

What it means to work and implement TOC

an interview with Javier Arévalo

Constant change and demand from organizations and the market on managers brings big questions and the need to break organizational paradigms, all with the goal to define more effective strategic directions in order to reach their most important objective: **to be more competitive and profitable today and in the future.**

Webpicking Colombia had the opportunity to have an in-depth conversation with Dr. Javier Arevalo, Regional Director for Latin America at Goldratt Consulting. The following interview will share Javier's thoughts and contributions in relation to what it means to work and implement TOC (Theory of Constraints) and how Latin American companies are betting on this new challenge.

What is TOC - Theory of Constraints?

TOC is a body of knowledge that has been developing since the late 70s to date, it encompasses a series of solutions and specific applications designed initially directed and applied mostly (but not solely) to companies and productive environments. Each of these solutions starts from the understanding and analysis of the current reality and an existing mode of operation under which organizations are functioning today. The origin of TOC is known through the best selling book **"The Goal"** published in 1984. This book is a product of Goldratt's experiences, specifically in the Operations area, and it shares three key TOC principles:

- **First Principle:** Applying the methods and knowledge of the hard sciences (physics, math, chemistry) to the management of organizations and companies.
- **Second Principle:** TOC is a practical application of cause and effect thinking used to find the valid premises and to identify and challenge the incorrect ones.
- **Third Principle:** The constraint (weakest link in the chain) is the regulating element of flow in organizations and systems which determines the degree (magnitude) of results with respect to the global objective of the organization, its Goal.
- The Constraint is that which limits the organization to achieve more money now and in the future. If companies want to improve, they need to identify and manage their constraint. Having a constraint is not negative, it is actually good because it is the point where all of the organization can be focused and used as lever or the place in the productive flow that can be utilized for the strategic decisions and the control of the system. This does not mean that the other elements (the non constraints) are not important, this means that there is a priority place or point and it is highly relevant from the standpoint of focus for management's attention.
- **TOC starts from the assumption that we have to challenge our paradigms**

What are the four principles or pillars of the methodology?

Today we speak of four principles or fundamentals of TOC.

- **Inherent Simplicity:** This principle comes from science, and it tells us that the more complex a system, an organization, the larger is its inherent simplicity. It is the belief that we always can find a simple way to understand our reality. Newton was able to describe the behavior of the bodies in the universe with three simple fundamental laws.
- **Conflicts always can be resolved:** In reality conflicts are not a given condition. They arise from lack of understanding or knowledge of how reality works. It is a derivation of the first one.
- **People are Good:** A good explanation or reason always exists that allows us to understand the motivations that lead people to behave in the way they do, or the decisions they make, even if they are the wrong ones.
- **Any situation can always be significantly improved:** The better the performance or current result of an organization, the bigger the next jump. When a company or group of people reaches very high performance, the possibilities and options are not reduced, on the contrary, they expand.

These principles are the base that guide our work and interaction with our clients, among us and with the reality that surrounds us. They are the guiding principles that make us continuously challenge what we do with the certainty that every problem has a solution.

Starting from the concept of the constraint, Dr. Goldratt proposed in The Goal his Process of On Going Improvement. It is what we call the Five Focusing Steps.

- IDENTIFY the constraint
- EXPLOIT the constraint
- SUBORDINATE the rest of the system to the previous decision
- ELEVATE the constraint
- WARNING!!! Do not let INERTIA become the constraint.

TOC allows organizations to implement improvements in their processes and the management of their resources based on the concept of the constraint. This enables:

- A mechanism of continuous improvement, supported on the fact that every organization has at least one constraint.
- Management and people to have focus continuously on what is really important and to generate a much better utilization of the resources available.
- Defining the strategic direction, how it should be implemented, and what are the necessary tactics
- Defining the mechanism that a company will have in order to deliver on the tactics at the operational level and achieve the sought business results.
- Mechanism and tools that will take the organization through a process to reduce and eliminate systematically its conflicts.

In what areas can TOC be applied to?

TOC can be applied to all endeavors of human activity. For example, if you examine all of the presentations during the annual TOCICO International Conference (June 2012), you will find cases where TOC is being implemented in industry, manufacturing, projects, government services improvements, logistics, public and private health systems, improvements in the operation and performance of legal courts, education, human relations and people training-skill development, marketing and sales. It actually deals with, touches and can be used to improve every single one and all of the functional units and in every environment where organizations dwell.

What have been the experiences of its application in the Logistics management?

If you look at the global performance of the supply chains and specifically if you focus on the items of high turns, and with limited market life, you will find that even in the best retail chains and operations with a lot of experience supplying basic consumer goods (natural or processed - foods, supermarket), they still have out of stocks or shortages, in spite of these experiences. And in spite of the technology and optimizations that have been implemented, you still find significant failures to have the right product in the right place at the right time. If you ask clients (even if you decide to test it on yourself as we are also consumers) if they are satisfied with the level of availability, you will find and agree that the answer is far from positive.

What are the essential elements to consider for the application of TOC to the Logistics management?

- You need to look at the organization as a whole. The organization must know its objective and the implications of adopting TOC. It is very simple, but not easy. What makes it attractive is the magnitude of the results and the simplification of the day to day of all involved.
- Cultural Change, under a new paradigm: Until the final client-consumer buys, no one in the supply chain has actually sold anything.
- Realign the operational paradigms so the whole organization is properly synchronized. If the rest of the organization is not in alignment, you generate a significant level of effort and thus the global return diminishes.
- Implementing a solution only in a functional area has limited effects.
- One of the limiting operating paradigms that must be changed is: An idle resource is a waste, that all resources must be working all of the time: "The Efficiency Syndrome"
- Everyone working on supply chains understands what is the real constraint or what is that the supply chain must achieve. Everyone in logistics knows that the secret is to have the right product at the right time in the right place, and from it several strategies and tactics are generated to accomplish it. Nevertheless, now-a-days, the direction in which most Supply Chains are moving is to improve and optimize the tools and methods of forecasting, and this is a real waste. The results achieved in this direction are of diminishing returns.

What are the main implications of implementing TOC?

- One requires the full commitment of the whole organization, from the CEO, managers, Board, directors, supervisors, employees, collaborators, etc...
- Before implementing, the organization must evaluate and define what is the advantage of incorporating TOC with all of its solutions and applications. During the Viable Vision process, we start by defining the strategic direction for the company with the main objective of what is required to transform it into an Ever Flourishing company.
- Defining itself as an Ever Flourishing company, that generates value continuously and increasingly for employees, clients (including suppliers, environment, society, government) and the shareholders.
- The company must desire to build a Decisive Competitive Edge, generate a market offer that allows the company to solve a real problem to its market in a way that no other competitor, similar or significant, can match. It means that the

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company opens a window of time to be able to capitalize on that competitive edge and the knowledge and know-how we transmit our clients makes the company and its people capable of converting it into a sustained sales growth. Our processes and knowledge make the company reach a stage where the Decisive Competitive Edge is realized.

- The company must do this without exhausting its resources, cash, capital investment, etc.. The company changes a series of paradigms and does it all at the same time.
- The company must invest time upfront to obtain an understanding and learning, and also some money before embarking in a full fledge implementation of TOC. This allows the company to have clarity about what it needs to do, what it should stop doing, and how to do it. It must be and it is an initiative that generates significant results immediately and continuously.

What should a company that implements TOC with Goldratt Consulting expect to get?

- A Strategy based on TOC that is sustainable and with a very high ROI.
- Realignment of the organization into a real pull system (satisfying consumption and real demand from the market)
- Utilize forecast where it adds value and from this make the system react very rapidly to the real demand pulled from the consumption node immediately being serviced by the company or the node that serves are the final sales point in the supply chain, achieving very high availability, sustained between **95% al 98%** for all SKUs, reducing the necessary inventory in 1/3 to about ½ of the starting inventory in the system, which results in a significant improvement of the inventory turns.
- You eliminate the need to produce inventories that you do not know if they are going to be consumed. Instead you place inventory in strategic locations of the chain, where it helps you best with the aggregation and to deal with the uncertainty of demand changes.

What are the indicators most impacted by TOC?

- Inventory Turns (industry, retail, wholesalers, distributors)
- Space and Cash flow in retail: Return per m2
- Supply Reliability: Throughput value day: monetary value of each order that you place on a supplier, including all SKUs X the number of days the full order is delayed vs. the promised date.

Are companies in Colombia ready to implement TOC?

Colombia has been transforming. The industrial sector has been modernized and is improving the infrastructure in results and in capital goods. In Colombia TOC has been present for more than 15 years in small to mid cap companies. Today TOC is a well known element in the country. The majority of the companies are in the capacity to implement TOC. Some of the larger companies are taking their first steps, they tend to be cautious.

If the people who have the responsibility to direct the companies want to improve the way they operate, they must take into account two things:

1. A change to the mode of operation generates a series of processes that reduce the demand on management attention, whereby the urgencies and fires are reduced significantly, and the system becomes much more stable, which generates better in the people's relationships, and harmony in the organization that the paradigms that exist in operations are removed.
2. The result obtained is much superior to the current ones without having to invest or increase expenses. An increase in the profitability is produced, coming from the raised productivity, but without having to expect or focusing in obtaining efficiency everywhere. Focus is what permits delivery on the important while eliminating the source of the urgent.

What is the reason(s) that TOC has not expanded more widely?

- Since TOC has become their strategic differentiator, many companies that are using TOC do not make it public as a best practice.
- The companies usually select or choose a strategic direction, and TOC is not the only one providing benefits. We think it is much more effective, but it is not the only one.
- For companies it is not easy to understand the differences between the philosophies of continuous improvement: TOC, Balanced Score Card, Lean, Six Sigma, Toyota Production System, etc.
- TOC's first significant success is associated with a production-operations solution, and this is not seen as an integral or holistic solution where the whole company is involved.
- In spite of these factors, TOC continues to expand at an ever increasing rate, and the differences in results and magnitude between TOC and the other approximations cannot be put aside anymore.

What are the differentiation factors of TOC compared to the other philosophies or practices?

- TOC is common sense: there is always a simpler way to do things.
- In all situations, no matter how complex, things can be made simpler and improved.
- It is a technology of management and administration of organizations, as a practical application of the scientific knowledge. The Science of Management
- The power of Focus.
- It is a quantum leap, a jump in an order of magnitude in the performance of people.
- We need to be exceptional only in very few things, not on everything.
- Focusing on the things that will yield results quickly.
- Wanting the maximum result with the minimum effort.

Brief Bio. Javier Arévalo. Ph.D. Regional Director Latin America Goldratt Consulting.

While working as Product Development Manager at Procter & Gamble, Javier Arévalo found Dr. Eli Goldratt's book "The Goal" and through it discovered the world of the Theory of Constraints (TOC). After several managerial roles and functional responsibilities, to executive positions, Javier found himself dedicated to implementing the principles and solutions of Theory of Constraints. He is currently the Regional Director for Latin America at Goldratt Consulting, managing the Viable Vision regional programs. His broad experience and scientific training of more than 25 years has carried him from his family business to his own business which initially focused on helping companies in areas such as: manufacturing, consumer goods and supply chain, product development and project management, sales and marketing, strategy and tactics, and is now focused mainly on enterprise-wide holistic implementations. Javier also dedicates part of his time to help with TOC for Education and the Odyssey Leadership program for young adults.

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