocation. At the same time, from my experience, I can tell you that executives are not making demands to be hard-nosed. They are caught between a rock and a hard place. They feel forced to escalate their demands, even without a softening economy. Every PMO must find a way to *quickly* help both sides, or they will soon be dead.

Having an experience base of 35 years in project management is not enough to justify some outrageous claims I will share with you. My PMP designation is also insufficient. Even my 88 year old mother doesn't believe that I'm so smart. So the only way that I can justify what I am about to tell you is through experience – mine and that of a few other professionals who have achieved something very special in terms of project management within an organization.

The most outrageous claim that I documented for a chapter in Dr. Harold Kerzner's book, *Project Management – A System's Approach*, was a case study about a company that increased the number of projects they were able to complete with the same resources by 300%. Average project durations were cut by 50%. In all documented cases, the improvements were accomplished within less than a year. In all of the several dozen cases that I have read, investigated, or implemented myself, where the same approach was used, the minimum improvement was 25% and in all but two cases, the improvement was done within less than a year, often within a few months.

I am convinced that there is only one way to accomplish such results in an incredibly short time – and that is FOCUS ON ONE MAJOR ROOT PROBLEM. However, the focus must be on the *right* problem, or the effort will be a complete waste. What amazed me when I first learned a methodology called Theory of Constraints (TOC for short) some 10 years ago, was how obvious the problem is, after you discover it. In fact, you don't need 15 management consultants and a 6 month study to discover it – a few symptoms of the problem and a few days will do fine.

In Project Management, the genius who invented TOC, Dr. Eli Goldratt, describes in his book, *Critical Chain*, how so many negative effects are driven by a common measurement that most organizations use today. Today, when an estimate is given for a project task, it becomes the standard of performance against which team members are measured. People who are frequently late on task estimates are considered unreliable. No wonder people try to get “realistic estimates” for their task times.

It is totally ludicrous to hold someone accountable to a task time estimate. An estimate is just that – an estimate. A project, by definition, is something we have not done exactly the same way before. So it is perfectly normal for any estimate to be exceeded, even by 100% or more.

Aside from this bad practice of holding people accountable to their estimates, there is another sinister attribute of today's project management environment that drives task estimates through the roof – bad multitasking. Almost every team member that I meet has the perfect excuse about why a 5 day task must be allotted 10, 20 or even 30 days to get done. “I'm working on six other projects, plus I have operational responsibilities. You're crazy if you think I can just work on your project.” No wonder, with a company I visited in Canada, a new product development that should have been completed in 2 months required a year and a half (no exaggeration)! No wonder a strategic plan that the executives should be able to implement within 3 months ends up taking all year and is still not completed.

Why is there so much bad multitasking going on today? When I meet with CEOs and senior management, I find that they are constantly pushing new projects into the system, irrespective of the capacity of their organization to do the work. If they managed their capital expenditures this way, every single one of those companies would have been bankrupt a long time ago. But, a PMO must understand that executives believe that they have no choice in this behavior. They feel that they must constantly activate new projects in order to get the improvements to warrant keeping their jobs.

What executives do not realize is that when a system is already at or over capacity in project management, activating new projects throws the system into chaos. They are choking the already clogged arteries of project work and wasting 25% or more of their resource time, either with bad multitasking or by having them work on the wrong project mix.

Goldratt's prescription is profound. He claims that “the more complex the problem, the simpler the solution must be, or it will not work.” A further hint on his philosophy comes from his background in physics, a science that does not like to accept the existence of complex systems. Goldratt claims that, “I probably would have found my answers sooner, if I had studied theology rather than physics.” The principle of oneness is something that Goldratt believes aligns well with human beings. People do much better when they put all their energy and focus into one thing, rather than many things. Perhaps this explains why Balanced Scorecard performance measurement systems, with 8-12 measurements, have fared so poorly in the past few years.

To help people apply a process of ongoing improvement, Goldratt invented five focusing steps. To date, these steps have led to breakthroughs in manufacturing logistics, distribution and supply chain improvements, project management, marketing and overall strategy. Below, I have described these 5 focusing steps and how they have been successfully applied in project management:

1. ***Identify the System's Constraint*** – This step asks where your biggest leverage point for improvement is, when considering how any system behaves over a period of time. In project management, within the multi-project environment, the practice of activating projects without consideration of the capacity of the system is changed to staggering projects according to the capacity of one resource – the strategic resource<sup>1</sup>. Within each project, the practice of holding team members

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<sup>1</sup> See Gerald Kendall and Steven Rollins, *Advanced Project Portfolio Management and the PMO*, J. Ross Publishing, 2003, Chapter 17

accountable to individual task estimates is replaced by the holistic measurement of meeting the project due date. The Critical Chain is identified as the physical sequence of tasks that determines project duration. It is the longest chain of dependent events, considering both task and resource dependencies.

2. ***Decide How to Exploit the System's Constraint*** – This step urges us to squeeze the most out of the project's duration. For individuals who are working on Critical Chain tasks, this means applying a “relay runner work ethic” to those tasks. In projects, every team member and every manager – resource, project and program managers, put their heads together every week to make explicit decisions on how they can speed up the project's duration via focus on the Critical Chain. Every day that the Critical Chain is shortened is a day saved for the entire project. For the multi-project arena, the focus is on the strategic resource and significantly reducing the practice of bad multitasking.
3. ***Subordinate Everything Else to the Above Decision*** – In order to squeeze the maximum out of a project, everyone must play second to the constraint, including executives. Executives subordinate to the constraint, the strategic resource, by agreeing to only activate projects according to the agreed-upon capacity of the strategic resource. Team members and others subordinate to those people doing Critical Chain work by helping them in any way they can. This might mean doing their email for a few days, performing support work on their behalf, making sure pieces of input work are ready on time, etc.
4. ***Elevate the Constraint*** – In project management, elevate usually means adding resources. Note that this is where we will be spending more money. Goldratt found, over a period of 25 years and applying the five focusing steps, that often we can accomplish enough to break a constraint by simply performing the first three of the five focusing steps. That is why he sequenced the elevate step as step 4 – it is most often not necessary.
5. ***Go back to Step 1*** – Do not let inertia become your constraint. If we are to have a process of ongoing improvement in project management, we must keep looking for the biggest leverage point. That is the correct job of a PMO.

While PMOs stand to gain a huge amount of credibility by implementing a Theory of Constraints Critical Chain approach in projects, the best is yet to come. When Goldratt's life's work is applied to an organizations logistics and strategy, the results are even more exciting and more holistic. Anyone who believes in, and has had success with, Dr. Edwards W. Deming's approach to quality and predictability in systems will find Goldratt's work a logical extension to and very complimentary with Deming's work. It also fits nicely with Six Sigma and Lean methodology.

The Theory of Constraints has been applied to not-for-profit organizations, manufacturing, distribution, government, schools and every type of organization you can imagine. There are now over 20 books on the subject, self-study CD programs, articles, white

papers and tens of thousands of web pages devoted to this subject. For a further introduction and a list of available literature and products, see [www.tocinternational.com](http://www.tocinternational.com). Or email your inquiry to [Gerryikendall@cs.com](mailto:Gerryikendall@cs.com).

Above and beyond the organizational improvements that I've personally witnessed from this approach, the most heartwarming effect has been the improvement in quality of life of project management professionals. A project manager, today, has to have unbelievable dedication just to tolerate the constant challenges and resource conflicts they face. When such significant changes are made in their lives, within a few months, the reaction is often disbelief. Most project managers have seen countless attempts to improve things, with little to show for it. Of course, when attempts are made to improve things and those things are not **THE MAJOR ROOT PROBLEM**, it is no wonder that everyone gets frustrated in the process – including even those doing the improvement effort.

It is only an assumption of physics that the world is simpler than we sometimes think it is. If you are willing to try that assumption, you will be amazed at how powerful it is and how fantastic the results. Good luck with your efforts and I wish you success and longevity.