Theory of Constraints: Five Focusing Steps

The Theory of Constraints says that every system has at least one constraint that limits how much it can achieve. It was developed by Eliyahu Goldratt, an Israeli physicist who became a business consultant, and it became famous through his novel The Goal, published in 1984. Improving anything except the constraint gives little benefit to the whole system. Goldratt's five focusing steps give a simple routine for improving the constraint.

1. Identify the Constraint

The first step is to identify the constraint, the part of the system that limits the total output. In a production line, it is often the step where work piles up in front, while the steps after it wait for work. In other systems, it can be a person, a policy or a lack of demand. A team looks at data and queues to find it, rather than guessing.

Example: A café has a long queue of drinks waiting at one coffee machine, while the cashier waits for it too. Identifying the constraint, the owner sees that the machine, not the cashier, limits how many customers are served.

At work: Omar, a supervisor in a small factory, checks where work piles up. Identifying the constraint, he finds that the painting oven is the step with the largest pile in front of it.

2. Exploit the Constraint

The second step is to exploit the constraint, which means getting the most out of it with what we already have, before spending money. It should never stand idle, for example during breaks, and it should only receive good material, because any time spent on faulty items is lost for the whole system. Small changes in schedules and quality checks often release extra capacity.

Example: The café keeps the coffee machine running without pauses, because cups, milk and syrups are ready in advance. Exploiting the constraint costs nothing, and more drinks are served each hour.

At work: Omar staggers the breaks so that the oven never sits empty, and he adds a check before the oven so that only good parts enter it. Exploiting the constraint raises the output of the whole line without any purchase.

3. Subordinate Everything Else

The third step is to subordinate everything else to the constraint, which means that all other steps work at the pace the constraint can handle. Producing more than the constraint can process only creates piles, delays and confusion. The other steps are allowed to have some spare time, because they are not the limit. The constraint sets the rhythm for the whole system.

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Example: The cashier takes orders no faster than the coffee machine can make drinks. Subordinating everything else removes the crowd of unfinished orders at the counter.

At work: Omar asks the cutting team to release work at the speed of the painting oven. Subordinating everything else shrinks the pile in front of the oven and shortens the waiting time of every order.

4. Elevate the Constraint

The fourth step is to elevate the constraint, which means increasing its capacity when exploiting it is not enough. This often needs money or effort, such as buying equipment, adding a shift or training more people. It comes after the first three steps, because they are cheaper and may already solve the problem. Elevating is justified when the constraint still limits the results.

Example: The café finally buys a second coffee machine. Elevating the constraint is worth the cost, because the queue of customers is still long.

At work: Omar's team still cannot meet the demand, so the company adds a second oven. Elevating the constraint comes only after the cheaper steps are done.

5. Repeat the Process

The fifth step is to go back to the first step. When a constraint is broken, another part of the system becomes the new limit. Goldratt warned that inertia should not become the constraint, meaning that old rules and habits can quietly stop progress. The five steps therefore form a cycle of continuous improvement.

Example: With two machines, the queue now forms at the cashier. Repeating the process, the owner identifies the new constraint and starts again.

At work: After the second oven, packing becomes the slowest step. Repeating the process, Omar identifies packing as the new constraint, and he also checks whether the old scheduling rules for the oven still make sense.

Conclusion

In summary, the Theory of Constraints says that the results of any system are limited by its constraint. Eliyahu Goldratt introduced it in The Goal and offered five focusing steps. Teams identify the constraint, exploit it, subordinate everything else to it, elevate it and then repeat. The cheaper steps come before spending money. Focusing on the constraint helps teams improve the whole system, not only isolated parts.

Sources

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