

THE GOAL: A PROCESS OF ONGOING IMPROVEMENT

by Eliyahu M. Goldratt

INSIGHTS BY:

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ABOUT:

This is a comprehensive summary of the book *The Goal: A Process of Ongoing Improvement* by Eliyahu Goldratt. Covering the key ideas and proposing practical ways for achieving what's mentioned in the text. Written by book fanatic and online librarian Ivaylo Durmonski. (Printable available only for supporting members.)

HIGHLIGHTS:

- The prime goal of every organization is always the same: to make money.
- You make more money by increasing throughput and decreasing inventory and operational expenses.
- Identifying the bottlenecks is not enough to make a positive change. You also need to instill enthusiasm in others.

ABSTRACT:

Alex Rogo, manager and the main character in this business-like novel, has less than 90 days to save the plant he's operating. What should he do? Luckily for him, he meets his old physicist teacher who, holding the torch of science, illuminates the constraint in his factory. But that's not enough. More and more situations complicate the life of Alex. Strangely, his teacher is always available to answer all of his newbie questions. In the end, after finally figuring out the process of ongoing improvement, Alex saves the day. And while it might seem like I'm mocking the whole script. The book is a must-read if you want to make improvements in both your life and your business.

THE CORE IDEA:

Eliyahu Goldratt, explains in a really approachable language the Theory of Constraints (TOC) – a theory developed by the author himself. The main message is the following: What determines the strength of a chain is the weakest link. So, what you must do is to find the weakest links in the systems you are part of and figure out a way to strengthen them. Sadly, what is often holding us back to make adjustments is the thinking: “that's the way it was always done”. The book does have a cure for that, though. It gives the reader an innovative thinking process that can help overcome the resistance to change.

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KEY LESSONS FROM THE GOAL:

- LESSON #1: CRYSTALLIZING THE GOAL
- LESSON #2: MEASUREMENTS THAT WILL HELP YOU MAKE MONEY
- LESSON #3: AIM TO MAKE THE WHOLE SYSTEM PRODUCTIVE
- LESSON #4: MAKE THE BOTTLENECK GO FASTER
- LESSON #5: FIX YOUR PROBLEMS BY APPLYING TOC
- LESSON #6: SOLVE PROBLEMS WITHOUT CREATING NEW ONES

LESSON #1:

CRYSTALLIZING THE GOAL

“There is only one goal, no matter what the company,” preached Jonah. The physicist teacher who will save the company Alex is managing.

No. It’s not winning awards. Nor giving more perks to employees.

It’s the egoistic pursuit of making money.

Add whatever you want on your careers page. But the main thing every organization on the planet is striving for is making money.

The sad part of this realization is that most business owners know that the goal is to make money.

“Of course, making money is inserted into the meaning of the word business. We need to make money to stay in business. I know that.”

Yet again, how many tasks do you or your company perform (or you) that are not related to this simple goal?

We label productivity with checkmarks and hours binged on chairs.

But real productivity is strangely simple: Making sure that every action by the people and the processes in the organization bring the company closer to the goal – making money.

Every action that does not bring the company closer to the goal of making money, means that this specific action is non-productive.

“Because what happens if a company doesn’t make money? If the company doesn’t make money by producing and selling products, or by maintenance contracts, or by selling some of its assets, or by some other means... the company is finished. It will cease to function. Money must be the goal. Nothing else works in its place.” Eliyahu Goldratt

LESSON #2:

MEASUREMENTS THAT WILL HELP YOU MAKE MONEY

Once we know what is the omnipresent goal every organization must pursue – make money. The obvious next question becomes: How do we know if we are moving toward the goal or away from it?

Commonly, people will say that increasing both ROI and cash flow are the things we must track.

But not according to Jonah – the business Jedi in the book.

Based on his theory, the following three measurements give a better idea of whether your efforts are getting you closer to the goal or not:

- **Throughput:** The rate at which the system generates money through sales. Or in other words, it's not important to just produce products. The important thing is to sell the products

you produce. If you don't sell them, you are losing money, not making.

- **Inventory:** The money the company invests in people, machines, materials, products that will help the creation of the product that will eventually be sold.
- **Operational expense:** This measurement determines the cash needed to turn the raw products into a sellable good – turn inventory into throughput.

If we further simplify, we can state the following: You need to focus on increasing throughput while simultaneously reducing both inventory and operating expense.

When you are able to manufacture more products that are immediately sold without keeping stacks of inventory around the warehouse, you've accomplished the goal.

Well, at least for a short while. You also need to ensure that this is a continuous process. Not just a one-time thing.

“Throughput is the money coming in. Inventory is the money currently inside the system. And operational expense is the money we have to pay out to make throughput happen. One measurement for the incoming money, one for the money still stuck inside, and one for the money going out.” Eliyahu Goldratt

LESSON #3:

AIM TO MAKE THE WHOLE SYSTEM PRODUCTIVE

Will increasing throughput alone make you more money?

It will. But just for a while.

What the main character faces as a problem is not just a single component that needs fixing. He needs to revamp *all* the processes in the organization to ensure that the company is making money tomorrow, and the day after that, and the month after that.

How to approach this rather complex task?

His teacher gives him the most valuable lesson in the book: Identify both the bottlenecks and the non-bottlenecks in the organization.

A bottleneck, as Jonah explains, “is any resource whose capacity is

equal to or less than the demand placed upon it.” Conversely, “And a non-bottleneck is any resource whose capacity is greater than the demand placed on it.”

Figuring out the bottleneck is surprisingly simple. In the book, Alex simply walks around the plant and looks for piles of stuff. If a machine is swarmed with inventory in front of it, it means that it’s a bottleneck. It means that the performance of the machine is essential for the survival of the company.

This might seem extreme. But it’s extremely important to understand. The capacity of the bottleneck determines the production of the whole company.

Most people will probably consider this bizarre.

How can one single machine influence the production of the whole company?

It does.

After all, if the components this machine produces are needed for the end product, you won’t ship unless they are produced. If you don’t ship, you won’t make money.

So, if the bottleneck is not working for an hour. You don’t calculate the cost for the machine alone. The entire plant is losing money. It’s like the entire plant is idle for one hour.

That’s why it is of high importance to ensure that bottlenecks are

working all the time.

“What you have learned is that the capacity of the plant is equal to the capacity of its bottlenecks,” says Jonah. “Whatever the bottlenecks produce in an hour is the equivalent of what the plant produces in an hour. So... an hour lost at a bottleneck is an hour lost for the entire system.” Eliyahu Goldratt

LESSON #4:

MAKE THE BOTTLENECK GO FASTER

Once Alex, the plant manager, identified the bottlenecks – a couple of machines producing essential components for the end products. It was time for action.

“How to make sure that the time of the bottlenecks is not wasted?”, was his guiding question.

After tinkering with his team, a couple of solutions were found:

- Ensure that the bottleneck is never idle – people working on shifts.
- The bottleneck should never work with parts that are damaged. This means that certain quality control should be overseen for all incoming parts.
- Ensure that the bottleneck is working on parts that are needed – not on such that are not needed at the moment.
- Find a vendor or other machines that can perform the same

tasks as the bottleneck to further increase productivity.

After reading about these simple, yet eye-opening techniques. I immediately identified weaknesses in my writing process.

Since the inventory of my site is content. The more I produce, the more sales I get. So, increasing throughput will happen by increasing the number of published articles.

This formed the following plan:

- Ensure that my time writing is never wasted – prepare in advance material for writing.
- Analyze, beforehand, the ideas I’m going to write. Figure out if they have search potential and if they fit the already existing articles on my site.
- Answer this: “Is the article I’m going to start writing aligned with my grand strategy?”
- And finally, while I’m probably never going to do it, consider other ways to increase the production of my articles – hiring someone.

After this quick detour to better showcase how the idea of bottlenecks can be applied to everything. Let’s return to the main content...

There was one extra thing Alex did that increased the productivity of the whole plant.

Fancy labeled as, “the next logical step.” This next move was to

reduce the supplies from vendors by half.

Why?

Each shipment was causing chaos in the plant. Supplies had to be stored, processed, modified. All of this was further slowing down the internal processes.

When they moved to reduced batch sizes, incoming parts were processed faster which in turn increased production.

This got me thinking, again, about how I manage my supplies.

For me, reading is what supplies me with ideas. The more I read, the more ideas for articles I have. But since I can't make all of them a reality because I don't have enough time. It makes more sense to replace part of my reading time with writing time.

As stated in the book, "throughput is most important, then inventory."

In my case. Published work is more important than an avalanche of ideas inside my note-taking app.

As you can see. The ideas are not just for plant managers – that's why I'm making this association with my life. We can all benefit from the concept of bottlenecks so we can respond faster to the ever-changing reality.

"Do all of the parts have to be processed by the bottleneck?"

If not, the ones which don't can be shifted to nonbottlenecks for processing. And the result is you gain capacity on your bottleneck. A second question: do you have other machines to do the same process? If you have the machines, or if you have a vendor with the right equipment, you can offload from the bottleneck. And, again, you gain capacity which enables you to increase throughput." Eliyahu Goldratt

LESSON #5:

FIX YOUR PROBLEMS BY APPLYING TOC

What determines the strength of a system?

The answer: The weakest link.

Somewhere in the middle of the book. Alex is leading a hike. He's the troopmaster of his son's Boy Scout group.

The problem?

Kids are all over the place. Some are going really fast. Others are going around. And finally, there is this kid Herbie. The "fat" kid – as labeled in the book.

Herbie immediately falls behind all the other kids and ends up occupying the tail of the hike.

The line stretches further in front of Alex. He has to do something

to ensure that they will reach their destination on time and, of course, make sure that everybody is there.

But this kid Herbie is going really slow.

What can he do?

The weakest link goes in front of the troop. Since Herbie is the slowest, and they can't leave him behind. He determines the speed of everybody. That's why he must lead.

And to help him move faster. The other boys take the load off his backpack. Now, he can really move. The average speed of the whole troop increased with this simple rearrangement.

This cute story explains in short the Theory of Constraints (TOC). The theory that can cure every dysfunctional organization or disorganized life.

Processes, tasks, beliefs that are holding us back. Slowing us down and keeping us grounded.

What if we can break the shackles and increase our productivity?

What can we achieve extra?

The book ends with Alex and his team identifying and documenting the process of ongoing improvement.

The steps, the sequence, they have followed to save their plant.

Here are the 5 steps explaining the Theory of Constraints (TOC):

1. IDENTIFY the system's constraint(s).
2. Decide how to EXPLOIT the system's constraint(s).
3. SUBORDINATE everything else to the above decision.
4. ELEVATE the system's constraint(s).
5. WARNING!!!! If in the previous steps a constraint has been broken, go back to step 1, but do not allow INERTIA to cause a system's constraint.

Once Alex finally figured out that Herbie is the constraint in the system when he was hiking. He placed him in front and everybody was subordinated to him. Then, by removing the load of his backpack, he elevated thy system.

Once all of this is figured out. You are only left with the important thing to ensure that inertia won't get you back to where you started.

Even if it does, you need to be vigilant and make immediate changes if things start to stall.

Or in other words, make sure that your "Herbie" is leading and traveling light.

Think about your life now. What things, processes, systems are slowing you down? What's *your* "Herbie"?

What you can rearrange and offload to others so you can move

faster?

“Again we start walking. But this time, Herbie can really move. Relieved of most of the weight in his pack, it’s as if he’s walking on air. We’re flying now, doing twice the speed as a troop that we did before. And we still stay together. Inventory is down. Throughput is up.” Eliyahu Goldratt

LESSON #6:

SOLVE PROBLEMS WITHOUT CREATING NEW ONES

Usually, we think that identifying our problems and figuring out solutions to solve these problems is our biggest struggle.

But this is far from what happens in real life.

What we are really up against is convincing people to change their usual behavior and ensuring that the problems we fixed won't be repeated.

The first problem – persuading other people to try new techniques – is something Alex struggles with in the book.

But instead of forcing the newly found method of TOC. By having conversations with his colleagues. He allows them to see, on their own, that the proposed solution will work.

As mentioned in the book, “Spelling out the answers when you

are trying to convince someone who blindly follows the common practice is totally ineffective.”

Plainly, you don't give the solution straight away. By asking questions, you help others spot the mistake on their own and think of the answer.

If you give a solution to a person, he won't believe it's the right one. He won't be convinced. The real objective is avoiding common practice and overcoming the resistance of change.

And this is done by engaging with others. Guiding them to the answer without uncovering it for them. You need to let others see the problem and get the suggested solution, on their own.

And to avoid people in your organization, and you, being ignorant of their ignorance. Alex and his team create a simple, yet most powerful, set of questions that will ignite a change:

1. Identifying “What to change?”
2. Brainstorming “What to change to?”
3. Figuring out “How to cause change?”

These three questions are, as labeled in the book, “the most fundamental abilities one would expect from a manager.”

You see, a desire for a change is common. People are open to hearing new solutions. But their mind shuts when the proposed new technique requires them to do something different.

So, what is hard is causing change without creating resistance in others. Or in other words, the ability to instill enthusiasm is important.

Once you master the technique of fixing core problems without causing new ones. And doing this with a great dose of zest. You will lead others and yourself to new heights.

“...can you imagine what the meaning is to being able to hone in on the core problem even in a very complex environment? To be able to construct and check solutions that really solve all negative effects without creating new ones? And above all to cause such a major change smoothly, without creating resistance but the opposite, enthusiasm? Can you imagine having such abilities?”
Eliyahu Goldratt

ACTIONABLE NOTES:

- **Productive versus non-productive:** These days, it's easy to convince yourself that you're doing something productive. Reading an article can be conceptualized as, "I'm staying up-to-date with trends." But is this actually necessary? Making more money by increasing throughput. That's the core goal of any business. Every action that doesn't lead to making money is non-productive. This makes you question everything you do. While you do X, you can stop and ask yourself: "Is the task I'm doing now helping me get closer to the goal, or away from it?" Once the answer is examined, you will know whether you should continue with what you are doing or not.
- **Identify the weakest links:** The overall performance of an organization is determined by the performance of everybody in the organization. Since your efforts are strongly dependent on others. Ensuring that everybody is doing a good job is a must. In this case, improving the overall performance should happen by improving the weakest link. This means that identifying the weakest links should be the main priority. Of course, this logic can be applied to other things – not just businesses. Think about your life. What's underperforming? What is causing this unfavorable outcome? Who/what is your Herbie?
- **A well-oiled machine:** Everything in a system should work in order for the system to work. The two things from the book that help us ensure that the whole system is operating at high speed are: dependent events and statistical fluctuations. Dependent events mean that something needs to happen first in order

for another thing to begin. Statistical fluctuations are types of information that cannot be predicted precisely. In other words, you know that it takes you around 20 minutes to go from X to Y. But this is cannot be 100% certain because there are other factors, besides how fast you drive, that determine your speed. So, your goal is to take into account these uncertainties and leave some room for error to run a smooth organization.

- **Ignite a change in behavior:** In the book, the main character identifies that a couple of machines are the bottlenecks. But are they really? Sure, the machines weren't operating at full speed. But the real problem was the inability of the staff members to see that they, themselves, were ineffectively operating the machines. They were following a certain workflow that was not working, but they weren't realizing that it was not working. Or in other words, the performance of a single machine is not determined by the machine itself. But by how good you are able to utilize it. So, once you figure out what's the weakest link. You need to first change how you think about this process. Change your thinking process to change your behavior.
- **Ignite enthusiasm:** Hitting a bureaucratic wall is commonly the thing that prevents change in organizations. In our personal lives? Rigid habits and toxic environment. It's hard to embed infectious enthusiasm when you've been doing the same things for years. Sure, you can change your routine for a day, but what you *really* need is a permanent change. What is suggested in the book, to change how people behave, is presenting information in such a way, so others can convince themselves that the new thing is an absolute must. Not giving them the answers, but guiding them to see them on their own.

COMMENTARY

So what's the real bottleneck of every organization?

In the book, the plant manager, Alex, identifies a couple of machines that are not properly managed.

But the real problem is much more subtle: The bottleneck is the way people think.

People think that their actions are good enough, that's why they keep doing them.

Unless someone – or yourself – uncovers the ugliness of your routinely destructive behavior, you will keep sinking.

The Goal: A Process of Ongoing Improvement is a novel-like self-help book. Yes, business owners surely need to study it. But not only to cure their ineffective processes. But primarily to cure their toxic way of thinking.

Once you breach through the thick layers of common practices that mask undesirable results as desirable. You will finally see how you are self-sabotaging.

The writing style of Eliyahu Goldratt can be related to a romantic novel at times. However, don't let the cheesy lines distract you from

the important components the author offers.

The book will open your eyes to the best way to cause a permanent change in everything you do.

Key takeaway?

Above all, the Theory of Constraints is a thinking process of high value. It permits seeing underperforming loops in a system and how they can be improved. Once embraced, TOC can help you strengthen everything you encounter. Even in times when others are confused, your thinking systems allow you to convert disorder to order.

NOTABLE QUOTES:

“But we’re not dealing just with a robotic operation. Our other operations do have both phenomena. And, remember, the goal isn’t to make the robots productive; it’s to make the whole system productive.” Eliyahu Goldratt

“...’utilizing’ a resource means making use of the resource in a way that moves the system toward the goal. “Activating” a resource is like pressing the ON switch of a machine; it runs whether or not there is any benefit to be derived from the work it’s doing.” Eliyahu Goldratt

“I’m talking about a production employee who is idle because there is no product to be worked on.’ ‘Yes, that’s always bad,’ I say. ‘Why?’ I chuckle. ‘Isn’t it obvious? Because it’s a waste of money! What are we supposed to do, pay people to do nothing? We can’t afford to have idle time. Our costs are too high to tolerate it. It’s inefficiency, it’s low productivity—no matter how you measure it.’ He leans forward as if he’s going to whisper a big secret to me. ‘Let me tell you something,’ he says. ‘A plant in which everyone is working all the time is very inefficient.’” Eliyahu Goldratt

WORKSHEET

Reading alone won't help you understand the actionable notes. You need to engage with the content. Answer the question below to plan your next steps:

1/ Are you moving towards your goal or away from it?

2/ What is the weakest link (bottleneck) in your organization? Your life?

3/ Identify the dependent events and the statistical fluctuations to move faster:

4/ Besides your processes, revise also the way you think:

5/ Ask yourself: What can you do to keep your enthusiasm consistently high?

THANKS FOR READING!

Ivaylo Durmonski

