

The Goal : A Process Of Ongoing Improvement

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Note To Reader – These are points I found very clarifying throughout the book. As the reader, I have a background of a story which drew a very clear and sensible picture that hold these points in context. This context was created by story, and for anyone wishing to really understand what is written below, I strongly encourage you to read the book. If anything, I hope the what I have captured from the book encourages the reader to buy a copy and execute the lessons within their organization.

-Brady Uselman
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What is the goal of company? - the bottom line, “to make money” pg 41

“If the goal is to make money, then (putting it in terms Jonah might have used), an action that moves us toward making money is productive. And an action that takes away from making money is non-productive. Pg. 41

Underlying Flawed Reasoning:

“Can I assume that making people work and making money are the same thing? We’ve tended to do that in the past. The basic rule has been just keep everybody and everything out here working all the time; keep pushing that product out the door. And when there isn’t any work to do, make some. An when we can’t make work, shift people around. And when you still can’t make them work, lay them off.” Pg. 43

There are three measurements which express the goal of making money perfectly well, but which also permit you to develop operational rules for running your plant. Their names are throughput, inventory and operational expense. Pg. 60

Throughput – the rate at which the system generates money through sales.

Inventory is all the money that the system has invested in purchasing things which it intends to sell.

Operational expense is all the money the system spends in order to turn inventory into throughput.

A measurement not clearly defined is worse than useless.

If it’s knowledge, say, which gives us a new manufacturing process, something that helps turn inventory into throughput, then the knowledge is operational expense. If we intend to sell the knowledge, as in the case of a patent or a technology license, then it’s inventory. But if the knowledge pertains to a product ... which will depreciate in value as time goes on, the investment that can be sold is inventory; the depreciation Is operational expense. (pg. 76)

A balanced plant is essentially what every manufacturing manager in the whole western world has struggled to achieve. It's a plant where the capacity of each and every resource is balanced exactly with demand from the market. Pg. 86

The closer you come to a balanced plant, the closer you are to bankruptcy. Pg 86

The goal is to reduce operational expense and reduce inventory while simultaneously increasing throughput. (The goal is not to improve one measurement in isolation.) pg 87

Balance plants are not possible – For one thing, there is a mathematical proof which could clearly show that when capacity is trimmed exactly to marketing demands, no more and no less, throughput goes down, while inventory goes through the roof and because inventory goes up, the carrying cost of inventory – which is operational expense – goes up. So it's questionable whether you can even fulfill the intended reduction in your total operational expense, the one measurement you expected to improve. Pg 87

Mathematical proof for this rests in two phenomena, “dependent events” and “statistical fluctuations.” Pg. 87

Dependent events – an event, or a series of events, must take place before the other can begin...the subsequent event depends upon the ones prior to it. Pg 88

Statistical Fluctuations – For information we cannot precisely predict, there is a variation from one moment to the next (ie, # of chairs in the room can be precisely measured, but the time you will wait to have a waiter bring you water varies.) Pg. 88

Most of the factors critical to running your plant successfully cannot be determined precisely ahead of time. Pg. 88

Dependent events put a cap on above average fluctuations. So there is an accumulation of “slowness” when dependent events are subject to fluctuations.
(Boy Scout Troop Example pg 101)

Bottleneck – any resource whose capacity is equal to or less than the demand placed upon it. (pg. 139)

Non-bottleneck – any resource whose capacity is greater than the demand placed on it.

RULE

The level of utilization of a non-bottleneck is not determined by its own potential, but by some other constraint in the system

Activating a resource and utilizing a resource are not synonymous. (Activating is like pressing the on switch of a machine, utilizing a resource means making use of the resource in a way that moves the system toward the goal.)

A system of local optimums in at an optimum system at all; it is a very inefficient system.
Pg. 211

SUMMARY

According to the cost-accounting rules what everybody has used in the past, we're supposed to balance capacity with demand first, then try to maintain the flow. But instead we shouldn't be trying to balance capacity at all; we need excess capacity. The rule we should be following is to balance the flow with demand, not the capacity. . Pg. 259

The incentives we usually offer are based on the assumption that the level of utilization of any worker is determined by his own potential. That's totally false because of dependency. For any resource that is not a bottleneck, the level of activity from which the system is able to profit is not determined by its individual potential but by some other constraint within the system. Pg. 259

“Spelling out the answers when you are trying to convince someone who blindly follows the common practice is totally ineffective. Actually there are only two possibilities, either you are not understood, or you are understood.” Pg. 268

Steps the characters in the book took to implement the Theory of Constraint

Step 1: Identify the system's bottlenecks.

Step 2: Decide how to exploit the bottlenecks.

Step 3: Subordinate everything else to the above decision.

Step 4: Elevate the system's bottlenecks.

Step 5: If, in a previous step, a bottleneck has been broken go back to step 1.

(pg. 301)

Fundamentally, a manager is looking to answer these questions: 'what to change?', 'what to change to?' and 'how to cause the change?'

At the most basic and fundamental level, these 3 measurements (Throughput, Inventory and Operational Cost) are meant to elucidate the intrinsic order of the organization.