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Strategic Partnerships

Theory of Constraints – TOC
Effective Management Made Simple

'Effective managers get the job done. They get more from the resources and time that they have available. The people and resources for which they are responsible achieve higher quality work, with lower lead times, reduced backlogs, increased throughput, less fuss and improved job satisfaction.

If you want to know how, this is the course for you and your people.'

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Experience. The Difference

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Theory of Constraints – TOC
Achieving more of your goal

Introduction

Theory of Constraints assists managers to achieve bottom-line and capacity improvements quickly and at little or no cost. At the same time, Theory of Constraints avoids capital expenditure by getting more from the existing system.

In practice, Theory of Constraints quickly delivers reduced process lead times (by up to 50%), decreased backlogs of work in progress (by up to 30%), increased throughput and improved job satisfaction. (See the chart opposite).

Theory of Constraints helps managers to reduce the vulnerability of operations or projects to unexpected changes. It simplifies scheduling and reduces expediting. By focusing on effectiveness, Theory of Constraints avoids cost-cutting drives and so improves workforce morale and pride in the quality of work.

The principles involved are generic, easily understood and readily applied to improve effectiveness in any context including health, retail, services, public administration or manufacturing, whether in project management, or supply chain operations.

Implementation of Theory of Constraints requires little training or culture change and no investment in information technology, systems or equipment. Results come fast. There is also little or none of the disruption and lost output, commonly associated with introducing complex technologies, efficiency drives or across the board cost-cutting.

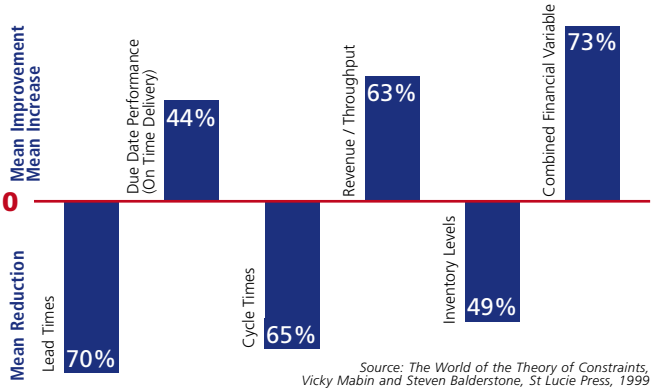
Unlike Lean and Six Sigma, Theory of Constraints is not widely known by Australian managers. By learning Theory of Constraints you can gain a point of difference as an effective manager in Australia.

Organisations, businesses, governments, health systems and armed forces around the world have adopted and implemented this simple but powerful management tool to help their managers to effectively deliver their goals. Find out why!

WORKSHOP LEARNING OUTCOMES

- **Know how to improve effectiveness without incurring additional costs.**
- **Learn how local efficiency can worsen system effectiveness.**
- **Adapt Lean to deal with risk and unanticipated events.**
- **Focus management efforts and allocate resources for the best effect.**
- **Simplify problem solving and get a win – win solution rather than a compromise.**
- **Meet your commitment: deliverables on time and within cost.**
- **Improve inventory turnover and shorten lead times.**

Summary of an Independent Study – Sampling of Companies Using TOC



Source: The World of the Theory of Constraints, Vicky Mabin and Steven Balderstone, St Lucie Press, 1999

WHO SHOULD ATTEND

This course is designed to support senior and middle managers responsible for effectively delivering goals. This is an essential tool for managers who are responsible for improving throughput, reducing backlogs and process lead times, reducing and simplifying expediting in an operating system.

It applies to the management of any interconnected system and in every key management area. It is applied in the operations of governments, health and other services, in processing operations, in project management, in financial institutions, in defence forces, in supply chains and in mining and manufacturing.

TIME FRAMEWORK

The material is presented over a 2 day period. The core module focuses on foundations of Theory of Constraints as applied to the management of resources and is designed for one day. Subsequent 2 half day modules cover scheduling of work assignments and, performance measurement.

WORKSHOP METHODOLOGY

Each student will be actively involved in group exercises and open discussion of examples, some presented during the course and others developed from the key processes of their workplace. The content is presented together with real-life examples using a variety of media including film. The presentation encourages the group to learn by applying the methodology to their workplaces.

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Workshop structure and content

DAY 1

The 'Building Blocks'

Theory of Constraints builds on the insight that a Constraint, usually a single Constraint, limits the effectiveness of any system in achieving more of its unlimited goal. The methodology consists of a five step cycle, with each step focused on the Constraint:

- Identify the Constraint which currently limits system performance (i.e. the 'Bottleneck')
- Exploit the Constraint (i.e. Wasted or lost time at the constraint cannot be recovered.)
- Subordinate non-constraints to the Constraint (i.e. 'Use spare capacity at non-constraints to help the constraint reach 100% of its capacity)
- Elevate the Constraint (i.e. 'Innovate to get greater than 100% of the capacity constraint')
- Identify the new Constraint (i.e. Continue the improvement.)

Together with the definition of the System and the Goal, these building blocks provide the manager with the key to unlocking the hidden capacity of existing resources, and achieving more of the Goal while deferring or avoiding purchasing additional capacity. And if there is a need to add resources these steps show where to add capacity to get the best effect.

In this module participants learn how to define realistic and effective targets for key processes. The thinking discipline of Theory of Constraints is introduced, including key tools such as the 'Current reality tree' and; Evaporating Clouds' that assist in identifying the Constraint and developing a creative solution. Practical class exercises reinforce learning about these topics.

Particular emphasis is placed on showing the relevance of this powerful methodology to the key process in the workplace of each participant.

DAY 2
MORNING SESSION

Key Performance Measurements

Theory of Constraints provides a simple but very powerful set of performance measures which tie local decisions to the overall performance of the system being managed. Since people tend to behave according to how their performance is measured, these measures reinforce behaviours which improve overall system performance. In recent years the Harvard Business School has recognised the unique contribution of Theory of Constraints in this field.

Participants will acquire skills in using this common sense set of performance measurements. The performance measurement framework will be illustrated using as examples the key operational decisions of infrastructure investment; out-sourcing or make or buy; the appropriate level of inventory build-up; and the optimal product mix.

This powerful approach to performance measurement has universal applications across the full spectrum of management environments: public, community or private sectors: administration, service, design, manufacturing or mining; for profit or not for profit.

AFTERNOON SESSION

Synchronized Scheduling

Whether you manage in government, a manufacturing facility, a corporate body, a service provider, in engineering or project management, you face the task of scheduling a variable set of assignments through a fixed or constrained set of resources. Theory of Constraints has developed a common sense and effective approach to the scheduling of assignments. This application uses a specific Theory of Constraints tool called 'Buffer Management: Drum – Buffer – Rope'. The keys to an effective schedule are to focus the schedule on the pace of the constraint, and to protect the constraint from unexpected interruptions by using strategically placed work buffers. The Constraint Management solution incorporates the 'pull' and 'flow' principles of Lean, together with the release of assignments based on the Manufacturing Resource Planning logic. The learning of the scheduling rules is facilitated through an engaging on-screen simulation of a system in which throughput can only be maximised by effectively scheduling the rate at which tasks are presented to available resources to be processed Every manager faces this dilemma.

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TESTIMONIES

"This was one of the best structured training courses I have attended. Very relevant and the practical aspects were effective tools".

Nick Porter – Senior Manager – Hill Defence Products – Adelaide

"We completed training on the 7th March 2012. Since this time one month ago, the throughput of product through our production constraint has increased by exactly 50%."

Andrew Meek – CEO – AWBell – Melbourne

"Application of theory to practice, in real life projects that DAFWA personnel could understand the relevance. Excellent Lewis. As ever, a very professional and informative performance with the right amount of enthusiasm and humour to engage us in the application of this practical theory of improvement."

Stuart Clarke – Senior Director at the Department of Agriculture and Food, Western Australia

Workshop Facilitators

Lewis Trigger

Lewis Trigger is a recognized international expert in TOC. Australian born, Israel resident, Lewis is an industrial engineer with over 20 years experience in applying Theory of Constraints (TOC) within the Israeli military's technology and logistics systems and within government and industry.

After completing his first degree at the University of Queensland, Lewis went on to serve 16 years as an officer in the Israeli Air Force. His experience in the Israeli Air Force and in senior management in high technology industry in Israel, has provided Lewis with a wealth of knowledge and experience in Operations and Project Management in general, and particularly in defence maintenance and Project Management. Today he heads his own company, based in Israel that provides Industrial Engineering Consultancy and Workshops to both defence and commercial industry.

For the last 10 years he has held the contract to coach all the formal Project Management workshops for the Israeli Air Force and Land Forces. In addition, he teaches Management courses in a number of Israeli colleges including the prestigious MBA program at the University of Tel Aviv.

For the last nine years he has been exporting his expertise to Australia, presenting his workshops to a wide variety of leading Australian companies and organizations. The list of organizations includes: Visy, General Motors Holden, Adelaide Health Service, the Spotlight Retail Chain, Dairy Farmers (N.S.W.), Australian Submarine Corporation (ASC), Western Australian State Department for Agriculture & Food, Salisbury City Council, Geographe (W.A), G. James Ltd (Qld), Rosebank Engineering (Vic), Raptispax (Qld), and Julliard Properties (Vic). Lewis's expertise was recently included in the exclusive executive MBA program in Complex project Management sponsored through the DMO – the Australian Department of Defence. In addition the following organizations have sponsored Lewis's public workshops that targets senior and middle management: The Australian Industry Group (AIG), the Queensland University of Technology (QUT), QMI Solutions, The Australian Israel Chamber of Commerce, The Chamber of Commerce & Industry W.A., SIRF Roundtables (focusing on the Mining Industry sector), The Defence Teaming Centre (S.A.), Terrapinn Conferences (focusing on the Mining Industry sector and Utility Assets).

Lewis holds a number of qualifications. His initial training was at the University of Queensland; however since then he has gained international experience including a Master of Business Administration from the Business School of the Hebrew University of Jerusalem and a Master of Science in Industrial Engineering from the prestigious United States Air Force Institute of Technology. He has been personally coached on TOC by the theory's founder Dr. Eli Goldratt.

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Theory of Constraints registration form and tax invoice

Personal details

Dr ❑ Mr ❑ Mrs ❑

Family Name

Given Name(s)

Telephone Mobile Facsimile

Work / Home email

Mailing address

Employment details

Employer ABN

Position / Title

Employer Address

www.

Payment details

Course fee $

Cheque ❑ Make cheque payable to the University of South Australia

Credit card ❑ Please complete the authority below

Visa ❑ Mastercard ❑

Card Number Expiry date

Card holder's name Signature

Please forward application with payment to:

STRATEGIC PARTNERSHIPS
University of South Australia
Level 5 Way Lee Building
City West Campus
North Terrace Adelaide SA

ABN 37 191 313 308

Contact Details
Ms Sandra Walker, Program Executive Officer
Telephone: (61-8) 8302 0801
Facsimile: (61-8) 8302 0805
Email: Sandra.walker@unisa.edu.au

http://www.unisa.edu.au/strategic

Cancellation policy: The University of South Australia reserves the right to cancel events and issue refunds. In the event that an attendee cannot attend, a substitute is welcome to attend in their place. No refunds will be given unless 30 days notice is given in writing prior to the date of the planned event.