

How Hidden Bottlenecks Can Destroy Your Workday

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There's a term that manufacturers are familiar with called constraint theory. Constraint theory tells us that the speed at which you can produce an item is limited by the point in your manufacturing process at which a bottleneck occurs. In other words, the slowest parts of your process are the limiting factors in terms of productivity. Let's look at an example. You own a factory that produces superballs. You procure raw materials, heat and mix them, color them, move the liquid to a mold, let the material cool and solidify, perform quality assurance checks, package and ship the superballs. Assuming you have ample supplies of raw materials, let's say you can move rapidly through every stage of the process with the exception of the cooling and solidifying stage. If it takes you three hours to cool and solidify a superball, then that's the stage that limits your production capabilities. You can't move faster unless you alter that three-hour stage. No matter how many superballs you can mold, no matter how quickly you can do the QA or the packaging, you can't move faster than your slowest stage. Identifying your bottleneck is the first step toward fixing it and becoming more efficient.

Discovering Your Bottleneck

Every business is a manufacturer, at least to some degree. Even if you manufacture experiences, you're still subject to limitations—bottlenecks—in your processes. If you think you're exempt from constraint theory, try this exercise: Take your final product—whether it's a customer with freshly cut-and-colored hair, or a clean home or office or software—and figure out what you're producing. Once you have your product, reverse engineer your process. Figure out all of your steps backward. If software is your finished product, it ends with distribution. Before that, it's tested; before that, it's coded; before that, specifications are written; before that, the requirements are gathered from the client, and what starts the whole process is landing the client. Now, identify the part that takes the single greatest amount of time in the entire process, and you've located the stage that puts the greatest constraint on your productivity. In the superball example, if you can install machinery that cuts your cooling and solidifying time in half, you can double your production. In the software example, if you can collect data from a client in half a day, write specs in half a day, test in half a day and distribute instantaneously, but the coding takes a week, you've identified the single point at which you can make the biggest difference in your productivity. Think about it. If you can make the QA process more efficient, you may gain an hour. If you can make the coding process more efficient, you could potentially gain days. Find your weak link and work on it first. Be creative—do you need to add a programmer? Do you need to alter the format in which your coder receives the information to make it easier to extract the necessary data? Can you create templates to eliminate duplicating work from one project to the next? Once you've identified the stage that eats the most time, you know where to focus your energy to gain maximum efficiency.

Fixing the Problem

Don't miss the bottleneck that's frequently overlooked in the analysis of any process: the step of landing the client. If the only way to speed up the programming process, for example, is to add a second programmer, then you have to be able to ensure that you have a steady workflow to keep both of those programmers busy. You must maintain the demand for your product! This use of constraint theory will make every single business more efficient. It's a formal, reasoned approach to finding out where your business gets hung up. Fix the hangups, and you can do more. Take a plumbing business. If you have clients, and have plenty of plumbers on call, but the one thing that holds up your job completion (and subsequent invoicing) is that you consistently have to wait two days for parts to arrive, then stocking those parts eliminates that bottleneck and dramatically improves your efficiency. Eliminating the bottlenecks in your business gives you options. You can take on more work for greater income. You can also reap quality-of-life benefits from becoming more efficient. If you're satisfied with your earnings and workload, perhaps identifying and fixing your bottlenecks lets you work an eight-hour day rather than a 10-hour day. Whatever your outcome, efficiency will always increase your options and productivity.

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