

ECHOES OF THEORY OF CONSTRAINTS (TOC)

A collection of stories, articles and white papers related to the Theory of Constraints from leading TOC experts and academics

Collected and Presented by Rajeev Athavale



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VOLUME 1

The Echoes of Theory of Constraints (TOC) - Volume 1

A collection of stories, articles and white papers related to the Theory of Constraints from leading TOC experts and academics

Rajeev Athavale

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This book is dedicated to



DR. Eliyahu Goldratt

“I smile and start to count on my fingers,

One, people are good.

Two, every conflict can be removed.

Three, every situation, no matter how complex it initially looks, is exceedingly simple.

Four, every situation can be substantially improved; even the sky is not the limit.

Five, every person can reach a full life.

Six, there is always a win-win solution.

Shall I continue to count?”

Preface

I am very happy to present this eBook “Echoes of TOC” to you. Let me take this opportunity to share with you my thoughts about this eBook:

Why this eBook? What inspired me to think of it?

On the other day, I was searching something on my computer. I was looking for an excellent story about how measurements drive behaviors. My impression was that my folders are well-organized and I will easily find the article and the story that I was looking for.

However, to my dismay, I could not find it - even today, while I remember the story, I don't know which article carried it.

This was quite upsetting.

The silver-lining was that, during the process of searching, I discovered many good articles that I downloaded over the years and I felt good about it.

It took me down the memory lane. It all started, as it happened with several people, I accidentally came across the book “The Goal”, and it changed my life. Like everybody else, I went through the other books written by Dr. Goldratt. As you know, most of his books are in story form.

Then I wanted something that tells me in detail what TOC is and how to go about it. So I started searching on the net and I came across many websites, white papers and articles. I downloaded many of them, from time to time and studied them.

During this process, I did not realize when I became passionate about TOC. I changed my career and got into TOC fully.

Training programs, books, videos etc. are great sources for learning TOC. However, it is difficult to go through them again and again. No doubt, that they build the knowledge. Getting practical experience helps to capitalize on it. But it is the articles, stories and white papers that help to sustain and enhance the knowledge so gathered. It is like learning from somebody else's experience.

So, I downloaded many articles and stored them safely on my hard disk. Even today I refer to them and enjoy reading them again and again.

Although I have a treasure of articles, there were occasions when I could not locate a specific article or some story or some example on my computer; so I searched for it again on the net and in many cases, I could not find it.

I realized that I have spent huge amount of time on the net to reach these articles and if I don't preserve them systematically, I am going to lose them.

So I was asking this question to myself: What am I going to do about it? Do I want every other individual to hunt for them to gain better understanding of TOC? But then it requires lot of time and patience.

More than ever, I felt the need to preserve and make available valuable TOC related creations. Over the last thirty years or so, many TOC experts have published several excellent creations on

their websites, blogs, Newsletters, Books etc. They are all scattered. There is a risk that with the passage of time, we may lose these creations and with them we deny opportunity to people, to understand well, many TOC concepts.

I started thinking. Had these articles not been there, my learning about TOC would have remained incomplete. Even today, I feel like referring to them. The chances are, with the passage of time, these wonderful creations may get lost on the net. Even today, they are not easily reachable since they are all spread across the net. They are hiding in numerous websites, Blogs, Newsletters, Wikipedia, books etc.

When I come across new articles from time to time (though they were written many years ago, but I discovered them now), I realize that there is a huge hidden wealth of TOC knowledge. Somebody needs to bring it out.

It would be worthwhile bringing them together in a form of a book, preferably an eBook.

So I decided that I am going to do something about it. I will collect all such articles and publish them in the form of eBook.

So the germ for this eBook got inserted in my mind.

The Journey

So I got started.

I gathered the articles that I had. I made a list of authors who wrote them. I also made a list of authors who I believed could contribute.

However, one question was bugging my mind.

Why would authors allow me to use their articles?

Am I going to buy the rights from them? If I want to buy the rights, then many authors may not want to sell, it is difficult to set a price and it could mean some investment from my side. I have zero experience in such deals. After all I am not a professional publisher.

If I want them for free, I need to find an answer to the question: Why would they allow me to use their articles free of charge?

One thing came to my mind. Most of these authors have expressed gratitude towards Dr. Goldratt. So I had a feeling that if somehow I could use their articles in some way to promote the cause of TOC, perhaps the authors will gladly agree.

But how? I was restless.

Then an idea came to my mind: What if I share the major part of the royalty to one of the trusts created by Dr. Goldratt or his associates? Eureka! The authors may agree since most of them have expressed a sense of gratitude towards Dr. Goldratt, so hopefully, they would not mind if a fair percentage of royalty is shared with any of the trusts created for promoting TOC.

But do the trusts need money? I decided to try with one of them. I approached Carol Ptak of Goldratt Foundation with the proposal. And fortunately, she agreed! She agreed to receive money on behalf of Goldratt Foundation!

I agreed with Goldratt Foundation that out of royalties that will be due out of the sale of this eBook, after deducting the charges levied by the website, I will share 70% of the royalty with

Goldratt Foundation. By the way, I have chosen www.leanpub.com¹ for publishing this eBook and their current charges are 10% of the selling price plus USD 0.50.

So I got a good reason to put forward to authors for requesting for their contributions. I was wondering whether there are some more good reasons for them to contribute and I discovered a few:

1. It is a nice way to pay tribute to Dr. Goldratt.
2. Their creations are preserved for a longer period of time.
3. Such eBooks may enable them to reach more and more people.
4. By way of contributing to the eBook, their creations are used to help people understand TOC better.
5. Their one-page information will be included in the eBook. It may help them in some way.
6. They will receive a free complimentary copy of the eBook where their creations are published.

With these things in place, I decided to go all out.

I used the places where most TOC people flock. Places like Linkedin Discussion Groups and Yahoo TOC sites. I wrote there and appealed to people.

I wrote to the authors whose articles I already had and asked for their permission. I also wrote to many of my Linkedin contacts and requested them to contribute with their creations.

I patiently followed up and most authors obliged. Many others wanted to contribute, but could not keep the desired timeline. Few bowed out for some reason or the other.

Articles started flowing in and I got buried under them!

My initial expectation was that I will have about 40-50 articles, I will choose some of them and will produce an eBook of about 150 pages.

To my surprise, I received more than 100 articles! Out of that, I shortlisted 80 articles which I believed to be a “MUST” for the eBook.

Then I had another problem. If I were to process all 80 articles, it would take huge amount of time. Also, it would be an eBook having about 500 pages! Too much to read. So I decided to break them in two volumes of 40 articles each.

It was not only the volume that bothered me. My problem was how I am going to organize the eBook so that it is an easy read for people.

Since I was not expecting so many articles, I started grouping them based on the various TOC topics, as and when they came in. Some topics had many articles, some had fewer.

So I thought that I will put some topics in Volume one and the remaining in Volume two. But then the question was: Is this a onetime activity that I am doing? Will I not want to come out with Volume 3, if this idea appealed to the people? Have I really captured all the articles that are worth preserving? Do I mean that no new articles will ever be written?

There was only one answer: “NO”.

¹<http://www.leanpub.com>

In that case, it is obvious that I cannot group them topic wise and let the topics spill over multiple volumes.

But then, how do I organize the articles? The answer depends upon what I want.

What do I want?

I know what I want, but I must take the pain to verbalize it.

I want people to read this eBook. But the question is: Who is my target audience?

I thought over it and my answer was:

I expect different categories of people to read and refer to this eBook.

There are TOC experts who would want to read, refer and give pointers to their clients for reading.

There are TOC Enthusiasts who would want to read and enjoy the articles.

There are managers and implementers who would read this book to strengthen their concepts and reinforce what they learned in the past.

There are fresh MBAs who are learning TOC and would want to benefit by learning from somebody else's experience.

There are trainers who would want to benefit by telling the stories that they will find in this eBook.

All these categories of people should find this eBook interesting to read. It needs to be sequenced in such a way that every time they refer to this eBook, they should find something interesting. The eBook need not be read in sequence. People may look at the Table of Contents and would choose what they want to read today depending on their mood at that time.

So you will find a basket of articles, full of variety sprinkled across the eBook. There are serious articles, there are short stories and there are crispy dialogues.

If you open the eBook every day, you should be quickly able to choose a different variety of writing styles and topics. And this is precisely how the eBook is organized.

I want some nice stories – short and crispy, that convey one or more TOC related point.

I want something easy to read and understand for the range of novice to TOC to experienced TOC people.

I also want some thought-provoking writings that illustrate some finer TOC points. What I am aspiring that the eBook should have an eclectic mix of styles.

I want some apparently insignificant details that may not be very explicit in the TOC BOK, but that if overlooked, could have a very negative impact on a TOC implementation.

I want short as well as some long-running articles.

I want the stuff that would interest everybody.

I want to make TOC more understandable, reference able and quotable to different people – TOC Experts / Consultants, Aspiring TOC Practitioners, Internal TOC Practitioners (i.e. business improvement people), TOC enthusiasts, Academicians in Management field, Business people, Managers and MBA/other students.

There should be something for everyone. It should not be focused only on one segment. At any given point of time, many people will be there in different knowledge category ranging from “Heard something nice about TOC” to “TOC Experts”. People will keep moving up this ladder. This eBook should serve them as a walking stick as they climb the knowledge ladder.

The eBook should give either “some food for thought” or “a thrilling experience” or some kind of enlightenment that provokes thinking and probably some action.

It should be an eBook to be read along with a cup of coffee – an easy read (Call it taking a few bytes of TOC Cake or get a taste of TOC or have some TOC Nuggets or TOC Chips!) – go through an article or two at a time, may be skip few and then come back and continue reading. Revisit some articles again and again. Refer them to others. Discuss with friends and colleagues. Ask questions - Why and why not?

Let people read an article a day, take it like a daily dose of TOC-tonic and then go to their work with added energy.

People should be able to identify a “Take Away” almost every day by reading say one article every morning and ponder over it during the day. One should get an insight into the wonderland of TOC. The eBook should demonstrate “The Logic and the Magic” of TOC in a simplified way and in small doses.

This eBook should become a “must have” in the world of TOC.

There are many things that are happening to make TOC the mainstream to run businesses. Perhaps, this eBook could serve that purpose in a small way. Probably, it should help to sustain “TOC Thinking” and help people to keep away from falling back to their “old habits”.

By reading this eBook, the word “TOC” should “Echo” in people’s mind and reflect in their actions. It should be a great source of energy for the people who breathe, eat, walk and sleep TOC.

My Team

Initially, when I was struggling with the idea, I was lucky to have an Advisory Board consisting of Jim Bowles, Mike Dinham, Rudi Burkhard and Philip Marris.

Jim and Mike had helped me with my previous eBooks. The idea got kicked off with Rudi in one of his Linkedin discussions. Philip is my Linkedin friend for a long time.

After I got started, various authors joined me by granting their permission for the articles and by sharing other articles. The team grew rapidly in a short period of time. Today, I am in the company of 28 authors!

Thereafter, the conversion work started and I was on a team that could be described as:

I had a little tea party

Yesterday afternoon at three.

It was very small three guests in all

Just I, Myself and Me.

Myself ate all the sandwiches

Whilst I drank the tea.
It was also I who ate the Pie
And passed the cake to me.
What a wonderful team!

I converted all 40 articles and checked them. At the end of it, I was getting tired. There were many small but important things to do and I was running out of my patience.

Suddenly, help came out of the blue!

Gary Bartlett not only helped me to verbalize my intuition about this eBook but also offered to help me in carrying out my pending tasks. He was willing to help with almost all of them!

Justin Roff-Marsh also offered some help.

Dr. Alan Barnard, on his own, created four cover designs for this eBook and gave them to me on platter.

What a relief!

It was not only a relief from work but also gave me energy to run the last mile.

I have no words to thank these people for offering help. A nice gesture. I will remain indebted to them.

I will be failing in my duty if I don't write about the generosity of the authors who willingly shared their articles and helped me to enrich the contents of this eBook. It is their kindness that this eBook is seeing the light of the day.

I am also thankful to www.leanpub.com for creating such a wonderful publishing site.

And here is this collection ready for you. Enjoy "Echoes of TOC"!

Rajeev Athavale

GOLDRATT FOUNDATION

Carol Ptak

Growth – Stability - Harmony

Overview

The Dr. Eliyahu M Goldratt Foundation is a non-profit organization organized exclusively for charitable and educational purposes to fund fellowships and grants to innovate practical applications and broaden the advancement of knowledge of the Theory of Constraints (TOC). Dr. Goldratt's life goal was to teach the world to think and to make TOC the main way to manage organizations.

The Goal

The Foundation wants to increase the awareness of TOC potential, increase the credibility of the TOC processes and generate excitement about TOC through new, significant successes. The process of on-going improvement is best served when TOC extends its application into new domains, improves its implementation methods, simplifies its tools, widens its applicability, deepens the understanding of TOC principles and applies its tools to achieve important social goals.

History and Board of Directors

The Goldratt Foundation was founded in 2011 during the TOCICO (Theory of Constraints International Certification Organization) as a way to ensure that new TOC knowledge would continue to be developed and this knowledge would be applied to create a difference. The foundation was the vision of Sanjeev Gupta, CEO of Realization Software. Realization donated \$54,000 to initially fund the work of the foundation. Elwood City Forge made a large donation in 2012 in appreciation for what TOC has done for their company. The balance of the funding has come from small individual donations. The TOCICO provides all administrative support as a donation to the foundation.

Currently the Goldratt Foundation is chaired by Rami Goldratt (Dr. Goldratt's son). The chair elect is Dr. James Holt of Washington State University. Other members of the board include Alex Knight, Christoph Lenhardt (current chair of the TOCICO) and Dr. Alan Barnard. The board is responsible for identifying the types of projects to be funded. In 2012, the focus was on the development of new TOC knowledge. There were many submissions and the final winner selected at the TOCICO 2012 conference was Dr. Boaz Ronen, Dr. Shimeon Pass and Dr. Shany Karmy for their application of TOC to the Justice System in Israel. The visibility provided to this work through the foundation afforded Dr. Ronen the opportunity to travel to Lithuania and describe the solution that worked so well in Israel to all the justices in Lithuania including the chief justice.

About the 2013 Goldratt Foundation Scholarship Fund

The Foundation recognizes that significant financial limitations can limit or block some innovative development of the TOC body of knowledge or delay applying TOC in social, educational, and other humanitarian areas. The Dr. Eliyahu M. Goldratt Foundation provides grants to accelerate projects that have demonstrated expertise, desire and opportunity to apply the Theory of Constraints. These grants are provided to encourage continual development, ease of implementations and expand TOC into new areas. The grants are awarded annually in areas of high interest to the TOC community. Applications that use TOC to improve and extend other proven (non-TOC) solutions, to support social goals or to address significant development of current TOC proven solutions are encouraged. The applications received include the application of TOC to address gang violence in Mexico, teaching critical thinking tools to school children in the Philippines, development of leadership in Peru, TOC education on TV in Israel, and intervention in non-performing educational systems in Israel.

Supporting the Goldratt Foundation

The Goldratt Foundation would like to thank the developers of this eBook for the donation of the book proceeds. The foundation has not reviewed and does not endorse any of the concepts or writings in the book. If you are interested in making a donation to the foundation please go to www.tocico.org website or click <https://tocico.site-ym.com/donations/donate.asp?id=4949>. There you can make a general donation or a donation specific to a project.

A Systematic Approach to Common and Expected Uncertainty

Eli Schragenheim

This is an extract from the article

INTRODUCTION

No decision is made with absolute certainty. This means that the actual results from decisions can vary. Does management have any guiding rules for making uncertain decisions?

Does statistics provide such a practical methodology? Even though many managers get a fairly good education on both probability and statistics, they do not use it very often. The thinking paradigms created by probability theory and statistics do not seem very useful in management reality. Too often there is not enough data to use any statistical tool. Collecting huge amounts of data to be used for statistical models is deemed a nuisance and is therefore not done. Most information systems are not designed to collect such vast amounts of data, just for the purpose of estimating uncertainty.

How should uncertain decisions be made when all that is available is intuition? While the estimation itself has to be intuitive, the decision making can still be structured. The intuitive estimation itself can be more structured and collected in order to allow for feedback and future improvement.

UNCERTAINTY CLASSIFICATION

Uncertainty can be classified into three categories:

1. Unexpected events/results. As it is unexpected from the manager's point of view, it is impossible to estimate the likelihood of its appearance, and no measures can be taken to control it.
2. Infrequent events, usually of catastrophic nature, greatly impact the organization and put it in danger. This is where insurance comes in. The vast majority of risk management practices are geared towards this type of uncertainty.
3. Common and expected uncertainty that impacts the daily life of every manager. All the frequent and regular decisions are uncertain because of the inherent randomness of certain variables. This uncertainty is handled by forecasting and by mere intuition, only seldom rooted in any procedure or quantitative algorithm. The focus of this paper concerns this type.

If You Fail to Plan . . .

Frank Patrick

“If you fail to plan, you can plan to fail,” says I.

“We don’t have time to plan, we have to get started,” says he.

“Started on what?” says I.

“Started on the work,” says he.

“Which work?” says I.

“There’s a whole bunch of stuff we know we have to do,” says he.

“But with your lean and mean organization, you have more work than resources. Which stuff should they work on today?” says I.

“That’s OK. It all has to get done. Start whatever we can,” says he.

“But isn’t there some stuff that can’t be finished without other stuff,” says I.

“That’s OK, it can still get started. If not, people will be sitting idle. Can’t have that,” says he.

“But it’ll sit half-done, waiting for inputs that may not match what was done, probably leading to rework,” says I.

“That’s OK. We know how to be flexible. We have to be in this business,” says he.

“But rework will add time and effort,” says I.

“That’s OK. There’s always overtime if we need it,” says he.

“But even with OT, with all the false starts, un-clear goals, and people jumping willy-nilly from task to task, don’t you risk being late against your promises?” says I.

“That’s OK. We’re used to being late. That’s why we always have a fallback plan to deliver less than the full original promise,” says he.

“Plan?” says I. “Doh . . .” says I, Homeresquely, with the heel of my hand thumping my forehead. Think about it . . .

Isn’t managing an organization to accomplish a strategy in support of a goal something worth planning? What’s your plan? What’s your strategy? What’s your goal?

Challenging one of the Basic Laws of Economics

Dr Alan Barnard

Should we just accept that the agreed Laws of Economics always apply, regardless of System Complexity?

This is an extract from the article

Introduction

An important part of any CEO's responsibility is to work with accountants to estimate how much profit a company will achieve in the next period and what, if anything, can be done to improve this. This job is challenging because of uncertainty that relates to the future. There is uncertainty about the volume of products or services that can be produced and sold, the price the market would be prepared to pay, and the costs and investments related to producing and delivering these.

Dr Eli Goldratt, author of The Goal and creator of the Theory of Constraints, used a simple case study called the "P&Q Example" to show how traditional cost accounting rules can (and frequently do) result in significant mistakes when used by company owners or accountants to predict the maximum profit a company can make within a specific period.

Dr Goldratt then used one of the basic laws of economics to show that the key to achieving the maximum profit for a company with an internal capacity Constraint (i.e. the market demand exceeding the capacity of one resource) is a very simple rule where we prioritize those products or services that will generate the highest Throughput or Contribution Margin (Sales Price - Totally Variable Cost) per Constraint Time Unit or T/Ctu.

But what are the common mistakes in applying this rule to real-life situations? Even more importantly, will this profit optimization rule still work if there is more than one resource that is overloaded? The latter is quite a common situation when the capacities of various resources are balanced to ensure high efficiencies of equipment.

This paper intends to show:

- 1 that most accounting textbooks **do** not apply this profit optimization rule cor\
- 2 rectly, which can result in major mistakes in selecting the optimal product m\
- 3 ix **for** lines with one capacity Constraint; and
- 4 that, in cases where the market demand overloads more than one resource on th\
- 5 e same production line, using the highest T/Ctu to prioritize which product m\
- 6 ix to make can result in a less than optimal solution. It can even cause the \
- 7 company to make a loss when a more optimal product mix exists that could have\
- 8 resulted in a profit.

The first objective will be achieved by illustrating the common mistakes made using Goldratt's original P&Q example, while the second will be achieved with a modified P&Q example, which creates the more complex environment of "interactive Constraints" - a situation where two resources on the same production line are overloaded. (For this more complex case, the traditional T/Ctu rule simply does not work and should therefore not be used.)

It is important to note, then, that this paper challenges one of the basic laws of economics; namely, that maximizing the profitability in a capacity-constrained company can always be achieved by producing and selling those products or services with the highest Throughput (Sales Price - Variable Cost) per Scarce Resource.

The paper also explores why Linear Programming will, in most real-life situations, not prevent this mistake, and offers a new, more universal rule that has been developed and tested by the author in simulations and real-life cases. This new rule is based on a shortcut to finding a product mix that will maximize the utilization of both interactive Constraints, in place of the most loaded resource.

How Big is your Market - Really?

Kevin Kohls

As I teach the Constraints Management course these days, especially to auto suppliers, I am surprised to hear the same obstacle to TOC brought up again and again.

Supplier: "We can't really use TOC, because we are meeting the market demand already. Besides, all of the forecasts we have, show that this segment of the market is in a downturn. The ability to produce more parts won't bring us the profits that are big part of the justification of what you are proposing."

I find myself asking the same questions over and over. If the customer is in machining parts for engines and transmissions, for example, the conversation might go something like this:

Bottleneck Buster: "How many of the quotes that you submit for the work that you really want do you win?"

Supplier: "Not as much as we like, maybe 10%."

Bottleneck Buster: "Hmm. And what percentage of the request for quotes do you answer?"

Supplier: "Well, there is some work we don't think we can do profitability, so I think it's around 30-40% of the quotes that we get our hands on."

Bottleneck Buster: "But, if you could convince yourself that you could take on this work profitability, would your company bid on it?"

Supplier: "Right, but as I said, our financial folks wouldn't probably buy in. They don't seem to trust us, for some reason."

Bottleneck Buster: "Let's set the reasons for that aside for a moment, and assume you have proven you CAN do this work profitability. Wouldn't the financial people be very supportive of our efforts to get this work?"

Supplier: "Yeah, they probably would."

Bottleneck Buster: "So then, how much of the automotive market in this segment to you really have?"

Supplier: "Probably 10%. No, wait; I see what you are asking. If we win 10% of the one we bid on, and that's only 40% of the market, that's only about 4%."

Bottleneck Buster: "And if we leave automotive and go into machine for other industries – marine engines, lawn mowers, etc. Is there a significant market segment of these types of products that you could bid on?"

Supplier: "Sure, but our VP has made it clear that we are not to go after that work."

Bottleneck Buster: "Why not?"

Supplier: "Well, we tried once and we got our butts kicked – lost a lot of money. It's a forbidden topic of discussion right now. Don't really have to worry about it - we don't have the money to invest in machines and resources."

Bottleneck Buster: "In hindsight, and now after the Constraints Management class, can you come up with logic on why you failed the first time?"

Supplier: "Yeah, I was thinking about it a lot during your class. We designed the system knowing what the answer was – it HAD to work. We changed all the efficiencies and speeds, made all the operators have zero variation, etc., etc., until we got the answer the bosses wanted – it would run."

Bottleneck Buster: "Yeow. No wonder the financial guys don't trust you. Who ended up being blamed?"

Supplier: "Oh, there was enough blame to go around, but we contracted the simulation work, and by the time the design started production, their contract was done. So they were the easy group to point at as being responsible."

Bottleneck Buster: "Sounds painfully familiar. Do you think you could design that system now, with what you learned, and make it work?"

Supplier: "Make it work – probably. Make it work profitability? No, our efficiencies are way too low."

Bottleneck Buster: "Recall that we talked about how deceptive the efficiency measure is. Let's assume instead you adopted a methodology of some sort that would, say, improve your throughput and your performance on certain key machines. At some point in time, wouldn't the improved numbers from that system make it more and more likely that a future design could be more profitable and have a higher ROI?"

Supplier: "It's possible. Plus, it could point out systems that would have to improve in the future. Some that are performing good enough now, but won't cut it in a future design."

Bottleneck Buster: "Good! And if you made a significant improvement in your level of performance in your current market, it might change your management perspective of what you could do in new markets. Plus, the increased performance would generate more profits, right? Those profits could be used to invest in new machinery and equipment."

Supplier: "I guess, but it sounds a bit risky for this company."

Bottleneck Buster: "Of course, based upon your current performance, it would be. But if you implement TOC in operations, and improve your performance with little or no impact on investment, wouldn't that be a good starting point?"

Supplier: "I guess so."

Bottleneck Buster: "Let's summarize to make sure. The reason your VP is confining you to this end of the market is not his fault - he's made that decision based upon your past experiment in a new market, that was designed on an unrealistic level of performance. The reason that you are not winning more quotes is due to your current level of performance. The reason you don't go after more quotes is because your financial guys know the company will lose money – based upon your current level of performance. So what's preventing you from expanding your market?"

Supplier: "Okay, okay, it's our level of performance. But jumping into this process would be a lot easier if our demand was higher – I think the Sales guys need to be doing more to pull in more sales to help make the need more visible. They should go get the orders, so we can justify TOC."

Bottleneck Buster: (Laughing) I would like to hear that conversation with the Sales and Marketing folks.

Supplier: "Well, I thought you could make that point to them as part of your consulting agreement. Look, what you taught us made sense. Teach it to them, and have them go get the orders."

Bottleneck Buster: "I certainly think training Sales and Marketing will be part of the future steps, although the training might not be exactly the same. Even with that, both Sales and Marketing wouldn't go to customers unless they can look at the numbers and are convinced you can do it. And their customers are not going to plunk down big dollars until they see the promised performance with your current customers. Like or not, improving your operations is the first step in the grand scheme of things – not only to improve your area, but to improve the company as a whole, including the marketing and sales area."

Supplier: "Okay, it makes sense. I was pretty much bought into the concept, but I need to be able to answer these types of questions. The logic seems pretty clear to me now."

To be honest, this is rarely one conversation, but a series of conversations, where the people I am working with have to work through the conflict and slowly adopt the new paradigm. When they can make the case to others without your input, you know you're on your way.

Paradigm Lock Explained

Dr Ted Hutchin

This is an extract from the article

Why is it so difficult to get organizations to improve, to get people to change how they do things, and to make progress towards our goals?

From 1992 to 1999 I was involved in a number of major TOC implementations throughout the world. I was very fortunate to work with some great people, visited many wonderful places and was able to teach and implement TOC solutions in many companies. At the same time I was struck by the fact that some of those companies did not get the level of success that they, and I, were expecting; they had done all the work, they had great implementation plans, all carefully constructed and checked using the TOC implementation tools, but no actual implementation was forthcoming. So what was happening?

Many of the senior staff within those companies had to face many pressures: economic pressure, financial pressure, pressure from “corporate” to improve. You are no doubt familiar with all these pressures as today they are no less severe than ten years ago – and in many cases more so.

So there was huge pressure to improve performance. Many people in those companies turned to systems for help, and thus we saw the rise of ERP systems, ever more complex, ever more expensive, and, as it turned out, no more successful than what had preceded them! And as for the individual caught up in all of this, well there too the pressure was increasing and the quality of the working life was for many people going down rather than up.

What is really sad is that sitting here writing this in April 2010 it would appear that little has changed!

So why were companies not achieving the level of success they expected back then, and why is that still the case today? The pressures have not changed, the need for improvement has not changed, and the need for a process to help the whole improvement/change activity has not changed, so why does it appear to be so difficult to make the changes that everyone agrees are important? Why are companies still stuck with the same problems as ten years ago?

If it quacks like a duck!

Justin Roff-Marsh

My friend Jamie Hayes (who has owned numerous gyms around Australia) likes to remind me that people don't visit fitness centers any more. "The truth is," he says, "they never did!"

Jamie's point is that, while almost all gyms have been calling themselves 'fitness centers' for the last ten years, their customers insist on referring to them as 'gyms'.

If it quacks like a duck...

Why then do gyms deliberately use terminology that is so obviously irrelevant to their customers?

I suspect it all started about ten years ago when a new style of gym (with aerobic classes and piped video) attempted to disassociate itself from the traditional Californian *iron jungle*.

Undoubtedly, in branding itself a 'fitness center', this new style of gym wanted to establish a new category in the mind of the market.

Well, time has shown that, while the market has grown to favor this new style of gym, it hasn't found it deserving of a whole new cognitive category! In other words, it appreciates that the new gym is a better gym but doesn't buy into the argument that it's anything other than a gym.

I suspect that the market applies the 'duck test' to determine whether or not a product is deserving of a new category. In other words, if it walks like a duck and quacks like a duck, it's probably a duck!

So how should the new style of gym have positioned itself?

Well, I believe that, rather than attempting to convince the market that it wasn't a gym, it should invested that energy in explaining why the new gym was a *different* kind of gym.

The irony is that it is actually easier to differentiate a product within an existing category than it is to create a new category. If you're differentiating your product within an existing category, you can use the existing market leader as a point of reference for your communications (i.e. 'our product is smaller, faster, friendlier, cheaper etc.').

In order to create a new category, you have to 'make a market' for your product — and making markets is an expensive and risky endeavor.

A lesson for all of us

Now there's a lesson in this for all of us — not just gym owners!

Only attempt to create a new category for your product if it is materially different from any other product with which the market is already comfortable. (As was the case with Sony's Walkman.) If there is already an existing category to which the market is likely to deem you belong (remember the duck test?), then position yourself against the occupants of that category.

A chiropractor with an identity crisis

I was reminded of this issue recently when I was approached after a seminar by the owner of a successful chiropractic clinic.

She explained she was considering re-badging her clinic as a 'wellness center' to reflect the total health solution she provided. Of course, I immediately advised her not to do it!

I suggested to her that people who wake up with bad backs are unlikely to look under 'w' for wellness in the Yellow Pages. And it's not just people with bad backs our chiropractor was about to risk confusing. I can't think of any ailment that is likely to compel sufferers to go looking for a 'wellness center'.

Better, I said, to be a busy chiropractic clinic with a difference, than to be a wellness center in search of a market.

The fundamental concept of TOC and life

By Martin Powell

This is an extract from the article

As we approach the first anniversary of the passing of Dr Eli Goldratt, many people will reflect on how much their lives were influenced by his ideas, his inventions, his writing and hence by him personally. Eli always tried to seek to distil the essence from any subject matter with all its many facets, even in his last few days.

Just prior to his passing, I was privileged to be with a group of people whom he had invited to spend some time with him – knowing that he, himself, did not have that much time left. Although quite frail physically, his mind was as sharp as ever and he duly taught us, with intensity, what he wanted us to cover at the upcoming TOCICO Annual Conference. When he felt this was good enough, he told us to split into two groups and come up with some questions that we wanted him to answer on any related topic. One group stayed in the room where Eli was and my group moved outside. We had been there only a few minutes before we were called back in.

Eli said that Dr James Holt had asked him a very important question and he wanted us all to hear this and his answer. James asked him the question again, which I recall as essentially “All through the years that we have known you, you have taught us to how to *focus*. However, there can be a downside to being 100% focused. My question to you Eli is how can we live a *balanced* life?” My interpretation was that James was verbalizing a deep dilemma or internal conflict that many of us have had – I certainly have experienced this personally.

Eli responded (I did not write his exact words) with “Many years ago when Wendy started to work with me and to help me with scheduling my time, there were hundreds of demands that she was trying to handle. So she asked me a question – how should we proceed with all these demands? What I told her all that time ago, has been a fundamental concept that we have lived by – NEVER LET ANYTHING THAT IS IMPORTANT BECOME URGENT!”

I had heard this phrase before in relation to time management. However, immediately, I suspected that if this was fundamental to Eli’s thinking then it is fundamental to TOC.

Our goal is...What is our goal?

H. William Dettmer

This is an extract from the article

Organizations of all kinds share a similar challenge: how to achieve their goals, and how to assure that their members aren't working at cross purposes in the process. This might seem like an obvious thing. After all, everybody knows what the organization's goal is, don't they? Well...no. Not in all cases, and maybe not even in most cases. Consider this situation.

The Supermarket Supply Chain Example

A few years ago, I was enlisted by an executive vice-president of a large American supermarket chain to help focus their improvement efforts at their semi-annual supply chain conference. This supermarket corporation operated 1,800 retail stores and 125 distribution centers throughout the western two-thirds of the United States. The 35 participants in this supply chain conference were vice-presidents.

We met in their "think tank", a large corner meeting room in the company's corporate headquarters that they had outfitted as a creative workshop and problem-solving facility. Besides the usual work tables and digital projectors, the room was equipped with half a dozen large, free-standing cloth-covered, padded room dividers. (Figure 1) Working groups used these seven-foot-by-seven-foot panels as displays for their "brainstorming" efforts. Writing with heavy felt-tip pens on colored sheets of paper and using push-pins, team members would post their ideas on the panels for all to see. The various inputs of individuals could then be modified, consolidated, and rearranged, like the pieces of a puzzle, to produce a structured result.

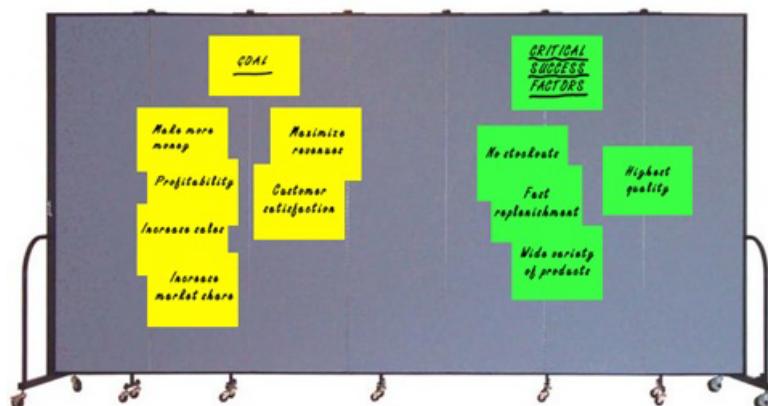


Figure 1 Brainstorming a Goal and CSF

Over the course of four hours, I posed two questions to the vice-presidents: what is the goal of your organization, and what are the critical success factors for achieving it? I fully expected to devote no more than ten to fifteen minutes in reaching consensus on the first question. In reality,

it required about an hour. I asked each of the 35 participants to write in a concise sentence what they believed the company's goal was. We posted the thirty-five inputs on one of the big panels, so that everyone could see all of them.

After consolidating multiple inputs that said essentially the same thing, we still had about ten different ideas of what the company's goal was. In the second half of the session, the same solicitation about critical success factors produced about a dozen similar consolidated statements. Think about that for a moment: twelve different factors that are absolutely critical to achieving an organization's goal. Miss just one, and - sorry! - you didn't achieve your goal. Which of these dozen balls in the air do you worry about catching first?