TOC International provides facilitators certified by the TOC International Certification Organization. All knowledge is based on years of practical experience and success in implementing all applications of the Theory of Constraints.

For information, please contact:
Gerald Kendall or Jacquelyn Kendall
+865-430-3128
e-mail: Gerryikendall@tocinternational.com
www.tocinternational.com
**VIABLE VISION STRATEGY & TACTICS**

This workshop outlines how to convert a company’s top line to bottom line within 4 years. The discussion of cases that integrate marketing, sales, logistics and new product development highlight how to move a company rapidly towards exponential growth.

**Viable Vision (1 Day)**

Most visions do not inspire excitement and correct, aligned action from the senior management team. To bring a company’s net profits to equal current sales within 4 years, every functional executive must be aligned towards rapid growth. Such achievement requires flawless logistics and a completely different marketing and sales approach. This workshop, designed for the top management team, explains through case studies, how to identify the opportunity for a Viable Vision, and how to move the company’s top management team to achieve it.

**Topics include:**

- Meaning of “Viable Vision”
- Finding simplicity in the midst of complexity
- Overcoming the Market Constraint – Driving sales and new profits through compelling marketing
- Operations Logistics that are meaningful to customers
- Distribution Logistics to increase turns and reduce inventories
- Speed to market in new product development
- Speeding up change with breakthrough project management techniques
- Aligning the Supply Chain – internal and external
- Making it happen – the 3 step approach
- Your next step
INTERNAL AND EXTERNAL SUPPLY CHAIN LOGISTICS AND MEASUREMENTS

This workshop provides insights into aligning and improving all parts of a supply chain. It is intended for executives and managers who seek holistic answers to deal with supply chain complexity.

SUPPLY CHAIN – THE HOLISTIC APPROACH (2 days)

One main purpose of any measurement system in a supply chain is to motivate the parts to do what is good for the system as a whole. In today’s global economy, a measurement system must do more than drive Company A to be better than Company B. Supply chains are now competing with each other to capture markets. Therefore, an effective supply chain measurement system must integrate each member of the supply chain, with superb logistics, to address how to help the supply chain achieve its overall goals. A healthy supply chain will satisfy the end customers and markets, better than competing supply chains.

Many organizations today do not integrate their own internal supply chain (within their own company) to work cooperatively. Before trying to align the external supply chain (multiple organizations) with a combination of logistics and measurements, it makes sense for a company to get its own house in order. This workshop defines the problems that are blocking most companies today from achieving such alignments and the solution in terms of both logistics and measurements.

Topics include:

- 3 Global measurements to assess the health of any supply chain
- The Inventory Conflict within a supply chain - overcoming some sacred cows
- Distribution Logistics – the problems and the solution
- Overcoming shortages while simultaneously reducing inventory
- Role of forecasting and transportation issues within a supply chain
- Operations Logistics within a supply chain – the problems and the solution
- Information needed by each link in the chain
- Two measurements for supporting organizations within a supply chain
- Case studies
THEORY OF CONSTRAINTS (TOC) OVERVIEW

These workshops provide a clear understanding of the TOC methodology, and the TOC processes used to improve an organization. It is offered at an executive level and a more detailed level.

TOC OVERVIEW FOR EXECUTIVES (4 hours)

This workshop is intended to give executives and managers the understanding of how constraints management provides leverage to improve. From this overview, executives will understand why many improvement efforts are a waste, and why many measurements drive the wrong behavior.

Topics include:

- Definition of a constraint
- Holistic approach – what is the problem
- The A and B example
- Physical vs. invisible constraints
- Operations example
- Generic constraints and solutions in Project Management, Distribution, Finance
- Systems approach – Supply chain, marketing, sales and H.R.
- Improvement strategy
- Case examples
- Summary of the major assumptions behind TOC

MANAGING BY TOC – OVERVIEW (2 Days)

This workshop provides an overview of all aspects of the Theory of Constraints methodology. It is intended to give managers evaluating the methodology and those embarking on a TOC effort a deeper understanding of the breadth and depth of the Thinking Processes behind TOC and the derivative applications.

Topics include:

- Definition of a constraint
- The Five Focusing Steps
- The A and B example
- Physical vs. invisible constraints
- Finance and Measurements – A new frame of reference
- Core Problems – class example
- Drum, Buffer, Rope overview
- Critical Chain overview
- Conflict Resolution
- Root Cause Analysis
- Marketing and Sales overview
- Systems approach – Supply Chain
- Where is your constraint?
STRATEGY – THE 4X4 APPROACH

This workshop provides the facilitation for creating a comprehensive strategy designed to meet the company’s goals. The techniques are designed to build the commitment of all key members of the senior management team, with a resulting plan detailing the major ideas that the organization must implement to be successful, the person responsible for each major idea, and the sequence of implementation.

Module 1  (4 Days)
DEVELOPING THE COMMON LANGUAGE AND DEEPER UNDERSTANDING ACROSS FUNCTIONS

This first 4 days builds, through a powerful combination of audience interaction and Theory of Constraints Insights and videos, a common understanding of the cause-effect relationships across an organization. Topics are customized according to the pre-identified constraint of the organization.

Topics are selected according to the organization’s constraint, from the following:

- Operations
- Finance and Measurements
- Project Management / Engineering / R&D
- Distribution
- Marketing
- Sales
- Managing People
- Strategy

Module 2  (4 Days)
DEVELOPING THE STRATEGY FOR YOUR ORGANIZATION

This session is designed for senior executives to detail the improvement strategy for their company. Each executive defines their major problem blocking them from meeting the organization’s goal(s). The problems are analyzed using the TOC tools, and the collection of ideas that comprise the strategy is developed. The session concludes with a plan that designates the milestones necessary to accomplish the goals, the sequence and the responsibilities. Documentation of the entire effort is provided.

Topics include:

- The undesirable effects of the organization
- Defining the conflicts
- Understanding and agreeing on the core problem of the organization
- Assumptions and injections to overcome the core problem
- Negative Branches
- Obstacles to implementing the collection of ideas
- Sequencing the milestones
- Responsibilities for implementation
IN ADDITION TO LEARNING THE METHODOLOGY PRESENTED IN THIS WORKSHOP, PARTICIPANTS WILL COMPLETE A FULL ANALYSIS OF THEIR OWN SUBJECT MATTER.

The TOC Certification Alliance was formed in November, 2001 with the help of Dr. Eli Goldratt. TOC International Inc. is a founding member and supporter of the Alliance. While international certification standards are being formulated, there are many aspects of TOC certification that are clear.

A TOC certified professional must have the ability to take any organization and improve it, making a significant contribution to that organization’s goals. Such an expert, or “Jonah” in the former vernacular, has the skill to analyze any situation and get others to buy-in to their logic. This professional has knowledge, experience and success in using the five Thinking Processes of TOC. These are important criteria to begin to define such a professional, but there are more.

The holistic TOC certified professional is intimately familiar with the applications of TOC to areas of Project Management (Critical Chain), Strategic Planning (4x4), Production (Drum, Buffer, Rope and Buffer Management), Distribution (TOC Distribution Solution), Marketing (The “Mafia Offer”), Sales (Overcoming the 6 layers of resistance), Finance and Measurements (Throughput Accounting, $ Days measurements) and Managing People (Day-to-day applications of the Thinking Processes). The expert may or may not have experience in all of these areas, but they have experience in at least one of the areas. Their knowledge gives them the ability to recognize where any of the applications can be used to speed up an improvement process without reinventing the wheel.

TOC International offers TOC certification training through the TOC Master Certification program. While the standard program is organized in three modules of 3 days each plus optional mentoring days, the program is often customized for on-site workshops. Participants in this program have access to TOC experts in between sessions and after the program is complete.

TOC International provides the top internationally recognized experts to facilitate your journey to certification. Our clients often seek help beyond the classroom and well beyond the knowledge contained in course materials and books. For TOC certification, TOC International provides a powerful combination of intense classroom instruction, a reading and study program, top experts in TOC and mentoring through the certification process.

All of the TOC facilitators who lead this program are true experts in TOC. Further, they have all implemented TOC for years. TOC International’s top team are Gerald Kendall, a recognized expert, internationally acclaimed speaker, consultant, facilitator, author of Viable Vision, Securing the Future and Advanced Project Portfolio Management and Jacquelyn Kendall, an experienced TOC professional with 10 years of TOC experience.
Module 1 - THE THEORY OF CONSTRAINTS THINKING PROCESSES (3 Days)

Using a school example, participants work through the realistic case study, learning all of the rules of logic (categories of legitimate reservations) and the five TOC Thinking Processes.

Topics Include:

- The Thinking Processes Road Map
- Clearly defining symptoms (Undesirable Effects)
- Connecting Undesirable Effects
- Three types of core problems
- Rules to construct solid logic (Categories of Legitimate Reservations)
- Steps for building a Current Reality Tree
- Group presentation and rules for scrutiny of Current Reality Trees
- Communicating the CRT to others
- Evaporating Cloud, Assumptions and Injections
- Translating UDEs to Desirable Effects
- Translating a CRT to a Future Reality Tree (FRT)
- Adding injections for sufficiency
- Negative Branch Reservations
- Building Prerequisite Trees
- Structure, links to FRT, Case study
- Building Transition Trees (TRT)
- Structure, links to PRT and FRT, case study
- Communicating TRTs
- Certification Test
- Homework – Reading, completion of school case study

MODULE 2 – THE TOC APPLICATIONS (3 Days)

Before beginning any improvement effort, it is important to bring a system under control. The Theory of Constraints application solutions meet Dr. Deming’s criteria for predictability. Further, the TOC applications provide generic solutions to many common problems. It is important for participants who want to be certified holistically in TOC to be familiar with all of the TOC applications. It is also valuable for participants to see how TOC Thinking Processes were used to find breakthrough solutions. This module supplements knowledge that participants will already have gained by viewing the 24 hours of Goldratt TOC Self-Learning Program CDs.

Topics Include:

- TOC application solutions and the three questions of change
- How generic solutions are customized, using the Thinking Processes
- Operations – Drum Buffer Rope – Review and implementation considerations
- Project Management – Critical Chain – Review and implementation considerations
- Throughput Accounting and supply chain measurements – How to implement and use them
- The Compelling Marketing Offer – Cases and hints to make it work
- Winning Collaboration – Management Skills using the Thinking Processes
- Distribution – Review and implementation considerations
- 4x4 – Facilitator’s Guide
- Certification Test
- Homework – Reading, self-study modules
MODULE 3 – PARTICIPANT IMPROVEMENT EFFORT USING TOC (3 Days)

This module provides the participant their final challenge – to apply everything they have learned to improve a real-life organization. These 3 days may be spread out over as long a period of time as required by the participant to make it happen. The participant may also supplement these days with additional mentoring days as required.

Topics Include:
- Defining the UDEs of the participant’s real-life organization
- Building and scrutinizing the CRT
- Getting buy-in to the CRT from the organization
- Creating the conflict cloud, assumptions and break through injection(s)
- Constructing the FRT and negative branches
- Building a PRT that the participant is prepared to follow
- Building at least one TRT that the participant will use, either for buy-in or to achieve part of a PRT
- Formal acceptance of the TOC analysis by the organization
- Agreement to implement the TOC solution or participant’s analysis of the failure
- Final Certification Test

This is a rigorous program intended for candidates who desire a very deep knowledge of the TOC Thinking Processes and their application beyond an academic setting.
After 40 years of Critical Path experience, projects are still frequently late, over budget and not within specifications. What is the problem? What can we do about it? Critical Chain reveals new assumptions about human behavior and overloaded project environments, and offers a breakthrough solution.

Module 1 (2 days)
PRINCIPALS OF TOC CRITICAL CHAIN PROJECT MANAGEMENT

This workshop provides a comprehensive understanding of how to plan and manage a project according to Critical Chain methodology. Issues related to single and multi-project environments are addressed, and the solutions are explained through simulations and scheduling exercises.

Topics include:
- The single and multi-project environments
- Profile of a typical task estimate
- Student syndrome
- Parkinson’s Law
- Good and bad multitasking
- Measuring people according to their estimates
- The five focusing steps of TOC, with the A & B example
- Applying the five focusing steps - The Single Project solution
- Reducing estimates to eliminate Student syndrome and Parkinson’s Law
- Relay runner work ethic
- Scheduling tasks to start as late as possible
- Project buffers, feeding buffers and resource buffers
- Multi-project problems and solution
- Good and Bad multitasking
- Drum concepts
- How to stagger projects according to a drum
- Implementing in a single vs. a multi-project environment

Module 2 (2 Days plus project management assistance)
IMPLEMENTING CRITICAL CHAIN

This session facilitates the Critical Chain implementation team to customize the solution so that it can be successfully implemented. Consulting assistance is provided to help create the project plan, monitor the implementation and deal with issues as they arise.

Topics include:
- Identification of the multi-project drum
- Staggering / gating mechanism
- Drum resource buffer
- Software requirement – real time vs. non real time
- Sequence of converting projects to CC format
- Project scheduling logistics
• Designated drum and schedule managers
• Frequency, method and data entry for progress reviews
• New primary measurements – estimating, road-runner, project managers, resource managers
• Subordination policy and measurement changes
• Exploitation policy and measurement changes
• Education plan – executives, project managers, resource managers, resources
• Negative branches
• Obstacles
• Implementation project plan, resources and leadership
OPERATIONS LOGISTICS (DRUM, BUFFER, ROPE ‘DBR’)

Most people that face the daily challenges of a production environment blame their management problems on “Murphy”. Murphy occurs when, for example, suppliers deliver late or with poor quality, machines break down, tooling fails, and many other unanticipated problems. As illustrated in Dr. Goldratt’s best-selling book, “The Goal”, TOC proposes Drum, Buffer, Rope as a way to succeed in spite of “Murphy”.

MODULE 1 - PRINCIPALS OF TOC OPERATIONS LOGISTICS (DBR) (2 Days)

This workshop helps production and non-production people understand why it is so difficult to manage production. With the objective of increasing throughput and flow, the workshop provides a complete understanding of the Drum, Buffer, Rope approach to scheduling and managing production environments. These principals can be applied to any plant environment – repetitive or job shops, V, A, T or other structures.

Topics include:
- Why is it so difficult to manage production
- Introduction to the simulator
- Managing for efficiency of each resource
- Determining batch size
- Drum Concept
- Buffering the drum, assembly and shipping
- Tying the rope from shipping
- Tying the rope from the drum
- Exploiting the drum
- Subordination
- Measurements in a DBR world
- Implementing DBR

MODULE 2 - IMPLEMENTING OPERATIONS LOGISTICS (DBR) (2 Days)

This session answers the question, “How do we fully implement Drum, Buffer, Rope in our environment”? Consulting assistance is provided to customize the solution, identify and overcome any issues blocking implementation and create and monitor the implementation plan.

Topics include:
- Identification of the Drum resource(s)
- Buffer sizes, batch size
- Method of tying the rope
- New primary measurements
- Buffer management and reports, Computer requirements
- Subordination policy and measurement changes
- Exploitation policy and measurement changes
- Education – plant management, supervisors, employees, sales, finance, executive, engineering
- Negative branches
- Obstacles
- Implementation project plan, resources and leadership
MODULE 1 - PRINCIPLES OF TOC PROJECT PORTFOLIO MANAGEMENT (2 Days)

This workshop details an 8 step process to bring strong project portfolio management practice into existence in any organization. It addresses problems related to projects focused on non-constraints, too many active projects, lack of prioritization according to the organization’s strategic resource and projects that take too long to execute. Cross-functional conflicts in project priorities, combined with resource conflict issues, are permanently addressed.

Topics include:
- The objectives of Project Portfolio Management
- The four major portfolios and their interrelationships
- Accelerating project delivery
- Improving project flow – multitasking, matching active projects to resource capacity, exploiting the strategic resource, relay runner work ethic
- The new approach to strategic planning (How to stop the destructive silo approach, how to address the organization’s biggest constraints, how to choose the right project mix)
- Connecting organization goals, projects (active and planned) and assets
- Prioritization – How to derive a recommended ranking of projects
- How to run a governance meeting, with recommendations on approving, deactivating and terminating projects
- How to balance a portfolio (supply-side and market-side, research vs. development, short term vs. long term, risk vs. opportunity, infrastructure and process improvement vs. bottom line improvement)
- Avoiding the trap of becoming too involved in the details
- Integrating the Portfolio Management function with a PMO

MODULE 2 - IMPLEMENTING PROJECT PORTFOLIO MANAGEMENT (2 Days)

This session applies the 8 step process, to build the portfolio and gain support and commitment of the senior executive team to the process. Consulting assistance is provided to customize the solution, identify and overcome any issues blocking implementation and to create and monitor the implementation plan.

Topics include:
- Definition of the four portfolios
- Connection of the portfolios
- The initial top management report
- Developing project plans
- Defining the red, yellow and green project list
- Examining portfolio balance
- Developing opportunity and risk templates
- Assessing prioritization recommendations
- Making other recommendations (kill, deactivate, activate, etc.)
- Preparing for the first governance meeting
- Software support
- Establishing a PMO – need and recommendations
DISTRIBUTION LOGISTICS

Learn how to establish a pull system, with the right inventory in the right place at the right time. Reduce shortages and total supply chain inventory simultaneously.

MODULE 1 - PRINCIPALS OF TOC DISTRIBUTION LOGISTICS (2 Days)

This workshop provides distribution management and executives with the insight to create an easy-to-manage pull system. It addresses problems related to too much inventory in the overall system, compounded by stock-outs in some parts of the system.

Topics include:
- The distribution environments – Supply Chain definition
- What causes service levels and throughput to deteriorate
- Levels of protection against demand and transportation fluctuations
- Justifiable paranoia
- Compounding negative effects – returns, lack of plant capacity, distribution center stock-outs, overstocking and obsolescence
- Current measurements and policies in the supply chain – plant, distribution centers, point of sale
- Defining the core conflict
- The solution – moving inventory to insulate against statistical fluctuations
- Establishing a pull system
- Buffer management – plants, distribution centers, point-of-sale
- New measurements for the supply chain – plants, distribution centers
- Transportation logistics
- Managing seasonal fluctuations and changes in demand patterns
- Socratic education

MODULE 2 - IMPLEMENTING DISTRIBUTION LOGISTICS (2 Days)

This session identifies the road map to customize and implement the Theory of Constraints Distribution Logistics. Consulting assistance is provided to customize the solution, identify and overcome any issues blocking implementation and to create and monitor the implementation plan.

Topics include:
- Definition of the supply chain flow and current measurements
- Buffers and location of inventory – raw material, plant, distribution centers, point-of-sale
- Pull system logistics
- New primary measurements
- Buffer management and reporting
- Replenishment frequency and logistical changes
- Computer requirements
- Subordination policy and measurement changes
- Exploiting replenishment time
- Education plan – plant, distribution, transportation, point-of-sale
- Negative Branches
- Obstacles
- Implementation project plan, resources and leadership
THE TOC MARKETING OFFER

This series of workshops provides the understanding and the tools necessary to build and present the TOC marketing offer to the market. Marketing, sales and functional management people who intend to participate in such an offer will learn the concepts and practical tools necessary to complete and present such an offer to the market.

MODULE 1 - CONSTRUCTING THE MARKETING OFFER (2 Days)

Using a case study adapted from a highly successful offer, this module gives marketing people a deep understanding of the components of an offer that is “too good to refuse”. Attendees learn, from practice on their own real-life examples, that such an offer is never based on price or product modifications. The workshop shows how to find the solution that gives a 1-2 year competitive advantage, and documents the components necessary to sell the solution to the market.

Topics include:
- Definition of an offer that is “too good to refuse”
- Criteria for the undesirable effects (UDEs)
- UDE Story format
- UDE cloud
- Deriving the generic cloud
- Assumptions related to rooted industry policies
- Sample logic tree of current reality
- Finding the solution – the Supplier’s Future Reality Tree
- The Customer’s Future Reality Tree
- Polishing the solution – negative branches
- Polishing the solution – overcoming obstacles
- Validating the solution
- Sales training considerations

MODULE 2 - CONSTRUCTING TREES AND NEGATIVE BRANCHES (2 Days)

This workshop teaches participants how to construct Current and Future Reality Trees related to a “Marketing Offer”. Attendees will learn the rules of logic used to construct solid, easy to understand diagrams, and apply these rules on their own real examples.

Topics include:
- Purpose of the Current Reality Tree (CRT)
- Essence of a CRT that makes sense to customers
- Rules of logic
- School example
- Connecting and scrutinizing UDEs
- Connecting to the supplier policies
- Deriving the Future Reality Tree
- Polishing the language in the Trees
- Oral presentations
MODULE 3 – SOLUTION FOR SALES (4 Days)

The best marketing offers are often the hardest ones to sell. This workshop teaches sales and marketing professionals why a traditional sales approach will fail, and how to be successful in closing the deal.

Topics include:

- The layers of resistance
- SPIN Selling strategy
- Sequence of a presentation
- Predictable negative effects that come from presenting out of sequence
- Marketing collateral required
- Presenting the problem
- Presenting the direction of the solution
- Showing how the solution overcomes the problem
- Letting the customer solve some of the negative branches
- Presenting the obstacles
- Evaluating failures
- Role Plays
WINNING COLLABORATION PROGRAM
A Theory of Constraints approach to managing people.

Every organization in today’s world faces many tough issues. To continue improving you must learn the right principals and a methodical approach. Learning demands more than old style lecturers preaching abstract ideas. Action learning means bringing real life issues to class, understanding them in a new light and using a step by step process to deal with them. Winning Collaboration teaches four skills to get people working together in organizations facing change.

MODULE 1 CONFLICT RESOLUTION AND NEGATIVE BRANCHES (2 Days)

Compromise is not good enough, the result… the same issues resurface again and again. This module teaches a logic based technique that produces a true win–win solution to conflicts between individuals. Participants will also learn to diagram and resolve empowerment conflicts within their organization.

Topics include:
- Skills necessary to define a conflict precisely
- The five box Conflict Cloud diagram
- Common objectives, needs, wants
- Constructing a Conflict Cloud
- Assumptions underlying a conflict
- Erroneous vs. valid assumptions
- Injections (proposed solutions)
- Testing the Injection for “win–win”
- “Win-win solutions don’t sell themselves
- Sequencing communication – where to start
- Pitfalls of communicating the conflict
- Working together towards a solution
- When to stop – three possible outcomes
- Applying the Conflict Cloud technique to empowerment conflicts

The Negative Branch Technique taught in this session allows you to logically analyze your own and other people’s ideas and present logical feedback without offending the other person.

Topics include:
- Vital importance of the initial response
- Recognizing the positives to someone else’s idea
- Identifying potential negatives
- Rules to construct solid logic
- Verifying negative effects
- Identifying assumptions
- Constructing the Negative Branch logic diagram
- Communicating your concerns
- Three possible outcomes
MODULE 2 (1 day) BUILDING A SUCCESSFUL TEAM PLAN

Team efforts often fail because not all members are bought into a goal, many times because they do not see it as feasible. Further, there are often critical tasks that are not part of a plan when a new project is initiated. This module teaches a technique to gain the active participation of all team members. By acknowledging everyone’s obstacles up front, team members are anxious to set Intermediate Objectives (milestones) to overcome the obstacles standing in the way of their goal. Through the construction of a Prerequisite Tree participants will learn how to formulate a comprehensive plan to overcome major obstacles and achieve a team goal.

Topics include:

- Agreeing on a goal
- Gaining full team participation
- Identifying obstacles to a goal
- An Intermediate Injection as a condition, not an action
- Identifying Intermediate Injections
- Synchronizing Intermediate Injections into a logical sequence
- Constructing a Prerequisite Tree
THROUGHPUT ACCOUNTING & MEASUREMENTS

The key to imbedding new positive behavior in an organization lies with financial reporting and measurements. A good measurement system must give every individual the tools to make correct, real-time decisions. In addition, individuals must have simple, clear reports that show them the impact of their decisions on the goals of the company. This workshop teaches the Throughput Accounting approach to achieving a good reporting and measurement system.

MODULE 1 (1 Day)

Topics include:
- The three primary measurements – Throughput (T), Investment (I) and Operating Expense (OE)
- Relationship between T, I and OE and the goal
- The A and B example – Cost World, Activity Based Costing World, Throughput World
- Measurements and the constraint
- The meaning of “Decide How to Exploit” and examples
- Measurements and subordination
- Reporting – traditional vs Throughput Accounting
- Cost analysis, treatment of inventory values
- Fixed vs. variable costs
- Treatment of investment
- Making Throughput a #1 priority
- Negative impacts of Throughput Accounting for public companies and how to counter them
- Measurements for the supply chain – Throughput $ Days and Inventory $ Days
- Implementing Throughput Accounting and relationship to legal reporting requirements