

# *Applying Constraints Management to Product Development*

*An intensive summit and working session  
with Dr. Eli Goldratt and leading  
implementers on synchronizing resources,  
projects, and pipelines in highly complex  
and dynamic organizations*

**Chicago • April 4-5, 2000**

## ***Learn:***

- Why Theory of Constraints (TOC) is not just about scheduling or project management
- How TOC implementers achieve dramatic turnarounds in profitability and cycle time, frequently generating over 100% improvement
- How to achieve collaborative resource sharing and how to synchronize the efforts of large scale teams
- How to integrate Time to Market with deployment of resources
- How to gain buy in and consistency of goals – up, down, and across levels and disciplines
- How to prioritize despite uncertainties; how to ignore unnecessary details and zoom in on the 1% that is truly important
- How to use TOC to determine what product concepts to kill or keep
- How to proactively control projects and resources in turbulent times
- About available TOC software tools and Internet applications
- How to *apply*TOC – what you must measure, monitor, and change to implement Constraints Management effectively in the real-world... no theory, no BS, no fluff

Post-conference workshop:  
**Implementing the TOC Multi-Project Method**  
April 6-7, 2000



[www.ManagementRoundtable.com](http://www.ManagementRoundtable.com)

## BACKGROUND & PURPOSE

Whether it's project bottlenecks, multiple competing priorities, or unclear decision-making, constraints are inevitable in product development. They move from one place to another, popping up capriciously along the chain of interdependencies, ultimately restricting your entire organization's output.

You can't get rid of constraints completely, but what you do about them can spell the difference between outright loss and off-the-chart gains.

Building on the renowned, acclaimed, and sometimes-controversial **Eli Goldratt's Theory of Constraints (TOC)** — "*Applying Constraints Management to Product Development*" — provides detailed case studies, hands-on guidance, and explores how to strategically redirect resources and harness the critical chain. Internal resources (time, money, people) and external market factors (customer needs, competition, industry dynamics— including e-business) will both be addressed.

The summit features Dr. Eli Goldratt leading a half-day discussion of Theory of Constraints in a systemic, enterprise-wide context. Dr. Goldratt will also be available throughout the two-day summit to provide feedback and insight.

The leaders in applying TOC to design and development will share their stories here for the first time. Until recently, most TOC success stories have taken place in the production world. These advanced practitioners (from **Lucent Technologies (Bell Labs)**, **Elbit Systems**, **Seagate Technology**, **Ford Motor**, and others) who have experienced the hurdles — both technical and cultural — of TOC as well as other resource and constraints management approaches, will share specifically what they did to achieve astounding bottom-line improvements. Facilitated working sessions on *1. Multi-project Management*, *2. Critical Chain (Single Project)*, and *3. TOC for Determining Product Concept Viability*, will give you a running head-start toward your own organization's breakthrough results and profitability.

The heart of this unique program is the deep exchange of practical "how-to-get-it-done" details and the linking of project management to product portfolio and pipeline decisions. The purpose is not to introduce you to the concepts, it's to help you implement them successfully — specifically in a product development organization.

A two-day post-conference workshop, "**The TOC Multi-Project Management Method**," led by well-known TOC and product development expert, **Tony Rizzo of Lucent Technologies (Bell Labs)**, will offer even more hands-on guidance on how to use this powerful management system.

## WHO SHOULD ATTEND

The summit is designed for senior managers to come together with project implementers to gain the momentum necessary to carry out change. Specifically the program will benefit vice presidents, directors, and managers of product development, engineering, R&D, and technology development as well as program managers and project leaders from highly complex and dynamic organizations.

---

## THE PROGRAM

---

— Tuesday, April 4 —



8:30am -12:00pm **Keynote: TOC and Changing the Enterprise**

**Dr. Eliyahu M. Goldratt, author *The Goal, It's Not Luck* and *Critical Chain***

Introduced by Sanjeev Gupta, CEO, Speed to Market

*“One of the biggest problems...is that most people don't see the company as a whole. They see fragments. Because of this, you get localized optimums, many wrong decisions, and much miscommunication.”*

Eli Goldratt, interviewed in *Product Development Best Practices Report*

In his highly logical, mince-no-words style, Dr. Goldratt will lead you to see the big picture and discover how everything ties together. He will discuss how to generate a common language, vastly improve communication, and launch correct (not flavor-of-the-month) initiatives that can lift the company. You will know how and why you must go beyond product development to truly accelerate it.

### **1. What to change? – What is the core problem?**

Every executive is convinced that the only prudent way to manage an organization is to never lose sight of the global picture — and that this is the way they are currently managing their organizations. Not only is this not the case, but the erroneous belief blocks executives from managing according to their healthy intuition.

### **2. What to change to? – What is the solution?**

You are most likely familiar with parts of solutions (in production, marketing and engineering) from reading Dr. Goldratt's books, but not the complete solution...

### **3. How to cause the change?**

Twenty years of TOC experience has shown that all obstacles have one thing in common: they are human-related, psychological obstacles. What these obstacles are and how to successfully overcome each of them is the essence of this presentation.

Dr. Goldratt will then be available throughout the two-day summit and will hold an **open Q&A forum** at the conclusion, after you've had a chance to synthesize the content of his presentation with your own personal experience, case studies, and break-out sessions.

1:30pm -5:00pm **Industry Case Studies — Implementing TOC for Multi-project Management**

Leading practitioners will discuss how TOC was implemented, how organizational obstacles were tackled, and what specific, measurable results were achieved.

- **William J. Baron, Director Optical Products Technology, Lucent Technologies, Bell Laboratories**  
Though details cannot be shared at this time, we are told by reliable sources that the results of this application to Fiber Optic Cable Development will “make your jaw drop.”
- **Guy Brill, Vice President, Elbit Systems Ltd.**  
Under the personal guidance of Dr. Goldratt, Guy pioneered the application of Critical Chain in a multi-project environment in 1997. The organizations' priorities are now consistent, actionable information is readily available, and problems are identified pro-actively.

## THE PROGRAM, CONT...

- **Brent King, Executive Director in Product & Technology Development, Seagate Technology**  
To compete in the disk drive market, Seagate must deliver faster time-to-market across a broad product line while investing close to \$150M per year in new product and technology development. Find out how it uses critical chain and buffer management to manage projects and pipelines.
- **Rick Mueller, Special Project Engineer, Ford Motor Company**  
With many simultaneous projects, some have to subordinate. Rick will discuss Ford's experience with TOC and other variants of constraints management to prioritize the product portfolio.

### 5:00 pm – 5:45 pm **Interactive Panel Discussion: TOC and Alternative Constraints Management Approaches**

How do you use CM in conjunction with other NPD philosophies? If you use “funnel-shaped” methodology, where should the funnel end? Can you prioritize resource allocation by using a linear programming algorithm? What about “lean” principles? How do you combine approaches?

### 5:45 pm - ? **Reception and Networking Dinner**

Chance to informally meet with others who share your interests on topics such as TOC Metrics, TOC for Supply Chain Management, Gaining Buy-In, TOC and “Lean,” and more.

## — Wednesday, April 5 —

### 8:00 am – 9:00 am **Breakfast panel: Choosing and Using TOC Tools and Software**

What do some of the specialized TOC decision support and project/portfolio management systems offer? What are the pros and cons of each? How do you customize to your own environment? Hear directly from leading purveyors. This session will be moderated to generate answers, not hype.

### 9:00 am - 12:00 pm **Facilitated Break-Out Sessions**

The following concurrent sessions are designed to be highly interactive and participatory. Each group will be limited in size to ensure individualized attention and problem-solving. Choose one to attend; output from all will be shared.

**1. Multi-project Management, the “Rizzo bead experiment:”** Learn why the widespread practice of multi-tasking (assigning each developer to two or more projects simultaneously) actually devastates any product development organization's speed to market. These facilitator-led exercises provide a quantitative comparison of the real productivity of a multi-tasking organization and the productivity of a non-multitasking organization. Then find out what to do about it. This session will be facilitated by **Tony Rizzo** (who designed and has used this highly-rated approach with many leading organizations.)

**2. Critical Chain (Single Project):** If your organization has staff dedicated to a single\* large project, this break-out, led by **Richard Franks, a Certified Associate of the Goldratt Institute**, will cover the key steps of implementing Critical Chain, including employee buy-in, management leadership, and course corrections. You will benefit from Franks' special expertise in project management implementation and profit improvement.

*\* If you are from an organization with a significant number of engineers working on multiple projects, you should implement the TOC multi project version of Critical Chain for maximum impact.*

---

## THE PROGRAM, CONT...

---

**3. TOC for Determining Product Concept Viability:** For best ROI of critical resources as well as effective synchronization, organizations must determine both the true market potential of a product and the internal capacity to develop it. TOC provides a clear framework to make both evaluations, which **Chad Smith** and **Debra Smith** of the **Constraints Management Group** (and with years at the Goldratt Institute) will walk you through.

12:00pm – 1:30 pm *Luncheon*

1:30pm – 3:00 pm **Report Out and Q&A Forum**

After the Break-out Sessions, all participants will reconvene to share the highlights of each group, the insights gained, and the questions that still remain. Dr. Goldratt and the expert facilitators will offer answers and suggestions — as well as more discussion, if needed — to synthesize the learning experience of the two days and provide solid take-aways.

## DELIVERABLES

By participating, you will not only hear what others have done, you will:

- Begin taking your own action steps toward substantial gains in throughput and profitability;
- Resolve existing or potential organizational conflicts that hinder results;
- Receive specific comparative data and metrics;
- Know which tools and software to consider using;
- Come away with a strong network of colleagues and experts to continue the dialogue with, even after the summit has concluded.

## SPECIAL FEATURES

- **Lessons-learned from industry practitioners** – a first-time gathering of product development executives who each have at least a year's worth of TOC application to report on and share
- **Interactive panel discussion: TOC and Alternative Constraints Management Approaches**
- **Breakfast panel: Choosing and Using TOC Tools and Software**
- **Informal networking:** luncheons, reception, dinner, special-interest discussion tables, ample break time
- **Concurrent facilitator-led working sessions** to focus on your organization's biggest challenges
- **Beginning framework, concluding wrap-up, and extended Q&A time** with the internationally renowned **Dr. Goldratt**

## POST-CONFERENCE WORKSHOP

### Implementing the TOC Multi-Project Method

led by **Tony Rizzo, Lucent Technologies**

*(Note: Attendance is strictly limited to 25 participants on a first-come, first-served basis.  
Early registration is advised.)*

During the first day of this two-day workshop you will experience not only the problems that plague most product development organizations, but also the powerful multi-project management solution made possible by the Theory of Constraints. This highly effective management system will enable you to reduce cycle time, increase the number of projects that are delivered on time, and decrease the number of projects that are shelved or canceled. The first day of training will conclude with a presentation and discussion of the Critical Chain Method (a one-project model) and the TOC Multi-Project Management Method. During the second day of this workshop you will participate in the simulated operation of a multi-project organization, using a unique multi-project simulator designed by the instructor. This simulator is a visually intensive, physical simulator, with which you and other participants not only test and learn the TOC solution fully but also develop and test your own, effective implementation strategy.

If you want to propel your product development organization to unimagined speed, astounding productivity, and extreme profitability, then you must know how to use this powerful management system. More importantly, you must know what it takes to implement it successfully. This workshop provides you with this knowledge and more.

#### Thursday, April 6

8:00am-12:00pm

- Intro to TOC.
- Maneuver Warfare and the effective “Boyd Cycle” in product development.
- Our counterproductive measurements and policies.
- The first bead experiment, with multitasking.

12:00-1:00pm *Lunch*

1:00-4:30pm

- The second bead experiment, without multitasking.
- Comparison of results; implications for performance.
- The Critical Chain Method, a one-project model.
- The TOC Multi-Project Management Method.
- The “Boom-Kerchink” system.
- Who’s begun using TOC.

4:30-5:30pm *Social Hour*

#### Friday, April 7

8:00am-2:30pm

- Reason for the simulation, Understanding the simulation process.
- Assignment of roles.
- Getting started.
- Simulation of current practices.
- Criteria for the first TOC project.
- Effective TOC scheduling.
- Transition policies and work practices.
- Simulation of transition period.
- Simulation of TOC operations.
- Impact of unplanned field problems on a TOC system.
- The buffers as operational measurements, and buffer management.
- Q&A

12:30-1:30pm *Lunch*

*Tony Rizzo joined Bell Labs in 1983, as a Mechanical Engineer. In 1994, Tony was introduced to the work of Dr. E. M. Goldratt and the Theory of Constraints (TOC). Tony has studied Dr. Goldratt’s work extensively for a number of years; he has spent much effort adapting Dr. Goldratt’s work to product development organizations. To date, Tony is responsible for bringing the TOC Multi-Project Management Method to a number of businesses within Lucent Technologies, in addition to training and consulting to other firms.*

## ABOUT THE MANAGEMENT ROUNDTABLE



**Management Roundtable** is the leading user-oriented authority on product development. Independent and unbiased, we bring together thought leaders and business practitioners whose common purpose is to define, develop, and deliver customer value — with minimum waste and maximum flexibility.

Founded in 1980, our focus is on sharing product development techniques, processes, discoveries and tools that generate innovation, customer value and faster response.

Our capabilities include conferences, workshops, on-site training, newsletters, research reports, referrals, introductions among practitioners and experts, and online information.

## KEYNOTE SPONSOR



Keynote sponsor **Speed to Market** ([www.speedtomarket.com](http://www.speedtomarket.com)) provides decision support engines that catalyze synchronization of Matrix Project Organizations. Its products are licensed to over 5,000 users throughout the world.

## TESTIMONIALS

Dr. Eli Goldratt was the full-day keynote speaker at a previous Management Roundtable conference. Here's what people said:

“...hits at the heart of the problem that our company is facing...and provides solutions.”

**Aiman A. Beg, Systems Officer, Bank One Corporation**

“We started practicing TOC in manufacturing with positive results.

We need to bring the theory into product development”

**John Polchin, Product Manager, Cornell Iron Works**

“Fantastic presentation that challenged the audience and explained the concepts in a crisp captivating manner!”

**Michael Brown, Project Manager, Bank One Corporation**

“Many other approaches have been used to no real gain. Production and project management can both benefit from TOC!”

**Bill DeLong, Director-Production Control, The Boeing Company**

“Very powerful set of tools.”

**Boyce Grier, Technical Manager, Lucent Technologies**

“Absolutely and accurately described my organization. I can see the relevance of all of this material.”

**Trish Mannitt, Project Manager, State Farm Insurance**

“[Goldratt] provokes you to think and to question both his and your assumptions on project management.”

**Burton Bright, Lead Engineer, Adtran, Inc.**

“...energized me to go back and ‘fight the fight’ with my organization.”

**Scott Law, Director, Schneider 2000 Programs, Groupe Schneider NA**

## RESERVATION FORM

**Venue:** The Drake Hotel, 140 East Walton Place, Chicago, Illinois 60611  
Telephone: **312/787-2200**, Fax: 312/787-1431. Please call the hotel directly for room reservations and mention Management Roundtable to receive the preferred rate (on space-available basis until 3/10/2000).

**Dates:** The summit will be held on **April 4-5, 2000**. Registration begins at 7am, concurrent with continental breakfast. The summit concludes at 3 pm on April 5. The post-conference workshop will be held on **April 6-7, 2000**. It begins at 8 am on April 6 and concludes at 2:30 pm on April 7. Please note that this summit is attendance-limited and will not be held at any other time during the 2000 calendar year. Early registration is advised. In-house sessions may be arranged by request.

**Program Fee:** The **2-day summit** registration fee is \$1600 per person. Teams of three or more may deduct \$100 each. Fee includes all conference materials, continental breakfasts, lunches, refreshments, and Networking Dinner. **The post-conference workshop** fee is \$900 for summit participants or \$1400 as a standalone session (attendance limited).

***No-Risk Guarantee: Your return on investment is guaranteed – money-back or credit.***

**Registration** — Please fill out the form below:

By Phone: **800/338-2223 or 781/891-8080**  
By Fax: 781/398-1889  
E-mail: registrar@roundtable.com  
Web: www.ManagementRoundtable.com  
Mail: **The Management Roundtable, 92 Crescent Street, Waltham MA 02453**

Please accept the following registration(s): (please use photocopies for additional people)

2-day summit     Post-conference workshop on Multi-project TOC

Name: Mr./Ms. \_\_\_\_\_

Title: \_\_\_\_\_

Company: \_\_\_\_\_

Address: \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Phone: \_\_\_\_\_ Fax \_\_\_\_\_

E-mail \_\_\_\_\_

Please send me a free sample issue of the PEER-award-winning *Product Development Best Practices Report* (whether you attend the Summit or not)

Fee: \$1600/person. Deduct \$100/person for team registrations of 3 or more.

Check enclosed, payable in US funds to Management Roundtable, Inc.

Please bill my  Visa  Mastercard  AMEX  Diner's Club

Account # \_\_\_\_\_ Exp. Date: \_\_\_\_\_

Signature \_\_\_\_\_

Please bill my company. PO# \_\_\_\_\_

Registration Code: **Web Download**