Using TOC-TP as a Guide to Integrate Lean, Six Sigma, Process Management and TOC Solutions for Business Improvement

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“If all you have is a hammer, everything looks like a nail”
(Bernard Baruch)
The Four Big Ones

TOC, Lean, Six Sigma and Business Management Through Processes are the four most vital business improvement methodologies available since decades, having passed the test of time:

- All of them start from a **system-wide perspective**;
- represent a **significant paradigm shift**;
- and bring **unique contributions** to sustainable results (*if and only if their implementation is not distorted by a short-term cost reduction mentality*...).

**TPS:** Toyota Production System; **TQM:** Total Quality Management; **CFM:** Cross-Functional Management; **BMTP:** Business Management through Processes
The unique contribution of each methodology

<table>
<thead>
<tr>
<th>Methodology</th>
<th>Goal</th>
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<tbody>
<tr>
<td>TOC</td>
<td>To increase organizational prosperity by focusing on the system’s constraint.</td>
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<tr>
<td>Lean</td>
<td>To reduce time-to-cash by focusing on waste elimination in the process flow.</td>
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<tr>
<td>Six Sigma</td>
<td>To increase customer satisfaction by focusing on the variability reduction of key product/process parameters.</td>
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<td>BMTOP</td>
<td>To increase all stakeholders satisfaction by focusing on the integrated standardization of the business processes flow.</td>
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## The limitations of each methodology (my viewpoint)

<table>
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<th>Methodology</th>
<th>Typical Limitation</th>
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| TOC         | Tends to be “top management-oriented” only.  
              | Takes process variation as a given.          
              | Tends to be (too) “money-focused”; lacks attention to values and mission. |
| Lean        | Tends to be “internally focused” on company’s value streams. |
|             | Does not consider market constraints. |
| Six Sigma   | Tends to be too “statistics-oriented”. |
|             | Implementers focus mostly cost reduction. |
| BMTP        | Although it builds an integrated process structure, it does not provide the specific methods for each business process. |
# The synergistic effect of the integration

## MORE DETAILS

**Article by E. Moura and A. Barnard:**

**Webinar slides by E. Moura:**

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## TABLE 1 - MAIN SYNERGISTIC INTERACTIONS AMONG THE FOUR SYSTEMIC APPROACHES

<table>
<thead>
<tr>
<th>TOC helps:</th>
<th>Lean helps:</th>
<th>Six Sigma helps:</th>
<th>BMP helps:</th>
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<tr>
<td>TOC is helped:</td>
<td>TOC’s TP or S&amp;I provide priority (focus) to Lean implementation projects. TOC concepts and tools facilitate better management of flow bottlenecks. TOC’s Critical Chain improves complex Lean projects management.</td>
<td>Provides priority (focus) to Six Sigma improvement/innovation projects. TOC’s logical trees (e.g., CFT and Cloud) can be used to innovative solution of technical or managerial problems. TOC’s Critical Chain improves complex SS projects management. TOC’s Throughput Accounting (TA) provides better evaluation of the financial impact of SS improvement projects.</td>
<td>TOC’s SS provides guidance for defining better financial performance indicators and decision making. TOC’s Critical Chain provides effective management of BMP implementation project. TOC Solutions are standardized into business processes, making them much more effective.</td>
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<tr>
<td>Lean helps:</td>
<td>Lean concepts and tools facilitate the implementation of TOC Solutions, by providing more visual control, less dependency of computer systems in the daily operation and wider people involvement.</td>
<td>Lean concepts and tools help the Six Sigma’s focus of less process variation and increased customer satisfaction, by attacking wastes and thus providing more stable processes and quicker response times.</td>
<td>Lean concepts and tools greatly help to achieve simple, effective and visual process standardization. The daily work of Kanban teams provides continuous improvement development and standardization.</td>
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<td>Six Sigma helps:</td>
<td>Six Sigma’s central value of customer satisfaction provides balance and reinforces long-term vision to TOC’s emphasis on financial performance (throughput). Six Sigma statistical tools help better analysis, configuration and timely adjustment of material/product inventories and time buffers.</td>
<td>Six Sigma focus on variability reduction helps Lean to achieve more stable and reliable processes, through the study and optimization of process variables.</td>
<td>Six Sigma structure at Black Belts and Green belts provide highly qualified teams for attacking critical, complex organisational improvement projects.</td>
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<tr>
<td>BMP helps:</td>
<td>BMP builds an integrated and responsive organisational chain that greatly improves the efficiency of system constraint exploitation and elevation projects. The fact that BMP standardises the information/materials flow and connection between processes and departments greatly facilitates subordination, which is so critical for constraint exploitation and elevation. BMP breaks the “site mentality” so detrimental to TOC’s systems thinking philosophy.</td>
<td>BMP helps Lean by approaching the subject of process standardization and continuous improvement from a company-wide, integrated perspective. The know-how and improvements from Kanban efforts are systematically captured and incorporated into business processes.</td>
<td>The leadership structure, the identification, selection and management of SS improvement/innovation projects is formally designed and standardised into the business processes, which provides sustainability of the Six Sigma initiative.</td>
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</table>
Why TOC should be the guiding methodology?

• It starts with the system’s goal and focuses on its constraint.
  − No other effort can be of high impact if it does not consider those two vital aspects.

• Therefore, despite the other three methodologies do have their focus, TOC provides the focus of the foci...
TOC-TP: the most powerful planning method ever!

1. Why change?

5. How to sustain POOGI?

4. How to cause the change?

3. What to change to?

2. What to change?
Why use TOC-TP as the guide to organizational improvement efforts?

- It has been **designed** to guide **any major change process**.
- It has the power to identify and challenge **political constraints** (management paradigms).
- The rigor of the **supporting logical trees** prevent decisions based on erroneous assumptions.
- Its Five Key Questions are a **reliable route** for a thorough planning, as well as a disciplined, aligned execution.
How to use TOC-TP as the organizational improvement compass (overview)

TOC-TP WORKSHOPS

- 5-DAY, UDEs to S&T Tree
- 3-DAY, UDEs to TO Map
- 1-DAY CRT

METHODS & TOOLS SUPERMARKET

- LEAN
- SIX SIGMA
- BMTP
- TOC SOLUTIONS
The 1-day CRT Workshop

• Used to identify **high impact improvement projects**, when no previous strategic planning has been made.

• Deliverables:
  - UDE list by **consensus**.
  - Clear, **common vision** about what are the key improvement projects that will cause a major impact on UDEs.
  - Improvement **themes assigned** to leaders for further detailed planning (with specific **methods & tools** selected from the “supermarket”, whenever applicable)
The 3-day UDEs-to-TO Map Workshop

- Used when management team won’t dedicate more than 3 days to strategic planning.

- Deliverables:
  - Team **consensus** about UDEs, Core Problem(s) and injections.
  - Validated, **solid direction** of the global solution (FRT)
  - Prioritized sequence of injection/projects implementation.

1. UDE list (brainwrit.+affin. diag.), UDE Map
2. CCC(s) ID., CRT build&analysis
3. CCC(s) analysis/ injections
4. FRT build & NBs ID./trim
5. TO Map, Projects Assignment (PRTs, if needed)
The 5-day UDEs-to-S&T Tree Workshop

- Used for full-blown Viable Vision/ Strategic Planning.

- Deliverables:
  - All deliverables from 3-day workshop, plus:
  - Solid, **crystal-clear logic** in each S&T node and among all nodes (necessity, parallel and sufficiency assumptions)
  - All areas/functions **perfectly aligned** through the vertical hierarchy and horizontal sequence of nodes.
  - S&T Tree: a tangible tool for a **focused, prioritized and disciplined** strategy execution.

5. TO Map

6. Two-Day S&T Tree Build/ Review
Some Do’s and Don’ts

• Do the workshops as a **team sport** (benefit of “automatic buy-in”). Avoid the “lone ranger + seller” approach.

• Don’t work with too big groups (10-20 people is recommended)

• Make sure the workshop is supported by competent facilitator(s), with solid knowledge and experience with TOC, Lean, Six Sigma and Process Management.

• Assure strong leadership: explain and implement the “**relay race work ethics**” to eradicate bad multitasking in the execution phase.

• Assure transparent communication to all stakeholders.

• Check & Act frequently!
Acronyms used

- UDE: Undesireable Effect
- CCC: Core Conflict Cloud
- CRT: Current Reality Tree
- FRT: Future Reality Tree
- NB: Negative Branch
- TO Map: Tactical Objectives Map
- PRT: Pre-Requisit Tree
- S&T: Strategy & Tactics