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Introduction to the Thinking Processes (TP)

TOCICO webinar

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Lisa Anne Ferguson, Ph.D.
Founder and CEO, IlluminutopiaSM
Theory of Constraints (TOC)

- TOC is a management philosophy that consists of a set of logic-based tools, which are called the Thinking Processes (TP) for solving problems.
- The TP have been successfully applied in production, distribution, marketing, and project management, in addition to improving managerial skills, such as conflict resolution.
The basis of TOC: Cause-Effect

We make some successful improvements - only to have more problems in other areas when we do!

We’re a poster child for trying what appear to be logical improvement initiatives – but rarely get the kind of results we thought (or were told) we’d get.

We constantly switch between planning for the future and fighting today’s latest (and biggest) fires.

What is the root cause of these three very common symptoms?

Root?
We’re a poster child for trying what appear to be logical improvement initiatives – but rarely get the kind of results we thought (or were told) we’d get.

We make some successful improvements, only to have more problems in other areas when we do!

We constantly switch between planning for the future and fighting today’s latest (and biggest) fires.

We’re managing our system without knowledge of the constraint.

Maybe there’s another cause as well.

Is our not knowing the constraint the ONLY culprit?
What is the additional (significant) root cause of these UDEs?

- We make some successful improvements, only to have more problems in other areas when we do!
- We’re a poster child for trying what appear to be logical improvement initiatives – but rarely get the kind of results we thought (or were told) we’d get.
- We’re managing our system without knowledge of the constraint.
- We’re not managing our organizational system holistically.

An Additional Cause
So why *aren’t* we doing these very logical things?

Assumption: We *know* how to identify our constraint and to manage holistically.

We’re managing our system without knowledge of the constraint.

We’re not managing our organizational system holistically.
Holistic Approach

5FS
Leveraging the constraint to significantly improve the flow of goal units

TP
Understanding the necessity-based and sufficiency-based logic governing the system

The Organization is an Ever Flourishing company; continuously and significantly increasing value* to all stakeholders – employees (including suppliers), clients and shareholders (while preventing harm to the world due to its actions or lack of action).

*increasing value: stability on green curve, growth on red curve.
What is TOC?

A *method of managing* that is premised on the fact that any system has a constraint, the factor most limiting the system from achieving more of its goal.

The methodology to properly find and address the constraint is contained in a set of tools and processes based applying the *rules from the hard sciences* to organizational systems.

*Those rules are based upon the continual use of processes utilizing necessity-based and sufficiency-based logic.*
The TOC Roadmap
What to Change?

ROOT?
How do we implement TOC?

Accelerated improvement revolves around effectively answering the following three questions:

What to change?
Identifying the core conflict OR Agreeing on the huge pot of gold.

What to change to?
Constructing a solution.

How to cause the change?
Devising the implementation plan.
What to change?

- List undesirable effects (UDEs)
- Choose three diverse UDEs
- Write an evaporating cloud for each UDE
- Check the logic of each cloud
- Write the core conflict cloud - generic statements based on the UDE clouds
- Check the logic of the generic cloud
- Build the CRT by linking the generic cloud to all the UDEs using cause-and-effect logic
Conflict with shareholders

Objective

A Ensure the company is an excellent investment

Important Needs

B Gain healthy returns on our investment

C Invest $ in the future of the company

Actions/Wants

D Company pays high dividends

D’ Company pays moderate dividends

Shareholders

Company

UDE: Our stock price is falling due to investor actions.
Conflict with employees

A
Ensure Company growth

B
Have satisfied, loyal employees

C
Spend money on critical non-employee investments

D
Pay high wages and benefits

D’
Pay moderate wages and benefits

UDE: Employee turnover is high.
Conflict with customers

Objective

Important Needs

B Satisfied customers

Actions/Wants

D Customers pay low prices

D’ Customers pay high prices

A Make money now and in the future

C Maximize revenues

Customers

Company

UDE: Customers are defecting to our competitors.
Generic Conflict for managers

A Successful enterprise

B Satisfy needs of each stakeholder

C Common good for all stakeholders

D Focus on needs of individual stakeholders

Company

Stakeholder

D’ Balance needs of all stakeholders
What to change?

Derive the Current Reality Tree (CRT)

From the generic/core conflict…

A  B  D
C  D'

UDE  UDE  UDE

D  D'
B  C
A
What to change to?

- Surface assumptions under the arrows of the generic cloud
- Challenge assumption(s) to develop injection(s) to break the core conflict
- Create the Future Reality Tree (FRT) by using cause-and-effect logic to prove that the injections change all the UDEs from the CRT into DEs
- Improve the FRT by writing and trimming Negative Branch Reservations (NBRs) to ensure that new UDEs do not occur
What to change to?

An FRT helps you ensure that the injection/solution will lead to desirable effects (DEs) without creating new UDEs - without necessarily having to implement the change in reality.
Improve the FRT

Negative Branch Reservation (NBR)

Could any part of the FRT lead to other UDEs?
How to cause the change? Option 1

- Generate a list of obstacles to implementing the solution
- For each obstacle, decide on at least one intermediate objective to overcome that obstacle
- Sequence the intermediate objectives (IOs) in the order in which they must be achieved to create the PreRequisite Tree (PrT)
- Insert the obstacles and IOs in the Transition Tree (TrT) to create an action plan
How to cause the change?

**Prerequisite Tree**
What currently prevents the implementation of the injections?

I.O. = intermediate objective
Obst. = obstacle
How to cause the change?

Transition Tree (TRT)
An action plan that overcomes the obstacles to achieve the IOs which includes all the logic related to the action choices and sequence.
How to cause the change?

Option 2

Instead of using PrT and TrT, utilize the Transformational Strategy and Tactic tree (TSTT) and critical chain implementation plan.

The TSTT is a compelling enabler of change which presents the full logic (both necessity-based and sufficiency-based) of the synchronized plan of strategies and tactics to achieve the goal and is easy to communicate to all stakeholders, thus ensuring all efforts are effectively coordinated.
Top references

1. It's Not Luck
2. The Choice
3. Theory of Constraints Handbook
4. Thinking for a Change
5. Goldratt's Theory of Constraints
TOC Failures . . .

- Early successes frequently get stymied
  - Traditional measures say there is a problem
  - Basic industry tenets are violated (paradigm shifts are common in TOC)
- Change of leadership usually calls a halt
- Lack of sufficient buy-in of a *critical mass or the most influential stakeholders*
- Lack of an internal TOC champion
“One, people are good. Two, every conflict can be removed. Three, every situation, no matter how complex it initially looks, is exceedingly simple. Four, every situation can be substantially improved; even the sky is not the limit. Five, every person can reach a full life. Six, there is always a win-win solution. Shall I continue to count?”

Eliyahu M. Goldratt, 2008
About the presenter

Lisa A. Ferguson, PhD, is the founder and CEO of Illuminutopia, an organization that is focused on “Illuminating the way to utopia for individuals, organizations and society” (www.illuminutopia.com). Dr. Ferguson is the author of the chapter on Strategy and Tactic trees in the *Theory of Constraints Handbook*. Professor Ferguson has taught several programs on how to write S&T trees. Until June 2008, Dr. Ferguson spent a year working one-on-one with Dr. Eli Goldratt, the founder of the Theory of Constraints (TOC), as his apprentice while learning how to write.

Lisa Anne Ferguson is planning to publish two books on TOC in 2013. The first one is titled “My Year with Dr. Eli Goldratt.” The second book is focused on teaching you how to write and capitalize on the power of Transformational Strategy and Tactic Trees to enable organizations to become ever-flourishing.

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