

GOLDRATT schools

What else can be done to improve the performance of production as the heart of the manufacturing enterprises?

Production is all about managing the flow. For years, people and companies have been developing new approaches to improve the flow. TOC, the Theory of Constraints, has been in this arena for over 35 years. Nevertheless, we do not talk about an old technology. The TOC solution for managing production blends the long standing ideas with the latest understanding and breakthrough elements. The results are extremely powerful and beneficial.

TOC has solutions for the two major production environments: MTO – Make to Order and MTA – Make to Availability.

For the MTO environments, the TOC Solution is known as Simplified Drum Buffer Rope with Buffer Management (S-DBR & BM) Typical results achieved by thousands of organizations around the world:

- Significant improvement in on time delivery of customers' orders (DDP – Due Date Performance approaching 100%).
- Reduction in manufacturing lead time resulting in competitive QLT to the market.
- Reduction in WIP
- Reduction of the operating expenses that are caused by late deliveries
- Increasing productivity without increasing costs
- Focused management: committed to excellent customer service and to continuous improvement

For the MTA environments, the TOC Solution is based on Replenishment the TOC way with Dynamic Buffer Management

Typical results:

- Significant increase in the availability of produced items, providing high level service to the market, and fully meeting expectations of buying from readymade stock.
- High Inventory turns as compared to the industry. This means achieving availability while controlling the amount of stock in the system.
- Reduction in waste due to dead stock and obsolescence.
- Clear and smooth flow of Work Orders on the shop floor
- Management focused on ensuring availability.

The book contains several articles from the Goldratt Schools written by those who have developed the TOC and its applications, implemented its methodology and applications, and have taught it all over the world.

For more information on Theory of Constraints and its applications, please visit us at:
<http://goldrattschools.org/>
www.toc-goldratt.com

PRODUCTION

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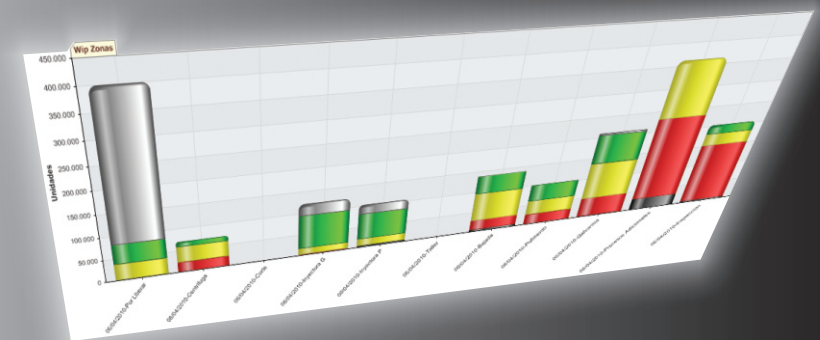
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TOC for Production Management



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EDITOR'S FORWARD

TOC was born on the production shop floor. It focuses on the company's goal, usually to make more money now and in the future through sales. True to its roots, this book recognizes the importance of serving customers through quality and on time delivery and, thereby, opening the possibility of increasing sales and profit. While the business literature recently discovered the existence of business functional "silos", TOC has long valued, and pragmatically practiced, close synchronization between production, marketing, sales and finance.

This book furthers the insistence on the pre-eminence of the company goal over any local functional area. It presents an exciting, pragmatic, and amazingly complete view of how to manage production for the benefit of the company as a whole. It does this in five chapters - 13 articles.

As is appropriate, Eli Goldratt leads off in Chapter 1, "Major Principles of Managing Production Flow", with a recent about-to-become classic in business literature. It offers an overview of where TOC fits in the theoretical/philosophical production domain, and the often misunderstood concept of flow. Flow is improved due date performance, not reduced costs. Production management is the management of production flow. Following up on the work cited by Eli Goldratt, Oded Cohen, very pragmatically, explains the importance of taking advantage of the strengths of the major improvement approaches, TOC and Lean, by using one to support the other. This is a case of the whole being much more than the sum of its parts. Eli Schragenheim thoughtfully distinguishes between planning and execution, and explores how to protect against the two major forms of

uncertainty. This is a seminal article that should not be missed. It extends our knowledge.

In Chapter 2, “TOC Applications to Production Management”, with this thoughtful background to support us, Oded Cohen, using a strategy and tactic view, provides a careful and complete summary of TOC production management in both MTO and MTA environments. Philip Viljoen explores the concept of capacity and the decisions that production managers must make. Some production environments show a touch time of perhaps 20%, much more than the normal 1-3%, and much more than with project management. Recognizing this, Amir Schragenheim presents a way of effectively managing production. Borrowing elements from both S-DBR and CCPM, Amir fills this important gap in our knowledge.

Knowing what to do, however, is not the same as doing it. Shri Srikanth opens Chapter 3, “TOC Implementation in Production”, with several approaches to implementations that deal with changes in worker pay systems. Inventory, final or in-process, is a detriment, not a benefit. Unneeded production raises expense without an increase in sales revenue. Reducing individual worker output in order to improve overall profitability can be expected to meet significant resistance. Shri speaks directly to this problem. In more general terms, Alejandro Fernandez discusses Cohen’s ten step integration of Deming and Goldratt, the Decalogue. Included are examples taken from actual implementations. The concept of value chain and the associated value offer, discussed by Jelena Fedurko, expands the scope of the TOC production application. Humberto Baptista explains how to capitalize on a decisive competitive edge, thus bringing marketing and sales into direct collaboration with production.

Chapter 4, “TOC Tools for Understanding the Production Environment”, addresses the need of all production personnel to understand their environment. TOC has always been pragmatic rather than only academic. How to use the TOC thinking processes, to move an implementation forward, is explained by Frances Su in her paper describing how to make some difficult and common decisions using the thinking processes.

We started by looking at production the TOC way from a philosophical and theoretical viewpoint. Then we dealt in detail with applications in the two most common production environments, extended it to a less common, but very important, area and went directly to implementations. Having discussed the most frequent customizing decisions, we now look at two recent implementations in Chapter 5, “Case Studies”. Maria Sierralta describes how she facilitated the implementation of the TOC production solution in a manufacturing company in Venezuela. Maria makes you feel as though you were there, pleased with the results so far, and looking forward to the next improvement phase. Finally, Ryoma Shiratsuchi and Keita Asaine present a detailed case study that testifies to the significant improvements that can be accomplished in six months.

If you want only one book to bring you up to date on the TOC production application, this is it.



Alan H. Leader
Editor