

Theory of Constraints

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The Top 10 Business Myths

10. If only sales could forecast accurately.
9. Some products and some customers are losers.
8. All inventory is cost.
7. Direct labor is bad.
6. The only way to compete is to outsource overseas.
5. The lowest price is the best price.
4. More efficiency = more profits
3. Quality and consistency will yield profits.
2. The customers only want lower prices.
1. You just don't understand – we are different!

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The Theory Of Constraints basic concepts

- Every organization has a **goal**
- The **global** organization is **more** than the sum of its parts
- The performance of an organization is **limited by very few** critical variables
- Even the most complex organization is subject to **cause and effect relationships**

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The Two Main Parts of TOC

1. **Operational**

The laws of the well-behaved organization and its ramifications on focusing management efforts

2. **Thinking Processes**

A set of tools for identifying and analyzing the core problem that blocks the organization from achieving more, analysis of the problem, devising a solution while inquiring its possible negative effects, overcoming the obstacles and planning the steps for implementation

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The Classical 5 Focusing Steps

1. **Identify** the system constraint
2. Decide how to **exploit** the system constraint(s)
3. **Subordinate** everything else to the above decision
4. **Elevate** the system constraint
5. **Go Back** to step 1. **Beware of inertia**

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Common Managerial Questions

That are often quite disturbing

- How good are we in achieving the goal?
- Are all the functions truly integrated in combined efforts to achieve more of the goal?
- Are we always aware how a local decision impacts other functions in the organization?
- Do we measure local managers according to their local achievements or according to their real contribution to the organization?

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The holistic approach

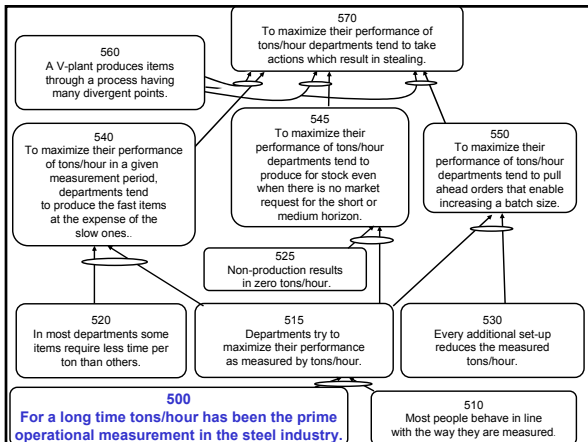
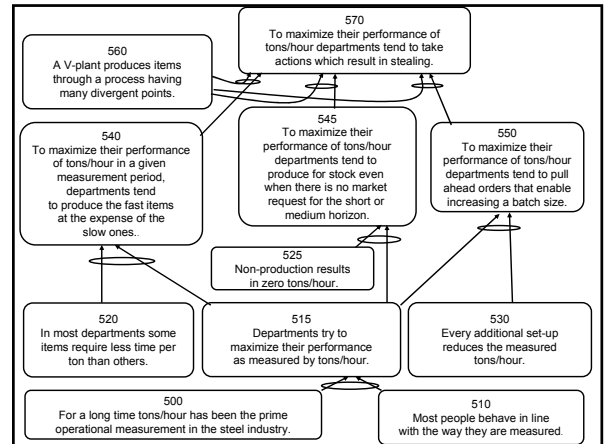
• Why?

- Improving one link can cause a problem in another
- Improving only one link can cause a problem for the link have improved
- Improving only one link is a waste of major benefits

• How?

- What to change?
- To what to change?
- How to cause the change?

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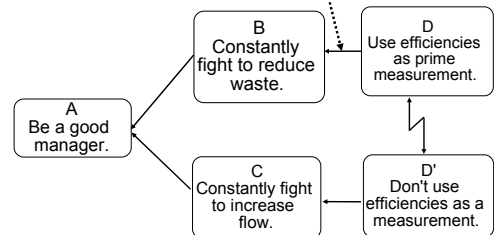


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The cloud of operations

Because...

A resource standing idle is a major waste.



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For example,

- In a certain company, product managers used to “steal” parts that are relatively scarce
- The management of the company tried various ways to fight with that behavior
 - They took disciplinary actions against those who took parts without a valid work order
 - They made it difficult to obtain those parts from the warehouse
 - the negative effect still exists!
- The product managers are still measured according to the growth in sales of their products and their customers' satisfaction

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Another Example

- A software company has a service department that is target to solve problems for the users
 - They sometimes add small functions to the code to deal with specific problems the users have
 - The service department is doing a great job and customer satisfaction is very high
- The company faces a huge problem whenever a new version is launched
 - It takes more and more time to finalized the exact content of the version
 - Many customers complain that their unique features “vanished” from the program

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What is unique in TOC as a management approach?

- An approach that defines the rules for a well-behaved organization
- It considers the **organization as a whole** while vastly **simplifying the complexity**
- It focuses on the **weak areas** of the organization
- It recognizes the causes behind dysfunctional behavior of people and thus opens ways to deal with them
- It teaches how to deal with **uncertainty**

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The Theory Of Constraints Basic Concepts

- ◆ Every organization has a **goal**
- ◆ The **global** organization is **more** than the sum of its parts
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The Second Concept of TOC

The global organization is more than the sum of its parts.

- ◆ There is synergy between the parts of the organization.
- ◆ Every product is the result of synchronized efforts of various resources within the organization.
- ◆ There are many dependencies among the resources

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The Third Concept of TOC

The performance of an organization is limited by very few critical variables

If the performance of an organization is dependent on the synchronization of many resources within the organization
And there are many partial dependencies between the resources
And each resource has a certain finite capacity

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The Third Concept of TOC - Explanation

Then

It is **NOT** possible to utilize the vast majority of the resources to their full potential and still maintain an acceptable performance of the organization

Hence

Only very few resources, perhaps only one, can be utilized to almost their full capability/capacity

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Some Ramifications of the basic concepts

- Management has to focus their attention on and around the critical variables
- Focusing on a few critical variables enables the human manager to control a complex system
- Definition: A **constraint** is anything that significantly **limits** the performance of the organization

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Observations

- The **market demand** is always a major constraint
- Capacity constraint(s) limit the ability to expand the market demand
- A **careful balance** between the **actual commitment** to the market and the **capacity constraint(s)** should be maintained

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Observations Regarding the Subordination Concept

- The subordination step is the **most far-reaching idea of the 5 steps**
- The subordination step means designing and running processes with **proper subordination to the constraint as the objective** of the processes
- When a constraint moves - the **subordination objectives change**

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Policy Constraints

Policy constraints are policies, procedures, norms or patterns of behavior that limit the performance of the organization.

Examples:

- Lack of training which causes lousy service, and in turn, causes reduced market demand
- Setting a minimum quantity for orders

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Three Types of Policy Constraints

1. Maintaining the “wrong” constraints - not elevating constraints that should not be constraints in the first place.
2. Lousy exploitation of the constraints
3. Lousy subordination

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Application of TOC to technology

1. What is the main power of the technology?
2. What limitation does it diminish?
3. What rules helped us to accommodate the limitation?
4. What rules should we use now?
5. Do the new rules require any change in the way we use the technology?
6. How to cause the change?

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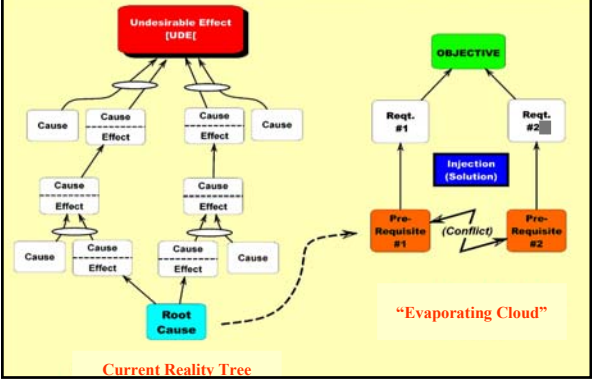
The Thinking Process

- A set of logical cause-and-effect tools that can be used to analyze complex system interactions...
 - Identify policy constraint(s)
 - Lead to breakthrough ideas that eliminate the policy constraint
 - Analyze the full ramifications of the solution
 - Identify obstacles to successful implementation
 - Create an effective implementation plan

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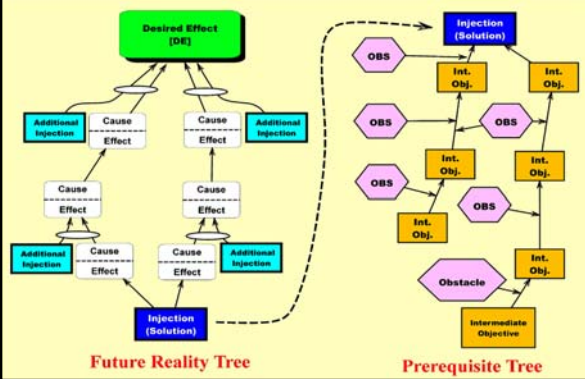
Five Logical Tools

An Integrated Thinking Process



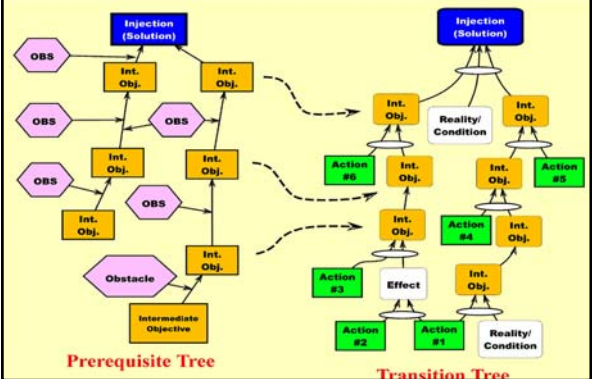
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