Introduction to TOC’s Strategy & Tactic Tree Thinking Process

By Dr Alan Barnard

The introduction by Dr. Eli Goldratt in 2002 (Goldratt 2002) of a “new” TOC-based Thinking Process called a “Strategic & Tactics” Tree (S&T) is being viewed by more and more executives and managers who have been exposed to it, as one of the most important breakthroughs in ensuring that holistic business or organization strategies are defined, properly validated, communicated and implemented to achieving harmony within organizations. The S&T, they believe, can for the first time provide them with a practical process and logical structure for defining and communicating all the necessary and sufficient changes as well as the sequence of implementation of these changes to achieve more goal units for the organization – not just What to change, but more importantly, What not to change and especially How To implement the changes and Why.

As with many breakthroughs, this breakthrough started with a simple question by Dr. Eli Goldratt: *If “Strategy” is really at the highest level of an initiative or organisation and defines the direction that dictates all activities, and “Tactics” are lower down in an initiative or organisation and define the activities that are needed to implement the Strategy, then where does “Strategy” end, where do “Tactics” begin.*

Dr. Goldratt realized that answering this question required that the words “Strategy” and “Tactic” had to be defined more clearly than before. His new definitions were inherently
simple, yet powerful. He decided to define “Strategy” as, simply, the answer to the question: “What for?” (The answer is the objective of a proposed change). “Tactic” is defined as, simply, the answer to the question “How to?” (The answer is the details of the proposed change). From these definitions, it is clear that every Strategy (What for?) should have an associated Tactic (How to?) and therefore Strategy and Tactic must always exist in “pairs” and must exist at every level of the organization.

Figure 1-1 shows the implication of the change in definitions proposed by Dr. Goldratt.

FIGURE 1-1 TRADITIONAL VS. GOLDRATT'S DEFINITION OF STRATEGY & TACTIC

Goldratt’s proposed “Strategy & Tactic Tree” (Goldratt et al 2002) can therefore be viewed as simply a logical tree of the proposed changes that should be both necessary and sufficient to ensure the synchronized achievement of more Goal units for the organization. However, any logical tree is only as valid as the assumptions on which it is based. Therefore, it is the responsibility of managers at every level in the organization to not only contribute to defining and communicating the Strategy and Tactic for each proposed change, but also to define and communicate the logic of the proposed change – why the proposed change is really necessary to achieve the higher level objective and ultimately the goal of the company, why they claim it is possible to achieve the objective
(Strategy) of the change (especially considering it has probably never been achieved before), why they claim their proposed change (Tactic) is the best or even the only way of achieving the Strategy of the change and finally, what advice/warning they would give to their subordinates to ensure the sufficiency of the implementation of the proposed change.

Each S&T node in the S&T is therefore simply a proposed change that should answer:

1. Why the change is needed? (Necessary Assumption)

2. What is the specific measurable objective of the change? (Strategy)

3. Why we claim the Strategy is possible and what specific requirements, potential negative branches or obstacles must be considered when selecting from the alternative ways (tactic) for achieving the Strategy? (Parallel Assumptions linking Strategy with Tactic)

4. How to best achieve the objective of the change (Tactic) e.g. what changes should be made to processes, policy or measurement?

5. What advice/warning should be given to subordinates, which, if ignored, will likely jeopardize the sufficiency of the steps they would take to implement this tactic or which is likely to be ignored (without the warning)? (Sufficiency Assumption)

Figure 1-2 shows how the S&T can be used to define and communicate the necessary change to “Achieve a Focusing Mechanism for Process Improvement/Capacity Elevation” by explicitly answering the questions of why the change is needed (necessary assumptions), what the specific measurable objective is for the change (strategy), why the objective is possible and why the tactic is the “best” way (parallel assumptions) and lastly how (the new procedure for implementing the change).
FIGURE 1-2 S&T LEVEL 4.11.5 FOR ACHIEVING POOGI

The most recent update on the application of TOC’s Buffer Management as a Process of Ongoing Improvement (POOGI) within the various applications of TOC can be found in the generic S&T’s\(^1\) released by Dr. Eli Goldratt. The relevant POOGI parts of the S&T’s for Manufacturing Companies, Distribution Companies and Projects companies are included in these generic S&Ts. Each of the POOGI processes typically have three components: (1) Recording reasons for red and black buffer status, (2) Conducting a Pareto analysis on reasons for identifying the primary causes of delays/unavailability and (3) Developing and implementing improvement projects (e.g. Kaizen events) to address primary cause(s) of delays/unavailability.

\(^{1}\)All the latest S&Ts are available at [www.goldrattresearchlabs.com](http://www.goldrattresearchlabs.com) with a free download of Harmony S&T viewer.
Using the S&T Tree to achieve HARMONY within organizations

How much of the above knowledge is really properly defined, documented, communicated and systematically validated/invalidated within a typical organization?

Field experience shows that very few organizations, if any, have taken the time to develop their business strategy and tactic to this level of detail. Unfortunately, there is a price to pay for managers and employees at all levels not being able to answer these simple questions for their area of responsibility. The price you pay is the risk of what Goldratt, in recent public events has called “disharmony” in the organization. Goldratt identified five “engines of disharmony” that make achievement of continuous improvement culture and harmony within any organization difficult and to which a well-defined and communicated S&T can provide the engines of harmony (Table 15-6 below).

<table>
<thead>
<tr>
<th>No.</th>
<th>Engines of DISHARMONY</th>
<th>Engines of HARMONY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Not knowing my own contribution or thinking that my contribution is not recognized.</td>
<td>Knowing exactly how I should contribute …and knowing that my contribution will be recognized.</td>
</tr>
<tr>
<td>2</td>
<td>Not knowing how others should contribute or thinking that their contribution is recognized too much/too little.</td>
<td>Knowing exactly how others will contribute …and knowing that their contribution will be recognized.</td>
</tr>
<tr>
<td>3</td>
<td>Inherent conflicts on which rules to use to best contribute to company goal.</td>
<td>All “rules” are aligned with the goal and strategy of the company.</td>
</tr>
<tr>
<td>4</td>
<td>Unresolved gaps between responsibility and authority (resulting in ongoing firefighting).</td>
<td>Gaps between responsibility and authority are systematically identified and removed.</td>
</tr>
<tr>
<td>5</td>
<td>Inertia or un-verbalized fear that block continuous improvement</td>
<td>Constraint focused continuous improvement process and culture is in place</td>
</tr>
</tbody>
</table>

Table 15-6 Engines of Disharmony vs. Engines of Harmony
Using the S&T to monitor Execution

Edison’s famous quote, “Vision without execution is a hallucination”, is a reminder of this simple fact that without follow-up and follow-through, we will not get the desired results.

Since the S&T contains all the Objectives that have to be achieved (Strategies or “Know-What”), and the necessary changes that have to be implemented (Tactics or “Know-How”) at each level and within each part of the organization, as well as all the related assumptions (“Know-Why”), the S&T can be used as a primary auditing tool. Are we achieving our objectives? Have we implemented the agreed tactics? If not, which of the assumptions that were made are no longer valid and how can or should this be corrected.

Using the S&T to identify and systematically remove POOGI Conflicts

Anyone that has tried knows the challenges in creating a Strategy & Tactic Tree. There is the challenge of knowing which questions to ask to identify the necessary and sufficient changes and the sequence in which these changes must be implemented, the challenge of answering these questions (using solid cause-effect) and finally the challenge of verbalizing the answers in a way that will ensure that the proposed changes are communicated clearly as “actionable information”. But can we use the other TOC Thinking Processes to help overcome some or even all of these challenges?

Over the past two years, a new process to use traditional TOC Thinking Processes (such as UDEs and the Conflict Cloud) Goldratt Research Labs has been developed and tested as part of a Continuous Improvement and Auditing Process to validate or even create new S&T blocks (Barnard 2009). Figure 1-3 below shows this new
process applied to managing projects. The process can be initiated at any level within the organization where a clear gap in performance exists that currently limits the achievement of the higher-level goal for the organization.

Step 1 involves identifying this performance gap, validating the extent and consequence of not closing this gap in relation to the goal of the organization (e.g. using the impact of the gap on the organization’s Throughput, Investment and Operating Expenses) and finally identifying the major Undesirable Effects (independent causes that contribute to the GAP). In the example below, these UDEs reflect the 6 most common causes of projects being completed late, over-budget and or under scope. Step 2 involves defining the subordination conflict that block removal of the most significant UDEs (in terms of their contribution to the performance gap), Step 3 and Step 4 involves identifying the erroneous assumptions that causes the conflict and identifying the new assumption and related new rule that will break the conflict. Finally Step 5 converts these insights into the structure of the S&T with the objective of the Conflict (A) being equivalent to the higher level objective of the S&T (e.g. “Meeting all project promises”), the Necessary Conditions (B&C) being equivalent to the Strategy, the assumptions that was challenged being equivalent to the Parallel Assumptions and the new Injection (the new rule) to satisfy B and C equivalent to the Tactic. The original UDE (bad multi-tasking) and its consequences are equivalent to the Necessary Assumption of that S&T block.
FIGURE 1-3 PROPOSED PROCESS USING CONFLICT CLOUD TO VALIDATE/CREATE NEW S&T ENTITIES

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