

Balancing Act

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Chapter 1

I let out an exasperated sigh as I pull the phone away from my ear. Daniel is yelling at me for the third time this week. Man, he's really railing at me. I haven't even had coffee yet.

"I had a customer complain about how terrible our service was," Daniel screams. "The lady wasn't happy at all. She said that you guys took twenty minutes to take her order. And she didn't even get a smile. Not even a goddamn smile. Just an unfriendly cashier who was just rushing her. On top of that, she got her order really late. That can NOT be happening. This isn't even the first time we've gotten this complaint."

"You're not making much progress and we're barely making it. What the hell is happening?" he rants.

Damn, I really messed up. I'm not getting a fast turnaround. There's this ongoing cycle that I can't seem to pull myself out of. Something breaks down at the restaurant. I get a phone call from Daniel yelling at me for not having fixed it sooner. I've got to fix it as soon as possible. I work like a dog to find a solution. Whatever I try doesn't seem to work. Finally, after multiple trials and errors, I fix the problem. By that time though, fifty other issues are getting thrown at me and I'm overwhelmed by work. It's not a healthy way of working or living.

Daniel interrupts my train of thoughts, "You've been here for three months and we've had no customer growth. In fact, we've been losing customers. That's not good business. What have you been doing all this time? Twiddling your thumbs? Sipping on frappes? When I brought you on I had high hopes, but now I'm second-guessing myself."

As he's speaking, my heart-rate quickens and my palms are getting sweaty. I tightly grip the phone so it doesn't fall out of my hand. *It seems like I could lose my job again. Take a deep breath and count to 10. One, two, three. Breathe.*

“You already know that May is the deadline for lease renewal. And it’s coming up in three months. You’ve got to increase profits by then. Otherwise I’m shutting this place down,” he angrily reminds me. “And you are out of a job.”

Out of a job. His words leave me paralyzed and I can’t move. This can’t happen again. *My worst nightmare is coming true. How did I get here? How did I go from happily signing onto the job to possibly losing it? All in the matter of three months.*

Daniel yells into the phone, stopping my train of thoughts, “Where’s your head at, Michael? Did you go off in lala land? Whatever you’ve been doing isn’t cutting it. Now, you have a goddamn deadline that’s fast approaching. If you don’t get your crap together, you’ll soon be out of a job. You’ve got three months.” Daniel slams the phone in my ear.

I hear the click and the soft familiar dial tone replaces the yelling. I put the phone down.

There’s a hole gaping inside of my chest and it’s getting bigger and bigger, enough to swallow me whole.

I could lose the apartment and would have to move back in with my parents. I don’t want to have to go through all that crap again. I’ve already gone through a year of looking for a job and that was just horrible. It was so hard to find a job after losing my management job at a retail store. I’d only been there for a couple of months and then it shut down due to multiple break-ins. Yeah, it closed down because of the bad neighborhood but it was hard to find another job at the same level.

How am I even going to get another job in this competitive market? It was so tough to find this one and it’d be almost impossible to find another one. If I lose my house, I could potentially lose everything. I’ll have to move back home for the second time. I’d be such a disappointment to my parents. I’d be such a disappointment to myself.

I’ve got to pull myself out of the pit that I’ve fallen into, or I’ll sink even further. *Everything’s going to be okay. There’s still time before Daniel has to renew the lease. Daniel wouldn’t have hired me if he didn’t think I could get the job done.*

Managing Lucky Pizza has always been an uphill battle for me. Really the restaurant had done well until recently. During its fourth year, the quality started dropping but it still managed to retain customers. By the start of year five, it started losing regular customers. Within the span of seven months, the management changed hands twice, but both were unsuccessful at bringing back customers. As our deadline was fast approaching, Daniel needed someone to take on the challenge of bringing back customers before the five-year renewal deadline.

That's when I came in, bright-eyed and ready to take on the restaurant. The day Daniel called me about the offer I was grinning from ear to ear. Finally, I could move out of my parents' house and get my own place. Glad to not be a burden to my parents anymore and happy to regain my independence, I excitedly took the offer and moved into a small apartment. It wasn't anything fancy but it was all mine. So much has changed since I felt all that excitement.

Now when I stare at the mirror, I can barely recognize myself. Dark circles lay beneath my eyes, and stress marks run all over my face making me look ten years older. I can't go about working the same way I have been. Something has got to change.

My cell phone beeps so I check my phone only to find a text from John saying that he can't come into work. Great. My scheduled cashier can't come into work today. That's not a good sign.

Scrambling to find someone to cover his shift, I send out a mass text to my cashiers. I impatiently update my text messages, waiting for any response. No one's responding. I frustratedly throw the phone onto the bed. I don't know what to do. None of the guys scheduled know how to manage the cash register. I'll just have to train Douglas to man the cash register, so he can switch between cooking the pizzas and cashiering.

I take a shower and get dressed. I jump in my car to grab a to-go cup of coffee. There's so much that I have to figure out.

The line is long but it's moving. Between the Venti Macchiatos and Non-Fat Lattes and the Double Espressos, I think people have forgotten that it is just coffee! I just need a cup of Joe and I need to get moving.

I get the drink and jump back in the car. I fumble with the dials on the radio until I finally settle on a station playing Ron's Business Hour. He's talking to some marketing expert, something about affiliate marketing. I can't focus on what he's saying. I drink the coffee and speed to work.

Why aren't more people eating at our restaurant? What am I doing wrong? How do I fix it? How do I turn this whole business around? Those thirty minutes to the restaurant pass by quickly. I pull up to a parking spot and hurry into the kitchen.

Right now, I have to solve the cashier problem. I walk over to my employees, who are just milling about in the kitchen. When I enter, they start picking things up and try to look like they're working. Most of them are youngsters working to pay off college loans, except for Ramón and Ted, who are the shift leads. Neither of them are scheduled for today.

"Hey, Douglas. It looks like John isn't coming in, so I'll need you to work both as the cashier and cook the pizzas," I tell Douglas.

Douglas says, "Sure, I can do it. I just need someone to show me how to work it." There's some uncertainty in his voice. I can tell he's nervous about working the cash register for the first time. But he's also eager to please and always wants to be helpful.

I explain to Douglas that he has to first determine the method of payment, then add up the prices, and then authorize the transactions. Just as I'm in the midst of telling him how to void a transaction, there's some problem with the oven and Douglass gets called away. There isn't enough time for him to learn how to work the cash register, so I tell him to go back to cooking up the pizzas.

Then a group comes in and Douglas is stuck in the kitchen working a big order. That leaves me stuck at the cash register. I try to work on the expenses report in between

ringing up customers but not much gets done. It's hard switching back and forth between different tasks and it's exhausting. I'm tired.

One thing comes out of it though. It doesn't look like we are wasting money but boy do we spend a lot. \$90 here, \$105 there. Suddenly 10 expenses like that and you're talking thousands of dollars. I scan the list and justify each expense in my head. I've got to see what I can do to get control of these finances.

I scan the few customers' faces. A couple office workers coming in for their lunch break, anxiously wait for their order. They need something fast so they can get back to work as soon as possible, but that's not what they're getting. Mothers that just wanted a nice easy meal, tiredly try to calm down their kids. Construction workers chew down on their pizzas. I'm not sure if they're enjoying themselves or just need to fill their stomachs as they make it through their day. They're pleasant enough but I get the feeling we're a convenient choice rather than a conscious one. We've got to turn this around. We've got to make people want to be here.

Then I glance at my staff. They're good people, hard-workers with families of their own to feed. Some of them have been here since the very beginning. Would they all lose their jobs because of me?

I don't want that to happen but the restaurant looks like it's headed that way. This could really turn out to be a nightmare.

After lunch, I head to my office to think. Clearly, whatever I've been doing isn't working. This is not a positive way to sustain a business. I must not be approaching these issues in the right way but I can't figure out what to change.

Greg interrupts my thoughts, "We gave the pizza to the customer really late. He got so furious that he threatened to write a bad Yelp review. Sorry boss. I apologized and everything," he sighs. "I was able to calm him down but he could go off any minute. He said he wants to talk to the manager."

Just one more bad Yelp review could possibly tip us over the edge. We've got three stars right now, hanging by a thread. I have to get this under control or we're really screwed.

I send Greg back to the kitchen and walk up to the customer and apologize. "How about a free soda now and free pizza on your next visit? That way you'll see this is an isolated incident." He calms down a bit. He's thinking. The free soda and a future free pizza is compelling.

Finally he says, "Okay. I'll give you guys another chance." I take him to the cashier and give him a free cup for the soda and a coupon for the pizza. I apologize again but I'm not sure this was an isolated incident.

I take a look around. Everyone's working hard but the kitchen's backed up and there aren't even that many customers. How does that happen? Mentally exhausted, I rub my temples to massage an ongoing headache.

I go back to my office to work on some paperwork and before I know it, Greg and the staff are saying goodbye. I check my watch only to find that it's already time to leave. As I drive back from home, I'm not sure I got that much done today. It feels like I'm barely treading water. I'm certainly not making progress.

Chapter 2

I wake up for the sixth time this night in a cold sweat. I turn to the clock, which says 3:45. There is no way I can sleep with this much tension in the pit of my stomach. Negative thoughts float inside my head and I dig myself deeper and deeper into the wormhole.

What if I can't turn this thing around? The business goes under, and people will lose their jobs. I won't be able to get another one. No one will trust me to work for them, and I'd be stuck again. I definitely do not want that to happen.

I close my eyes and try to get some sleep. I fall back into a restless sleep pattern.

Rrring, my alarm goes. I turn off the alarm on my phone and slowly pull myself out of bed. Exhausted from the stress at work, I take a cold shower to get moving. It wakes me up a bit.

I want to get to work a little early today so I can think. I stop and get my coffee and as I drive to work, I start to relax my shoulders and pay attention to my breath to calm down. Clearing my mind helps me calm down. I pull up into my parking spot.

First, I've got to start thinking about the issue at hand. We're not making enough money. More accurately, we're not making enough profits. I look at my numbers. Revenues are decreasing but profits are falling even faster. No wonder Daniel is screaming.

What's the relationship between Revenues and Profits? Obviously Expenses.

$$\text{Profits} = \text{Revenue} - \text{Expenses}$$

If my Revenue falls, it follows that my total Profit would also fall assuming. But wait a minute - if my Profit is falling faster than my Revenue is falling that means Expenses must be rising.

How can that be? I've been watching expenses like a hawk. How could they be rising? Where have I been spending money?

I pull up my expenses spreadsheet and try to make sense of it. Labor is clearly the highest expense - but I need people to run the shop. We've added a few people to cover the odd shift and the labor rate has increased - people need to make a living wage - so that's part of it. Next is ingredients - if the ingredients aren't good how can the pizza be? I scan through the ingredient expenses - there were a couple of emergencies so we had to make a quick run to the store and our main supplier did increase their delivery charges by adding a "fuel tax". Hmm - maybe expenses have been rising. I'm going to need to break this down by category to see if the increase is limited to a few categories or if it is across the board.

But you don't dig yourself out of a hole by reducing Expenses. Why have Revenues been falling?

Revenues are tied to customers and how much each customer spends. I guess the simple formula is:

$$\text{Revenue} = \text{Number of Customers} * \text{Average Spend per Customer}$$

That means that I can increase Revenue if I increase the Number of Customers OR increase how much each Customer spends.

That's interesting. I've been focused only on the Number of Customers but not what each Customer is buying. Of course, they will buy more if they like the food so there has to be a Quality element that factors into all this. I wonder how that fits in?

Regardless, to increase Revenue I have to focus on two things - "How do I get more Customers into the shop?" and "How do I get them to want to spend more?"

I'm interrupted by the kitchen staff. They've started showing up and prepping for the day. There is a lot of clanging so I put down my pencil and head off to the kitchen. I've got some new ideas so I'm feeling good but all that breathing and calming down go straight out the window when I turn the corner.

The kitchen is chaotic - Greg and Fred are throwing the pizzas together haphazardly. Their focus isn't on the food prep - it's on making jokes and playing with the dough. They're not rolling out the dough consistently properly and it's all stretched out and thin, unlike the thick texture it should have.

Ramón and Ted don't even have time to supervise because they're running off in fifty different directions like chickens with their heads cut off. Douglas is simultaneously getting ingredients, cleaning ovens, unpacking boxes, and placing orders with our suppliers.

Since he's training, Jonah is rushing from the cash register to the kitchen back and forth. I'm not sure if it's his dirty apron, his bloodshot eyes, or his hair splayed out in different directions that is most alarming. I certainly don't want him running the cash register looking like that.

I shake my head in disbelief at the utter chaos. What a bloody mess this is! This can't be my restaurant. I yell, "Stop!" They turn to me looking confused and pause what they're doing.

There are still thirty minutes before we open the doors.

"Let's gather around the countertop. We need to talk." I haven't had a staff meeting in a while, not a good thing for sure." I begin, "Our restaurant is having some issues and we're at the risk of shutting down because we haven't been making as much money as we need to."

That got their attention. Their eyebrows knit together in worry at the prospect of losing their jobs. "Are we going to lose our jobs?" John asks.

"That potentially can happen if we don't get more customers," I answer. "But I strongly believe that we can save this restaurant, which means we'll have to solve problems quickly and do everything possible to attract more customers."

"I came into the kitchen to check on you guys and it's an absolute mess." As I continue speaking, I'm losing my temper. "You guys have zero direction and look like you have no clue as to what you're supposed to be doing. Things aren't being completed, and if they are, they're not done well." I feel my teeth clenching as my frustration grows, "Your work is a huge mess and I haven't seen such sheer incompetence before. What's going on?"

Seeing their terrified expressions from my angry outburst and that they're trying to avoid eye contact, I refrain from taking my overblown reaction a step further.

Pull yourself together, Michael.

Taking a deep breath, I regain my composure and lower my voice, "I apologize for that outburst. I was getting frustrated. I take responsibility for what I just said." I shift gears. "We have to work together as a team to fix our labor. Look, guys I'm not blaming you. I want to figure out what can be done to sell a high quality pizza and give our customers a great experience. I don't want this restaurant to fail so we have to work together to figure it out. What are some of the issues that you guys have?"

There's silence. My natural tendency would be to start talking again but I wait.

Fred bravely speaks up, "We're all just picking up where others have left off. We're trying to get it all done but we all end up doing everything.

"But not everyone knows how to do everything," Ted adds on. "Many of the guys don't know how to man the register or cook up the pizzas or deal with customers so some things fall through the cracks. Cooking up the pizzas requires attention. If you try to do something else at the same time one of them is going to burn and then you're done for. The kitchen backs up and you can't recover."

"Makes sense," I say, thinking about how my plan yesterday was to have my cook manage the cash register. "Some of it is training, some of it is being properly staffed, and some of it is being able to focus on one task so it gets done properly. Good insights, guys! I need to figure out how to create a system that supports you guys. That's my job."

“Ok. We’ve got 10 minutes before we open. Let’s try this. Ted and Ramon - assign one person to the oven and let’s make sure we don’t burn even a single pie today. You can rotate people through but make sure that person is focused on putting out quality, perfectly baked pizzas. And then let’s see what other problems that creates. OK?”

Ted and Ramon look at each other, and shrug and then look at me. “Ok, boss,” they say almost in unison.

Everyone gets back to work.

I pull Ramon and Ted aside to understand the problem further. Since they’ve been here since the restaurant’s inception, they know what’s going on in the kitchen.

“So our labor needs a lot of work. But first I need to understand something. What happens to the bad pizzas?” I ask them.

“If we notice it before it goes out, of course we stop it and make a new one. A few of them make it to a customer and often they send it back so we have to toss them.” Ted answers. “Everything’s wasted. We can really do anything with it. Depending on how bad it is we might keep it and eat it after the shift.” They look down almost embarrassed. “Then we have to start the pizza over.”

“But not all bad pizzas get sent back?” I ask.

“I suppose there are some that aren’t perfect that don’t get sent back. The customers probably just eat the pizza even if they might not care for it,” Ramon says. “Not all of the pizzas are badly made though.” He tries to reassure me but the fact we’re even having this conversation is not good.

“So we sell some pizzas that aren’t great and some customers eat the pizzas anyways.” I shake my head. “I can’t believe those customers would come back again.” I think about it for a minute. “That actually makes it a hidden waste. It’s

costing us a customer but we don't know it. I wonder how often that happens?" I say out loud.

"Yes, that's true. We definitely need to make better pizzas," Ted says.

I head back to the office thinking about what I just learned. Some real insights from the line. I'm glad they spoke up, otherwise I wouldn't know what is causing the problems. Our pizza quality is certainly driving away customers. I need to fix that. Let's see if focusing on the oven makes a difference and we'll take it from there.

My phone rings and I answer the call. It's Daniel. "Hi Michael. I called to tell you that I got some customer feedback from Jordan. You know, the one with the glasses, that comes in every week for a slice." It sounds like he's cooled down from the last time we spoke.

"That good. What did he say?" I ask.

"According to Jordan, the quality of the pizza has slowly been deteriorating. It's okay. It's edible but it's inconsistent. A couple of times, he got a strange tasting crust. He also complained that once there was too much sauce and not enough cheese. The cheese wasn't spread out evenly. And it took too long! What's up with that?" Daniel says.

I ignore his question and say, "Thanks for the feedback. We can't improve if we don't know the problems. I appreciate that information. It's very helpful. Clearly, we have a low quality pizza that needs to be fixed. I'll be talking to the employees to get a good sense of what's going on."

"Yeah, of course. You'll have to figure all this out soon. We can't be having such poor pizzas being made," he tells me.

"I understand. I'll be working on determining exactly what the problem is," I tell him.

"That's fine. Just get it done," he curtly ends the call.

I put down the phone and rub my face. I guess this is what responsibility feels like.

Chapter 3

There's much that needs to be done so I get up an hour early to think. It's so quiet. Almost Zen-like.

I think about yesterday's conversations and start thinking about pizza quality again. The hidden waste when we lose a customer is important. So are the burnt pizzas and the pizzas that get sent back. They are all waste and that can't be good. But how does that fit into the equation? It's an expense surely but there seems to be more to it than that.

Interestingly, all three stem from the same scenario - we don't pay enough attention when we're making the pizza. In fact if I could solve that one issue then I would take care of some of the waste in our system and prevent the hidden waste all at the same time.

I get dressed and head to the office. The roads are a little less crowded. I switch on the radio and start listening to a show that's already in progress. It's "Ron's Business Hour" and there is this super excited guy talking about some housing project that went wrong.

"It's called 'due diligence'. You have to do the work properly and completely. Let's take an example of a fictitious housing developer. Let's say they want to build an apartment complex and pretend that they cut corners and don't properly inspect the land to see if it was well-suited for such a large structure. They go through all the efforts to buy the land, design the structure, buy the materials, hire the workers and ultimately build the structure. Then they find out the foundation they put in can't support the structure because the land is shifting underneath. What a mess. Now it costs more to repair the foundation than it would have to have simply done the work properly from the start. They need more labor, more material, more time and in the worst case, they have to tear the building down. Everything's wasted."

He's still talking about upfront costs vs and revenue ratios but my mind drifts back to the pizzas. Our example is not so dramatic but it's the same outcome. We do

something simple poorly early in the process and the net effect is dramatic. Two seconds more rolling out the dough or distributing the cheese evenly prevents us from losing the revenue from a pizza, having to eat the costs of the ingredients and potentially losing a customer forever.

If I could change the process I can change the outcome. I wonder how Ted and Ramon make pizzas. Do they do it the same every time? Do they ever accidentally skip a step? How do they ensure the pizza is right before it goes to the customer? Do they check it? Do they even see it when it leaves the oven?

Then I think of the new guys. How do they do it? Do they even know how to do it correctly? Did Ted and Ramon teach them the proper way to make pizzas? Are they using a consistent process? These questions make me shudder. Yikes.

“... the company exists to make a profit,” Ron’s guest continues. “Look around. Every business you see is making money. If it wasn’t, they would just shut it down. Why would anyone risk capital, spend the time only to lose money? It wouldn’t make sense. You’d be better off just putting the money into a savings account. That’s the opportunity cost of money.”

I park and shut my car off.

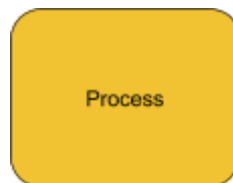
I walk into the kitchen. It’s still empty. It’s almost eerily quiet. It all looks clean and organized but I’ve seen it during a shift and it’s a mess. Tables filled with just everything. Dirty dishes by the sink and dishwasher. Rags and pizza peels by the oven. There are scraps on the floor and flour on the counter tops. I look in the freezer and it’s just a mess. I wonder if we even know what’s in there.

I start thinking about the flow through the kitchen. I hear the order being called in. “Large All-American with extra Cheese”. Dough hits the table. Kneading and Tossing. Sauce and Cheese. Toppings and then the oven. Doesn’t seem that complicated and yet we’re messing it up somehow. Take it out of the oven and put it on a tray or in a box and then to the customer. It’s a process and we lose if it gets screwed up at any step along the way.

I think about that last statement for a bit. Is that true? If we screw up the process, then the output is bad. That's true but we can recover from some screw ups. Like if we don't put enough cheese on the pizza. The next guy can catch that and add some cheese and it's all good. It increases the amount of time we spend making that pizza but it's still a good pizza. The customer doesn't notice that. Of course that's IF we notice it and catch it before it goes in the oven.

The oven. That's the one black box in the whole system. We can't see what's going on inside and if it comes out too soon the pizza is underdone and if it stays in too long we have to make the pizza again. Wow - that's a risky step. In fact, now that I think about it, it's amazing we get it more right than we get it wrong. I need to ask Ted and Ramon how they manage the oven.

I head back into the office and draw a box on my yellow pad.



This seems to be a natural place to focus. What's the Process?



Makes sense and of these the Oven seems like the danger spot. I need to talk to the guys to see if yesterday's experiment of focusing on the Oven made a difference.

I stare at the diagram for a while and it occurs to me that these are also the cost drivers. After rent and labor, ingredients were the third highest expense. Dough, Sauces, Cheese, Toppings and Boxes. At least it breaks down the problem into more manageable chunks.

I hear the crew arriving and the kitchen is stirring. I get up and head in. I want to ask about the oven.

Ramon is on today and he greets me with his usual infectious smile. He really is a great guy. I catch him up on my thinking and tell him the difference between recoverable mistakes and fatal mistakes and he gets it. And then I ask him about the oven.

"It's like I've been saying," he starts. You have to have someone just focused on the oven. They can't be running the cash register or running around the store. They have to be right there checking every few minutes. You get it wrong and you get toast."

"When I'm running the oven, I check the edges. I check the center. I rotate the pizza so it gets cooked evenly. I don't want it to bubble or overcook in any one area and I definitely don't want it to burn!" he continues.

"But that's all I do! Ask the guys. They know not to ask me questions when I'm on oven!"

"You remember that guy Ricky we let go two months ago? That guy, all he did was talk. We would throw away five pizzas a night. He was a mess, man. You gotta focus when you're on oven."

He's right. You have to focus.

"Who's our best oven guy?" I ask

"Anyone can do it - but besides Ted and me, I think Fred and Douglas are pretty good."

Good to know. Douglas is here today so we decide that he and Ramon are going to switch off and focus on the oven. The goal is no loss from the Oven. They're instructed to come get me if they lose a pizza so we can see what happened.

That means the other guys have to work cashier, do the prep, make the pies and keep the restaurant humming. Let's see how this works.

Chapter 4

Success! We didn't burn a single pie last night. There was an issue where we got the toppings wrong due to some bad handwriting but not bad for our first experiment. Not much more revenue yesterday but certainly less waste.

I'm going in a bit later today so Ron's Business Hour catches me while I'm making breakfast.

"Here I am with Edible Bouquet manager Sophia Hernandez. As a manager at a company that arranges fruits and chocolate into beautiful baskets used as gifts for special holidays, Sophia knows a lot about ensuring employees are working efficiently. In any business, there's a lot going on and to keep customers satisfied, employees need training in their duties. She has come up with the cross training to organize the labor better. Can you tell me more about cross training?"

"Cross training is training your employees to perform jobs outside of what their regular role is. When we have only certain people that do customer service or dip the strawberries into chocolate, we waste time figuring out scheduling the right people for each task. Let's cut that out and make sure everyone can take on each of those tasks," Sophia answers.

"What are some of the benefits that come with cross training?" Ron asks

Sophia says, "It saves time when you're a manager. Say your business is going to have a busy weekend since it's a holiday. You need a second cashier. If one of your regular cashiers can't make it you're stuck. You're left trying to train someone at the last minute and then you put them out there during a busy weekend when you can't afford to drop the ball. It's like you put in your weakest player when the bases are loaded. It's a lot of stress for the employee and a lot of stress for you."

"Instead, if everyone is cross trained, you simply need to bring in someone else. They've already been trained so they are familiar with the system and this isn't their

first time doing the task. Then you are free to put your strongest players where they are the best and your business runs more smoothly.”

“By cross-training your customer service representative to do cashiering and your cashier to create baskets, you not only help your business but also broaden each worker’s skill set. Plus sometimes you find hidden talents. One of our college students turns out to be a marketing whiz. She started making baskets and now she works in digital marketing. It’s great for us and it’s great for her!”

Ron says, “Let’s take the radio station for example. One of our hosts is out sick one of the days. So instead of just playing any old recording, we would have our cross-trained sound guy host the show.”

Sophia says, “Exactly right. Your sound guy will have broadened his skills set and it saves your business from extra costs and of course, the stress from having to find a replacement.”

Ron asks, “How exactly does a manager or business owner get cross-training going?”

Sophia says, “That’s a great question. There are a couple of approaches. If you have the budget there is nothing better than one-on-one training. In fact, some industries need that if you’re teaching someone how to operate specialized equipment or handle complicated tasks. But most often the type of cross-training that I am talking about is “On The Job” training. Something that can be picked up in a shift or two. The training is provided by an experienced person while they are performing their regular job and the trainee is working alongside getting coaching and guidance from the mentor.”

“It’s important that the training be done in a safe, “no-fail” environment. You don’t want the trainee to feel small or ignorant. They are students who are learning so you have to give them space to try and fail.

Ron jumps in, “Doesn’t that mean there is a very real cost to this type of failure?”

“Absolutely so you don’t want to do this on your expensive raw material or your critical orders. But within the bounds of good judgment you want to allocate some raw material for this training. At Edible, we’re lucky that any waste is small. The biggest commitment we make is in time and wages. But our employees are worth it and we find that they stick around longer, reducing our recruiting expense.”

“Once trained, we also start doing work rotations so that everyone gets a chance to practice what they’ve learned. After one or two training shifts and three or four work rotations the person is ready to go and we utilize them in a way that works for everyone!”

“Sounds straightforward enough. What’s one benefit of cross-training we haven’t spoken about yet?” Ron asks.

“Well, I think the fringe benefit of cross-training is that it gives everyone a better appreciation of what the other person is doing and feeling. You are forced to walk in the other person’s shoes for a period of time so you begin to appreciate what they do and how they do it. Plus when a customer asks a question the employee has a much deeper insight into the process and does a better job answering the question!”

Ron says, “Cross-training definitely sounds like a tool that our listeners can apply. Thank you, Sophia, for being on the show. Our next guest is a ...”

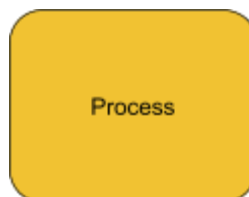
I turn off the radio. Wow I can definitely apply this whole cross training thing. It would be awesome if everyone knew how to make pies and run the cash register. I smile - actually it would be great if the people who were making pies and running cash registers knew how to do it efficiently. I guess I need some basic training before I start with cross-training.

I figure I’ll do both. I’ll call people in one hour early for the next two days and train people on how to run the “front of house” cashier, ordering, bussing, and cleaning tasks and the next day train on the “back end tasks” like making pies, keeping the kitchen flow orderly and ensuring high quality pizzas go out the door. I’ll need Ramon and Ted to make it successful so I’ll chat with them when I get in and then send the email.

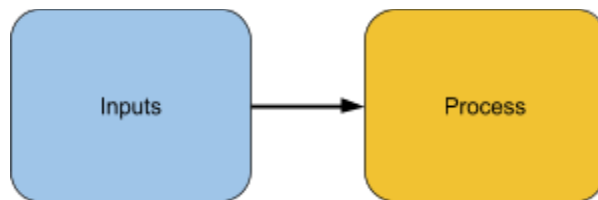
I drive in and check on the kitchen. Things seem to be going fine. Fred is on oven duty first and he'll swap out with Ted. There is some issue with the produce so I head back to the office to call up our suppliers. But once that's straightened out my attention comes back to the business.

My notes are still on my desk and the process seems accurate. The oven experiment is working but we need to do more. I can't just tell Daniel we burnt fewer pies so we should stay open and I doubt he's going to be too impressed with my cross-training idea. What else?

My eyes fall on my produce supplier's phone number and I start to think about vegetables. Where do they fit into the process?



They are certainly used in the process but there is something different about them. We don't control them like we control the oven temperature. They're really Inputs into the Process. Something like



Yeah that makes sense and the Pizza must be the Output



That seems simple enough. But now what?

If I control the Inputs I can control the Output right? Actually, if I control the Inputs AND the Process I can control the Output. That sounds better. In fact, the same equation holds if I control the COST of the Inputs AND the Process I can control COST of the Output.

That's interesting. Yesterday when I was looking at the numbers the Revenue was going down but the Profits were going down faster. That meant the Costs were increasing. With this new equation, it must mean that either or both the cost of the Inputs or the cost of the Process must be increasing.

I need to break down the costs of each. I reach for the accounting books and start looking at the ingredient costs.

I examine the costs of the raw materials to make the pizza. The cost to make a pizza is only \$2.49. If I throw in the cost of the Rent and Utilities divided by the number of pies we make the cost is about \$6.65 more. So each pizza costs about \$9.14 to make and our price average is \$22.50.. That doesn't take Labor costs into account but that's over \$13 we make for each pizza we sell. We should be minting money here!

Shredded Cheese	\$1.00
Flour	\$0.45
Fresh tomatoes	\$0.40
Fresh olives	\$0.30
Fresh bell peppers	\$0.20
Kosher salt	\$0.01
Olive oil	\$0.13
Total Cost of Ingredients	\$2.49
Rent/Utilities/Misc	\$6.65
Overall Cost	\$9.14

By far the cheese is our most expensive ingredient. Not only do we use a lot of it but it is the most expensive ingredient per pound. Tomatoes are second which makes sense. Dough, cheese and tomatoes make a pizza! Of course rent is our biggest overall expense but I'll have to focus on that a bit later. It's going to be way harder to reduce our rent.

Thump, thump. "Crap, the damn thing isn't working. What the hell is happening?" I hear from the kitchen. That doesn't sound good. I go over to the kitchen to check what's going on.

There I find Douglas and John peering into the oven. "What's going on?" I ask

"The oven is not turning on," Douglas says frustratedly. "I tried turning it on and off but it won't come on."

"We can't give them uncooked pizzas," John says.

Thanks, Sherlock. "Damn it. I can't catch a break," I mutter. What am I going to do? It's not like I have another oven to bake pies.

I stare at the oven and do the basic turning it on and off. It's not heating up.

It's time to call the repairman. I dial the number for a local repairman and ask him for his earliest appointment. He tells me that the earliest that they can come is tonight at 8:00 PM. I book an appointment with him at 8:00.

"We're just gonna have to close the business for the day. "I'll have to call someone to fix it. There's no other option," I calmly tell Douglas and John.

There's no reason for another blowup like yesterday. That can't ever happen again.

They stare at me wondering if it's okay to ask the next question. "So we can head home?"

“Yeah, looks like it,” I say. “First write a sign on the window. Tell the customers that we can’t take anymore orders. When the customers are gone, clean up the place and then you guys can leave.”

They nod their heads in agreement and start cleaning up the place.

I slump down in my chair and bury my face in my hands. Just when it looks like I’m making progress, the oven stops working and I have to shut down the restaurant. There’s a lot being thrown at me all at once. That’s what comes with being a manager. But this time is different, this time my job is on the line. If I can’t come up with solutions quickly, I’ll be out of a job.

I call up Daniel to let him know about the oven. “Hi,” I say.

“What?” he growls. He sounds like he’s just woken up.

I tell him about the oven breaking down and explain that I had to shut down the restaurant. Once I finish explaining why we have to shut down the restaurant, I brace myself for his reaction.

“Unbelievable! We just talked about how urgent it is for you to increase profits. And now we’re shutting down for a whole day. Do you know how much goddamn money we’re going to lose?” he screeches.

I can imagine him pacing up and down his hallway as he loses his temper, frustratedly barking into the phone. His reaction is pretty much what I expected.

“Why aren’t you prepared for any of this?” he continues. “That’s your job as a manager. You just wasted a day because you had to wait for the repairman and send everyone home.”

I keep my mouth shut so he can air out his frustrations. “Right after I told you about getting back the customers we lost, we lost an entire day of business. Do you have any idea what that can do to our restaurant? Do you have any clue how far this can set us back,” Daniel yells.

He barks, “You know what? I need to meet with you now, so you understand the urgency of this issue. I’m going to be there in fifteen minutes. We need to talk.” He hangs up the phone.

Chapter 5

He's coming over here? He's coming now? It somehow feels like a bad dream and I can't wake up. I was feeling good this morning. Now I feel sick. Tension rises in my chest and my heart is pounding fast. I start taking deep breaths to calm myself down before he gets here.

I try to prepare what I'm going to say by going over my notes but I'm just anxiously flipping through the papers. Maybe I can share what I've understood from the diagrams.

Before I know it, Daniel enters the room with stress lines across his forehead. The anger that I heard on the phone doesn't show on his face. Instead he wears a look of disappointment.

He quietly tells me, "I don't know what to tell you, Michael. At this rate, it looks like we're going to lose the restaurant." He shakes his head. "You better make some changes."

He sounds as if he's really given up on the restaurant.

His speaking barely above a whisper is far scarier than his yelling. The numbness in his voice makes listening to him almost unbearable. He's so close to giving up on both the restaurant and on me.

I have to reassure him that I'm doing a good job. My job is hanging in the balance.

I say, "I understand what you're saying and I'm working on fixing it. Right now, I've figured out why the kitchen's running inefficiently and that we can save money if we negotiate with our vegetable suppliers. The oven was just bad luck. It was working fine this morning and the repairman can't make it until 8pm."

He cuts me off. "It's more than that, Michael. The oven is just the last straw. You've been here since." He pauses, "When - mid November? And since that time

we're just not making money. Why would I continue to fund this money pit if there wasn't some chance that I could make a return on my investment? What's the point?"

He looks at me and shakes his head. I look back wondering if today is going to be my last day. I'm not sure what to do.

"Are you firing me?" I ask.

"What's the point? We're done in two months anyways."

"Two months? I thought I had three!" I object.

"We have to formally renew the lease 30 days in advance and sign a Letter of Intent. I'm not signing that letter unless a miracle happens." He runs his hand over his brow. He had told me he had always wanted to own a restaurant. I'm sure this isn't what he had in mind.

I try to jump in and show him what I've found.

"Take a look at the process. We've changed things around so someone is always manning the Oven. It's cut down on our waste and improved our turn-around time. We're even taking steps to cross-train people so we're not short-handed. "

His voice raises. "That's fine. I'm looking for you to make changes quicker. You're making progress with some issues. But we still lost a day of business, and our deadline is coming soon," he tells me. "I need you to be putting out fires quicker. In fact, I need you to be thinking ahead so we don't have fires!"

"Yes, of course," I tell him confidently. "I found that the cost of the pizza is getting too expensive because of the high price we pay for the tomatoes and veggies. We shouldn't be spending so much on produce even if it is fresh."

Daniel cuts in, "Okay. You want to cut costs. What have you actually done about it?"

I hurriedly grab my diagram notes. I tell him excitedly, "I have been applying this diagram to identify the issues that I have been encountering. First you have your input. The input directly affects the output - that's just the result or the end product. If we control the inputs and the process we can control the cost and output!"

I look back at him and find him crossing his arms, staring at me with disbelief.

"You didn't actually answer my question. You're just repeating what you already said but now with a diagram. It doesn't sound like you've taken any action. All you have is this measly diagram and all this analysis. But there haven't been any changes."

My mouth turns into a grimace. I slowly place the notes on the desk. Obviously, there's no need for them now.

Sensing my disappointment, he slightly softens his tone, "Look, it's fine that you're making some progress and figuring out this diagram and everything. But we are losing money fast, and our deadline is quickly approaching. You need to show me more than a diagram and your thinking process. I need to see actual changes being made."

Before heading out the door, he turns and reminds me, "You've got two month or we're done for."

I sit down back into my chair. He has a right to be frustrated. From his perspective, there has been no progress because I haven't made any tangible changes to the restaurant.

However, the diagram got me to identify one of the real problems with our low quality pizzas. Before I had the flow, I felt like I was just stumbling in the dark without a flashlight. There is something there. I know it. I just need to continue using it to identify issues and fix them asap.

I look back at the oven problem. The oven is key to our operation. Obviously if it's not working we don't have a business but even when it is working we need to

manage it very differently than almost any other process or piece of equipment in our shop. I can make do without almost everything else. The soda machine breaks - I can pour from two liter bottles. But if the oven breaks, it breaks our business.

I check my watch. I remember that the local repairman is coming to fix the oven at 8:00 PM. It's 7:30 now.

I head to the kitchen and look at the oven. Wow - who would have thought this piece of equipment would make such a difference in my life. There's a knock on the door. I find that the mechanic is patiently waiting at the entrance.

"Thanks for coming," I say to him. The mechanic looks at the oven and asks to see the circuit breaker. He resets it but the oven still isn't heating up. Then he walks back over to the oven and cuts the power to the oven. He carefully takes out the fuse and examines it.

Turning over to me, he informs me, "The fuse is blown so I'll need to replace it. There's a Home Depot nearby where I can get the fuse."

"That sounds like a plan. How much will it all cost?"

"About \$350." Wonderful. I'm supposed to be making money, not spending it. In any case, it has to be done now.

"All right. That's fine. Just bill the restaurant," I tell them.

He drives off to purchase the fuse, leaving me some time to think.

Something like this is bound to happen again. I can't have the repairman come every time it breaks down. He doesn't have flexible hours and I'd be spending a fortune each time it stops working. In the meantime, Lucky Pizza would be losing revenue. It's just a waste of time and money and opportunity. I need every minute if I'm going to pull this off.

My mechanic comes back and begins rewiring the fuse. It looks complicated, and is definitely not my field of expertise. I step away to give him some room. As he works on the oven, I sit down in my office to figure out a solution to the oven.

What can I do in case the oven breaks again? I don't want to have to shut the restaurant down every time it happens.

An hour later, the repairman tells me that he's finished.

"How can I prevent the oven from breaking down again?" I ask him.

"Most of the time an oven isn't working, it's one of three things that are failing: the fuse, igniter, or the temperature sensor. You can order these parts online beforehand so you have it ready to install. It doesn't take long to repair. Not only that but the parts are easy to install. You can find videos on how to install parts online," he says. "If you need any help with installment, just give me a call. Use my number here and I'll be at Lucky Pizza as soon as possible."

"That's very helpful. Thank you so much for your help," I say. I lead him to the entrance.

Back in my office, I search online for the parts he mentioned and order them. They'll be here by the end of the week. It's a small investment to make sure that doesn't happen again.

I look around my office. Not much more I can do here. I drive back home, ready to put this day behind me. I'm sitting at a light when my phone rings. It's my mom. Immediately, I hit "Answer".

"Hi Mom."

"Hi, honey. How are you? Haven't heard from you in a while. You've been okay?" It hurts to hear her voice. All of those emotions from when I moved back home come rushing back. That whole feeling of inadequacy comes back. But I have to hold it in.

“I’m okay,” I hold my voice steady. “It’s been tough at work. But I’m sure I’ll turn it around.”

She says, “That’s great. I’m really proud of you for getting your life back on track. I know it was a difficult journey but you really persevered.”

I respond with as much confidence as I can muster, “Thanks, mom. You were great throughout the whole job searching.” I gulp as I swallow up my emotions. “You guys really helped me pull out of that funk and figure it all out. I couldn’t have done it without you.”

She says, “I know, I’m happy that you felt like you could lean on us. And you made it happen! You’re a manager now. I’m so proud of you. Here’s something you wouldn’t have guessed. Your cousin Diana is getting engaged to a banker. It felt like just yesterday when you two were riding your tricycles down the street. Now, you kids are all grown up with your own lives. It’s crazy how fast time flies.”

“How exciting! I hope he’s a good guy. I’ll have to congratulate her,” I say. I think back to those breezy summer nights spent racing our tricycles up to my mother’s porch. Now she’s getting married. How quickly time flies by!

“Yeah. I met him a couple of times,” my mom says. “He’s on the reserved side but completely adores Diana. They’re very cute. I called you as soon as I found out. How are things with you? Is work going okay?”

I keep my emotions in check and tell her, “There’s just a lot of chaos happening at the restaurant, so I’ve been working really hard to make it all work. It gets stressful sometimes but I can handle it. I’ll be okay.”

“Are you sure, honey? You sound a little tense,” she asks.

“Yeah, I’m definitely okay. It’s part of the job. I’m just under a lot of pressure at work. But I’m making progress and doing what needs to be done,” I say.

My mom says, “I’m glad to hear that. Things will work out in the end.”

I end up talking to my mom for about an hour. After talking to her, my anxieties about the risk of losing my job are temporarily relieved. I tell her that I've got to go so that I can get some rest for the next day.

Then I rest my head on the bed and close my eyes. It feels good that's over but I'm still smarting about my talk with Daniel. Good he didn't fire me but I'm as good as gone unless something changes. What did he say? Oh yeah - I need a miracle!

Chapter 6

Today's training day. The alarm wakes me up and I roll out of bed and get ready for work. The conversation with my mother helped a ton. After fueling myself with coffee, I'm ready to do it.

I check my watch. It's 7:00 AM in the morning and everyone's here on time. We've got three and a half hours before we open. That should be enough time to cover everything.

I explain, "All right. Ramón and Ted will break the team into two groups and take you over all the job functions to ensure that you know how to do them well. You'll be trained in everything, from cashiering to cooking up the sauce to providing excellent customer service. This way you'll get a decent overview of all the tasks. Today isn't a passive activity. You need to be engaged and participating. You got it?"

They nod.

"After the training is over, we will be testing what you've learned as soon as the restaurant opens. Are you guys ready?" I say.

They look at me and say, "Yeah!"

"Okay. Great. Ted and Ramón, you guys can break them up into groups and start your training now," I tell them.

I watch as my shift managers head the training, starting off with breaking into groups and guiding the workers in the process of each task.

I leave them alone and check back on them every 30 minutes. The team is intently listening to Ted and Ramón and working hard to learn their duties well. Initially, they start off slow with learning the processes. There are some hiccups and mistakes along the way. For example, they're not letting the sauce thicken to the right texture and are still slapping on the cheese onto the pizza. But I'm sure that they'll get the

hang of it. What's great is that they're constantly asking questions, actively participating in the training. In general, I'm seeing a good work ethic.

A couple hours later, I see massive improvements. There's an aroma of tomato sauce wafting through the restaurant. The team members are smoothly transitioning from one task to the next. The cheese is being spread out properly, the sauce smells delicious, and the dough is being flattened out vigorously. They're not as fast as they should be yet. But they're much more organized and efficient, unlike what we had earlier a couple weeks ago.

I check my watch. It's time to test out their training.

I tell them, "Guys, our restaurant opens up in five minutes, so it's go time. Do everything that you've learned and do it well."

They organize themselves into their work stations and start preparing for customers to come. We're a bit overstaffed right now but that's okay. They're learning their roles and so they are a little slower at it right. The important thing is that they are learning to do it the right way at the same time so they know what to do and if someone else is doing it wrong. The question now is can they perform what they've learned and be as efficient under pressure? Only time will tell.

I position myself so I get a good view of our customers and my team.

At 10:40, customers start to trickle in. As soon as the customers order, there's a huge difference in the labor. They're providing excellent customer service, greeting customers in a friendly manner and clearly listening to them. The workers are also quickly taking down the orders and communicating them to the cooks.

The cashiers are happily greeting families and engaging groups in friendly conversations. They are even doing a better job keeping the restaurant clean by quickly bussing and cleaning the stuff that always makes its way to the floors. The tables all look set and presentable and the floor is clean. Not bad.

When I check the kitchen, there's so much less chaos even with the extra workers.

“Hey Joey. When are you going to start putting the cheese on right? This is the second pie that’s light,” Fred teases him. Joey comes over and agrees!

There’s a light banter as the team finds and fixes their mistakes.

“Doh! You’re right dude!” He lays on that easy smile he’s known for. Then, he picks up a cup of cheese and brings it over to the other station and fixes his mistake. “That should do it. Thanks man!”

Ramon is watching Jimmy check the pizzas. Jimmy is new at the pizza puller but he is getting the hang of it.

“Turn it, turn it. There you go. You see how it’s a little hotter on the right? Watch that. Each oven is a little different but once you get to know it, it’ll give you a great pie every time!”

Then every now and then Ted calls switch and everyone switches to the next station in the process and picks up where the other guy left off. This way they see every step in the process and have time to practice it.

We’re lucky we got a good size take out order so they’re getting real experience. Then Ramon starts doing something I haven’t seen him do before. Before the pizza goes into the oven he gives it a quick once over and checks the topping against the order. I notice it because he stops the process to get clarification from the cashier. One minute delay saves us from having to redo the pie because he comes back and adds an ingredient.

“Hey Fred! Double check the ingredients. You missed the half ‘shrooms,” he says as he adds them to the pie.

“Yeah watch the ‘shrooms Fred!” Joey lays on with his smile in full force.

I begin checking on the customers. “Hey guys. How’s it going?”

The father of a family of four tells me, “We weren’t happy with our past experience at this place. But we decided to give it another shot. Ya know, help out our local businesses. And man, are we glad we did. The service is good, and the pizza is delicious. Only problem is that we had to wait a while for our pizza but we can live with that.”

Beaming from the indirect praise, I say, “Thank you for giving us another chance. I’m glad you’re enjoying the pizza! We really appreciate your feedback.”

There’s a familiar looking guy, one wearing glasses and an iron pressed shirt. It’s Jordan who’d given Daniel the customer testimonial earlier. I walk on over to him.

“Hey Jordan. How’s it going?” I ask.

Jordan says, “Pretty good. I’ve been swamped at work but other than that, everything’s been fine.” He sets down his slice of pizza and says, “Your pizza tastes like it used to. Did you do something different? I stopped coming here for a while but Daniel’s a friend of mine and I feel guilty eating somewhere else.” He picks up his slice, “But this tastes way better than last time.”

I smile at him. “You’re our favorite customer Jordan and we really appreciate your feedback. Thanks for taking the time to tell Daniel what we could do to improve. We always take your feedback to heart so keep it coming!”

Jordan chuckles, “Oh, of course. Glad that I could be of help. I love having a pizza joint so close to my house.”

I continue to chat with him for a bit and learn that he has two daughters and a dog. I tell him next time to come in with the whole family!

Others have similar reactions. Some still aren’t getting their pizzas on time so we still have to work on that. But overall people are having a good time. *What a change from before!*

I savor this moment, knowing that I’ll remember today when times get tough. Not every day will be as good as today, but I now know that it can be this good.

The shift is almost up so I gather the workers around the oven.

“Guys, you did an excellent job today! The customers I spoke to really enjoyed the pies and had a good experience. There are some things we can do to improve our speed but our first focus has to be quality and I’m impressed with what you all did today. We already have customers saying the pizza is tasting better and that’s thanks to you guys. Give yourselves a round of applause,” I happily tell them.

“As a reward, I’ve given each of you a little gift.” I say. I gave them Amazon gift cards. “Good job everybody. Start cleaning up and I’ll see you tomorrow. Ramon and Ted, I’d like to speak with you.”

I tell them, “You guys did a great job today. I saw you in action and you were firm but patient. We have to keep the quality at that level from here on out. Do you agree?”

They both nod.

“I want to make sure one of you is always on shift at least for the next month until the guys have this down cold. Ramon, I love the way you checked on the order. Let’s make sure everyone’s doing that. It’s way easier to fix the issue before it goes into the oven! How do you think it went today?”

“Honestly, it’s been really stressful. I didn’t realize how much attention to detail was needed and then trying to teach everyone to pay attention and make sure nothing goes wrong is tough,” Ted answers.

Ramon says, “Yeah. It’s pretty overwhelming. The oven requires so much care and not everyone is as patient as they need to be. I’m glad we’re doing training but I’m still afraid that we’ll have to take over eventually.”

“Okay good to know. Do you think some of that will come with practice?” I ask.

“Sure but we’ll need to keep a close eye until we’re sure they can do it. It’s easier if we just do it.”

“True,” I say “but that’s the whole point. What if you can’t be there one day? The pizza quality that day will suffer and trying to get past one bad Yelp! review takes a ton of work. We need to figure out how to consistently deliver a high quality pizza regardless of who is in the kitchen. Trust me. Once we get past this hump it will be a lot easier.”

They nod. We spend some more time talking about how and when we should try to speed up the process and who did better at each station. Overall they’re happy they participated in the process.

“Any update on the restaurant?” they nervously ask as we’re winding up.

“Daniel wasn’t happy about the oven going down and he’s still waiting for us to show him that we can run the place efficiently. Today was a big step forward but I really need your help to keep it this way. I know that I’ve thrown a lot at you guys, but that’s just because I know you guys can do it.”

They smile and head on home.

Chapter 7

My phone starts ringing. I glance at the screen and see that it's my friend Derek. "Yo, we're going to hang out at my place and then do some shenanigans like before. Wanna come?" he says.

I pause and he notices my hesitation. "You know you want to," he tells me. "Justin and Andre are going to come."

I've finished what I need to finish. "Yeah, sure, why not? I'll be there."

At Derek's place, we're lazily sitting on the couch downing cans of beer. Well, they are. I'm going slow tonight since I have work tomorrow. Out of nowhere, Derek comes up with the bright idea of breaking into a swimming pool.

"No way in hell," Justin says. "That is trespassing private property. I'm not interested in going to jail."

"We're not going to get caught, dude," Derek says.

"It's not just about getting caught. It's about the principle of entering someone's property when you're not allowed to," Justin argues.

Derek says, "Come on. There's no point in arguing with me. Let's go."

It takes a whole lot of convincing but he finally manages to get us all to break into the pool.

"We'll need something to break the lock, won't we?" Justin, the only logical one, asks.

We grab a hammer from Derek's garage and drunkenly walk to the local swimming pool. Andre whacks the lock with the hammer. It takes some beating but it finally opens.

Derek yells out, "I'll race you."

We all jump in. My arms and legs are thrashing in the water chaotically as I struggle to keep up a fast pace. *Man, I haven't worked out in a while.* I reach the end and turn to see Derek has already gotten their first. I use up all of my remaining strength to splash at him with full force. He does the same type of splash to me, starting a splash war.

"If only we had a stopwatch to see how much I beat you losers by," Derek calls out.

Justin retorts, "That's only because you started first. I would've creamed you if we'd started at the same time.

"Sounds like an excuse," Derek shoots back.

As they're bickering, my mind starts whirring. *Don't we have a problem with something related to speed? Like at the restaurant. What is it again? Something about pizzas. Pizzas not getting to them on time.*

"Something like that." I say out loud.

"What the hell are you going on about?" Andre asks.

"I didn't know I spoke aloud. Just a work problem I have. Can't get the pizzas to the customers on time, don't really know what to do about it."

"All this work talk is making me bored. Shut the hell up about work," Derek says.

"Screw you. Man, I might lose my job if I don't get this right," I say.

"Wait. You say you have a problem with how fast stuff's getting done?" Justin asks.

I nod. He continues, “There’s this thing called time study. It’s used across businesses to maximize the efficiency of labor. Basically, you find out what your key tasks are. For you, that’d just be whatever goes into making the pizza.” He pauses and turns towards Derek. “Should I just stop? I know we said we don’t want to talk about work.”

“Nah. Keep on going,” Derek says as he lays down on a bench. “I don’t want Michael to have to bum back to his parents’ house again.” I roll my eyes.

Justin continues to explain, “After figuring out those key tasks, you determine the length of time you want each task to be completed in. Then you use your stopwatch to time the length of time to get the rate at which the work is completed. Take those times that you observed and turn them into standard times. You want them to be hitting those timings after that.”

I say, “Holy crap! That’s really helpful. I think I can use that for sure. As long as I’m not too hungover to remember it.”

“Are you morons done?” Derek asks in an irritated voice. We agree to shut up about work. No more work talk for the rest of the night.

“Remember that time we drove all the way to Yosemite only to realize we didn’t get anything to camp? So we just booked rooms at a sleazy hotel room,” Andre says.

“Michael was snoring the whole night,” Justin says.

Derek says, “I couldn’t get a second of sleep thanks to you.”

Then suddenly something catches my eye. It’s a light of some sort. I try figuring out where the light is coming from and it hits me too late. The lights focused on us and behind it is a not too happy security guard.

He yells as he chases after us, “Hey. What are you guys doing here? You’re trespassing private property!”

We scramble out of the swimming pool as fast as we can, our clothes dripping with water. *Today was the best workout I’ve gotten all year.* My heart is racing and my legs are pumping as soon my feet hit the ground. We take a sharp turn and run towards the sidewalk. Completely out of breath, we stop when we know that we’ve gotten rid of him. Then we turn towards each other, look at each other, and start cracking up.

“That was way too close,” I say laughingly. “But man, we got away.”

“We are such great role models,” Justin says sarcastically.

“Only the best,” Derek says. “I’ll see you guys later. I’ve got to wake up for an early shift tomorrow.”

“Aw man, I’ve got to head home too. I have a long commute to work,” Justin says.

One by one, we each head on home. I start thinking about how I’ll implement time study to speed up our orders.

Chapter 8

I can barely open my eyes. The sun is way too bright right now. I struggle to get out of bed, feeling so tired from our late night out. I think about just going back to sleep. Then I think of the fact that my job is on the line. That's quick motivation to get moving.

I was not in the right state to drive last night so I left my car at Derek's. I take an Uber to Derek's place to pick up my car and then from there, I go to work.

Squinting into the sunlight, I pull down the visor to block out the sun. I smile at our ridiculous middle of the night swim and then start thinking about the time study Justin was mentioning. I can't remember it all but the essence was:

- Set a target time
- Measure how long it's currently taking by timing repeated attempts of the same activity
- See what can be done to reduce current time to match target times

Seems easy enough. What could go wrong? Then I smile. I usually say that just before everything falls apart. Someone once said "Confidence is what you feel before you fully understand the situation!" I think they knew what they were talking about.

I start thinking about the process again.



Where's the time going? We prep a lot of the stuff ahead of time so the dough is made and measured and the toppings are cut and stored. The Sauce! That's where a lot of time is going. I need to look closer at that step. The rest of it is just assembly time and isn't that complex. Even the Oven is pretty standard in terms of time. Once we set the temperature it should be pretty routine.

I come in and discuss the time study with Ted. He thinks it's a good idea but he's concerned that it will disrupt the flow in the kitchen. I agree so we decide not to make a big deal about it. We'll tell people what we're doing but won't worry too much about exact timing. The point of course is to see where the time is going so we can do something about it. I'm just going to be a fly on the wall.

I print out a simple table and grab a clipboard. I've got a stopwatch on my phone and I borrow a few from the guys so I can track multiple pies at once. It takes me a minute to find a pen that works and I'm finally ready.

Number	Order	Pizza	Dough	Sauce & Cheese	Topping	Check	Wait	Oven	Serve	Total
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										

I watch an order come in and start timing how long it takes before we start the order.

Jimmy grabs the order after about 5 minutes and starts tossing the dough. It's an extra large so he grabs a dough ball labeled extra large and starts rolling it out. Another order comes in and I realize I'm going to have to ballpark the wait time since I only have one phone.

It takes about three minutes to get the dough stretched properly. The toss is an art but it makes a difference. The Sauce and Cheese go on in less than a minute and then the Toppings go on in another minute-thirty seconds. Then the pizza waits. I

don't say anything. I just watch it. Fred is busy watching the oven rotating the pies that are already in but this pie just waits.

Jimmy goes and gets the next order and starts tossing the small dough. It takes less than three minutes but it still takes time. He adds the Sauce and Cheese and the Topping and then that pie waits as well.

Jimmy grabs the next order and starts stretching the dough. Looks like a large. He has to work this one a bit more. For some reason it's not coming out the way he wants it. At one point he rolls the dough back up and starts again. He gives me a sheepish look but keeps going. Now Ted's involved. The stopwatch reads 4:49 by the time Jimmy's done with it.

Finally Ted gets back from the front and checks out the two pies. He compares the two pizzas to the order and gives Fred the okay. Then Fred grabs the small and puts it in the oven.

A few minutes pass and then Fred removes one of the other pies and slides it in a box. The lid is open and you can see the vapor from the perfectly piping hot pizza rising. Yummy. But again the pizza sits.

Fred moves the pies in the oven around and then grabs the extra large pizza and puts it in the oven

Ted finally moves back from Jimmy and takes a look at the cooked pizza. He does one more comparison against the order and sends it out. I don't have good timing on that one but it sits for about 4 minutes.

The process repeats itself. The small pizza comes out after about 12 minutes in the oven and then the extra large pizza comes out after about 15 minutes.

In the middle we run out of sauce so a number of orders get backed up waiting for the sauce to reach the right consistency. It looks like we started making the 2nd batch too late and by the time it was ready a couple of pies had waited over 12

minutes. The funny thing was how fast those pies made it through the rest of the process . I could barely keep up.

In the end, I end up with a table like this:

Number	Order	Pizza	Dough	Sauce & Cheese	Topping	Check	Wait	Oven	Serve	Total
1	4:57	X-Large	3:04	5:04	2:09	2:10	7:34	14:48	1:24	36:13
2	6	Small	2:48	0:50	1:02	2:12	:15	12:03	2:33	21:28
3	5	Large	4:49	0:45	:42	3:41	2:12	13:25	:34	24:52
4	7	Large	3:15	1:20	1:03	3:21	3:42	13:06	1:20	27:07
5	4	Large	3:40	12:26	:14	:10	:00	13:48	:02	29:54
6	1	X-Large	4:39	12:45	:20	:09	:00	14:11	:06	31:35
7	6	Large	3:18	12:38	:12	:14	:05	13:36	:04	29:32
8	9	Medium	2:31	12:04	:24	:08	:06	12:57	:07	27:32
9	7	X-Large	3:46	12:12	:58	:25	:09	15:01	:06	30:59
10	4	Small	2:30	9:41	:31	:12	:09	11:54	:08	24:05
11	2	Large	3:08	2:01	:23	:20	:14	13:26	:10	18:35
12	2	X-Large	4:30	2:14	:28	:21	:05	15:41	:31	22:25

Interesting.

I look at the data and the notes I took while I was observing the process. A couple of things stood out to me.

1. The process is not orderly meaning that just because something comes in first doesn't mean it goes out first
2. The process isn't predictable. Our fastest time was 18:35. Our slowest time was 36:13
3. Too much variability
4. Too much dependency on the shift supervisor leads to lots of wait time
5. The sauce needs to be made before we run out of sauce. It takes anywhere from 1 to 3 hours to make the sauce so we have to start the sauce at least 1hr before we need it.
6. A Pie could wait as long a 10 minutes waiting to be checked or just waiting

Number	Order	Pizza	Dough	Sauce & Cheese	Toppings	Check	Wait	Oven	Serve	Total
Cashier										
	Assembly									
						Check			Check	
							Oven			

One thing is for sure. I need to cut down the amount of Check Time. We're wasting seven to ten minutes waiting for a pie to be checked. That's seven minutes a customer is waiting in the lobby getting annoyed. There is only so much time you can spend playing Candy Crush before you start complaining.

I point this out to Ted and surprisingly he snaps back.

"What do you want me to do? I have to go help with the dough. I have to help with the oven. Sometimes even the cashier needs help! I'm only one guy!"

I sense his frustration. And my timing is bad. He's just coming off of a long shift and instead of thanking him I'm bringing up more changes.

"You're right. You are the supervisor and you are spending a lot of your time actually doing the work. Let me think about that and get back to you with some ideas," I say hoping to diffuse the situation. I don't need a scene in front of the guys. Plus, I'm supposed to help solve problems not create them. He calms down a bit.

"Let me think about it over night and let's chat tomorrow."

"Alright," he says. "I gotta go anyway. I've got to go pick up my daughter."

Chapter 9

The Time Study was interesting. Not only did I collect a whole bunch of useful data but I also got to witness the process in action and see where the time goes. It also taught me a valuable lesson about when to make suggestions and not to push people too hard. I need the staff if I'm going to turn this place around.

I jump in the car and head to work. I've got to solve the timing issues but then I need to see what I can do about the waste.

I get to the first light and I turn on the radio. Right after the traffic update comes Ron's Business Hour.

He's talking to Professor George Heidenberg about a model that can be applied to any problem that one has.

"We're here with the renowned business Professor George Heidenberg from Fairburn University," Ron introduced. "He's a prolific writer who has written various books on business strategies and entrepreneurship. Today he will be discussing his book *Mass Balancing Act* in which he talks about applying the Mass Balance Model to any problem that arises in your life. Professor Heidenberg has a Bachelors in Chemistry and a PhD in Finance. "Good Morning, Professor Heidenberg! How did you come with the approach and how do you apply it?"

"Well good morning, Ron. I've been teaching for over twenty years and have been finding MBA students constantly running into problem after problem at work. With all those pressing deadlines, sleepless nights, and intense pressure, it becomes a lot. Because of their hard work and persistence, they do manage to figure out a solution in the nick of time. By the time they've resolved that one, another problem arises and then comes another. It's not at all a sustainable way of working! I see these guys in their mid-to-late twenties coming in stressed out about work, frustrated that they weren't reaching their full potential. I thought 'My gosh! I need to come up with a solution. I stumbled upon an article that discussed the amount of food that Americans waste over the course of a year and just thought about the concept of

waste. From thinking about the concept of waste, I outlined the mass balance model with all of its different elements. I call the mass balance model, MBM, for short.”

“The Model is actually the result of my Chemistry degree and an extension of a very basic scientific principle. It’s called the Law of Conservation of Mass and it was discovered by Antoine Lavoisier in 1785. The idea is simply that you cannot create or destroy mass. If some mass is introduced in the system, no matter what you do, the same amount of mass must exit the system. I call it the Mass Balance Model, or MBM, for short.”

I can hear how enthusiastic he is about his model. His clear, engaging voice and earlier description of the stress draws me in. Even though he’s on the radio, I can imagine him using gestures to convey his point to Ron.

Ron asks, “What is the Mass Balance Model?”

“Taking carpentry for example. If you start with a 50 kg piece of wood and you use it to make a 35 kg table then somewhere in the system you are left with 15 kg of wood. It’s either in its original form or it’s in saw dust on the shop floor. But it has to exist somewhere.”

“And the principle applies across industries. Take water for instance. If you start with water and you boil it, the water disappears but you have created Hydrogen gas and Oxygen gas. The water (H_2O) mass is redistributed as hydrogen mass and oxygen mass but you did not create or destroy any mass in the process. There is no more hydrogen or oxygen than what you put into the system ”

“So how does this apply to business?” Ron asks.

“Simple. Every business process is just like a chemical reaction. You have inputs, you act upon the inputs, and you get outputs either in the form of the desired result or waste. With this understanding, you can start to reframe problems you are facing and then determine if the unwanted result is due to an input or a process issue. The

model helps you break down any situation into bit-size, manageable problems instead of what might initially appear as an unsolvable situation.”

“Can you give me a practical example?” Ron asks, hoping to avoid turning his business segment into a chemistry class.

“Sure. Let’s say you make concrete and you find that on a particular day the concrete is hardening sooner than expected. The Output is flawed. It may not have become Waste but it is not what you want. The issue can only be the result of two things:

1. The Inputs - things like the specific concrete mixture chosen, the Temperature, the quality of the sand or
2. The Process - how much water was added, how it was mixed, how long it was allowed to sit, how it was poured , where it was poured”

Wait a minute. Hold on. That’s what I’ve been looking at all this time. I turn up the volume so I can hear exactly what he says.

Concrete is a good example because the amount of water to add depends on the temperature so effectively your Process may change based on Temperature which is an input. Now you have specific areas where you can begin to look for the root cause of the situation.”

“How is that different from just traditional problem solving?” Ron asks.

“It’s another systematic approach to solving problems quite like traditional Problem Solving or 7-Step Problem Solving. The issue is people rarely use either the Mass-Balance Approach or traditional Problem Solving. Instead they use an intuition-based approach by following their gut or come up with a patch or work-around to mask the issue instead of systematically thinking about the problem and addressing the root cause.”

“What’s wrong with an intuitive approach to problem solving?”

“Nothing! In fact there have been numerous studies that show that in certain situations only an intuitive approach will work. The issue is that if the problem does not get properly solved by the intuitive approach many people don’t know how to proceed and often get frustrated. They are so used to solving the problem intuitively that they don’t have any other tools.”

“Take the concrete example again. Intuition might simply be to add more water since the belief is the concrete is hardening too fast due to the temperature. But let’s say you followed the directions precisely and you were still getting the same result. Now what. Adding water may simply mask the root cause issue which could be the type of sand you are using or the fact that this particular concrete mixture is not rated for this particular climate.”

“So how does one balance the Intuitive with the Systematic?”

I arrive at work but I can’t leave the car.

“Great question. It’s never one or the other but both. My approach has always been to try to solve the problem quickly using any method you like or prefer. Sometimes the problem can be solved quickly and efficiently by just taking action. However, give yourself a time limit. Something appropriate given the gravity and complexity of the problem and write that time limit down. If you cross that time limit without solving the problem it’s time to go to a systematic approach to ensure you are not missing something obvious or not considering something because of some assumptions you’ve made.”

“Oh, I see.” says Ron. “You’re advocating for a systematic approach since it forces you to look at all possibilities. Especially possibilities that may not have been considered by taking an intuitive or gut approach.”

“Exactly. You need a model to ensure you have asked all the right questions!”
“I’m still a big fan of the 7 Step Problem Solving method. The problem is that it takes much longer and I can never remember all 7 Steps! The Mass Balance Model is much easier and accomplishes the same thing.”

“I’d even go one step further. My belief is that any problem can be root caused to either the Input or the Process. If something is not going right that’s where you should start looking.

“So this only works if things are going wrong?” Ron asks.

“Actually, I’ve seen the model work its magic when things are going great. Just because a process is working doesn’t mean it couldn’t work even better. And sometimes we don’t even know that better was achievable until we experiment with the system a bit. The Mass Balance Model helps guide you through that experiment.”

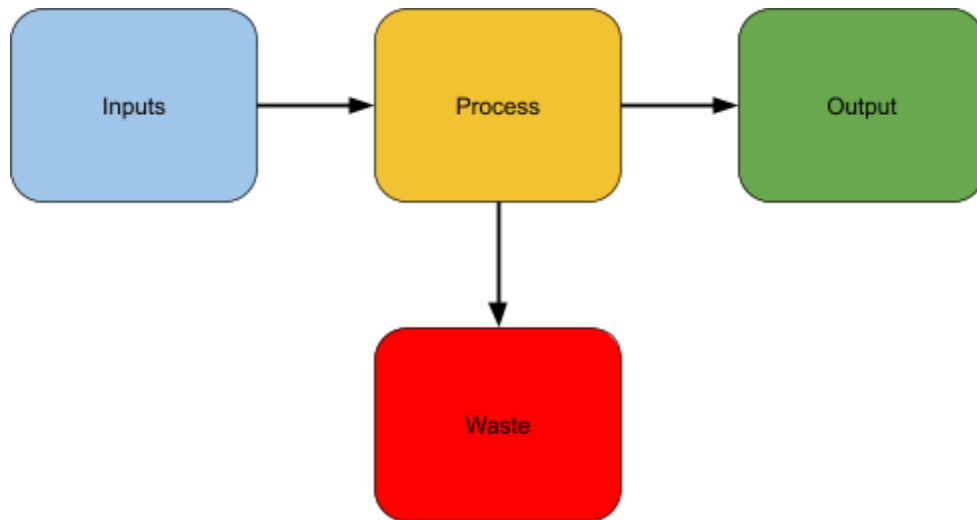
“Pretend you’re making appliances and you have used your Six Sigma processes to get outstanding yields. You could use the Model to note the Inputs and Processes you have in place to achieve the high results you are seeing. Just like you would change an Input that was causing Waste, you can change an Input that was giving you success with an even better Input. Then you can test the Output and see if you get a better result!”

“Same thing with Process steps. Is there a better way to do it? You don’t know until you identify what is going well and see if you can do more of it. Again the Mass Balance Model shows you where to look and gives you a framework in which to conduct your experiments.”

Ron takes over, “Alright. Very interesting. Let’s open up the phone lines....”

I switch off the radio and think for a minute. Inputs, Process, Outputs, Waste. That’s almost exactly what I have on the pad I showed Daniel. I just didn’t connect Waste to the model. Now that I think of it, that’s so obvious. The pies we burn, the vegetables we throw out are all Waste.

I can’t get out of the car fast enough. I rush into the office to find the pad and add in Waste.



That's better. Now everything is accounted for. $\text{Mass In} = \text{Mass Out}$.

I can actually trace the issues through the system and see where things are going wrong. The Oven and the Time Study have been focused on the Process but there is another whole set of variables tucked away in the Inputs which could be affecting my Output or creating Waste.

Now we're cooking with fire!

Chapter 10

I've got the most data around the Process so that's probably the place to start. The combination of the Time Study and the Mass Balance Model give me some pointers.

I grab Ramon before it gets busy and run a couple of ideas past him.

"I was thinking about the time study we ran yesterday and I had a few ideas. First, it would help our throughput times if we could cook the pizzas in the order received. I saw a few pies get behind because other pies ordered after them made it out the door first. Customers notice when people who came in after them get their pizzas first. Is there a reason why a pie may have to wait?"

Ramon thinks and then says, "In general no but if the oven is full we can sometimes put in a small pizza but in general no."

"Okay, let's try to cook them in order unless we're all full."

"But boss, how are we gonna do that? We don't know what order they come in. We just see the pizzas waiting by the oven and we put them in!"

He's right, if the pizzas pile up at the prep station there's no way to know which comes first. They don't get married back up to the order until after they come out of the oven.

"Huh. Good point. Let me think about that for a while." I go on to my second point.

"I'm thinking we spend a lot of time cooking pizza sauce and sometimes we don't time it well enough. I mean, you don't know when you are going to need more and if you run out it can seriously affect your pie time. I was thinking - why not start a batch as soon as we arrive in the store and then start another half-size batch two hours later. We typically don't run out of the first batch until afternoon anyway and we typically only go through two batches of sauce each day. This way we never run

out and if we have excess it's okay. It's certainly less expensive than the price of missing a pizza sale or keeping the customer waiting."

"Yeah that's good," he says as he considers the idea. "We'll have to cut the recipe in half but that could work." Then he stops and says, "Why not just make a full 2nd batch earlier in the day?"

He gets excited. "Why not just keep the recipe as is and just make the second batch earlier? Then we never run out!"

"Great but then won't we have a lot of extra sauce?"

"Yeah but as you say, 'It's way less than the price of missing a pizza sale or keeping the customer waiting,'" he beams as he uses my words against me!

"I like it. Let's do it today!"

"Also, I've been thinking about the check time. Could the Oven guy do that?"

"It's dangerous. If the Oven guy gets distracted even for a moment we could lose two or three pies. It's not worth it."

I have to agree. That's the most critical step.

"Could someone else do it?"

"Well, you don't want the Assembly guy to do it. That's like the fox watching the hen house."

"Could someone else do it?"

He thinks and finally he says "Yeah, the restocker could do it. He's in and out the freezer all time bringing ingredients and dough so he might just be the perfect guy. He sees a pie and he checks it. He never leaves the back so he's always there."

That's interesting. We already have a guy in the back who isn't fully utilized. He's not goofing off but he can do more. It's almost like we are taking a Waste and making it an Input!

"Makes sense to me. One more thing. Maybe we ring a bell each time a pie is waiting for a check. We could save up to 10 min on a pie and that's a lot of time."

Ramon's practical. "Let's try with the restocker first and see how that goes."

Chapter 11

Wednesday night I take Justin out to dinner. A thanks for the Time Study idea we performed earlier in the week. Wednesday is our slow day so it gives me a chance to slip away from the pizzeria and show Justin my appreciation.

Justin's coming from work so we meet up at this trendy restaurant called the Saddle-Up. It's hustling for a Wednesday! I wonder how this place is on the weekend. All it is is a hamburger joint where you can customize your burger. They pride themselves on how exotic their burgers are and how each can be made just the way you want it.

We sit at the bar so we don't have to wait in line. I can't help but think that Daniel would die for a place that was this busy. Eventually this trendy hipster slides up and says "What can I get you two gents?"

We order some beers and he gives us each a pencil and a "menu". It's not really a menu. It's an order form. We're like two kindergarteners holding golf pencils checking off what we want and circling our choices. Buns, meat, toppings, condiments. You select it and they make it happen.

Our beers show up and the bartender spends some "quality time" with us. He collects the order form and gives it directly to the kitchen and he's gone.

Justin and I say cheers and we take a long sip on a cold beer.

"Man that's good beer" Justin says as he loosens his tie and I agree. It tastes great!

"Boy, these guys really have it together here. This place is jumping." I casually look around and see families and dates and teen groups. They're lining up outdoors waiting to get in. Almost exactly opposite the problem I have.

"No doubt," Justin replies. "By the way, thanks for treating tonight. You didn't have to, you know."

“Are you kidding? I owe you big. I timed our pizza operations and found out all sorts of things! We’re performing tasks out of order, we’re wasting time checking the pizza before and after we cook them and our throughput time is completely random. It’s scary but I’d probably lose a bet trying to guess how long it would take to get a pizza from my joint.”

Justin chuckles.

Heck, we even had to delay all our pizzas because we ran out of sauce. It added an extra ten minutes to our delivery time. I wouldn’t have believed it unless I saw it with my own eyes and I wouldn’t have done that if you hadn’t suggested we do a time study. So cheers!”

We raise our glasses and drink more of what is quickly becoming my favorite beer.

“It’s tough over there, huh?” Justin inquires.

“Yeah, my boss is up my grill all the time and he probably had a right to be. Things have been just moving along but no big improvements until recently.”

“Oh yeah? What changed?”

Well two things: we did the time study and I started using this thing called the Mass Balance Model. I already knew a lot of it but when I heard this radio show it really crystallized it in my mind. Now I can’t stop thinking about it.

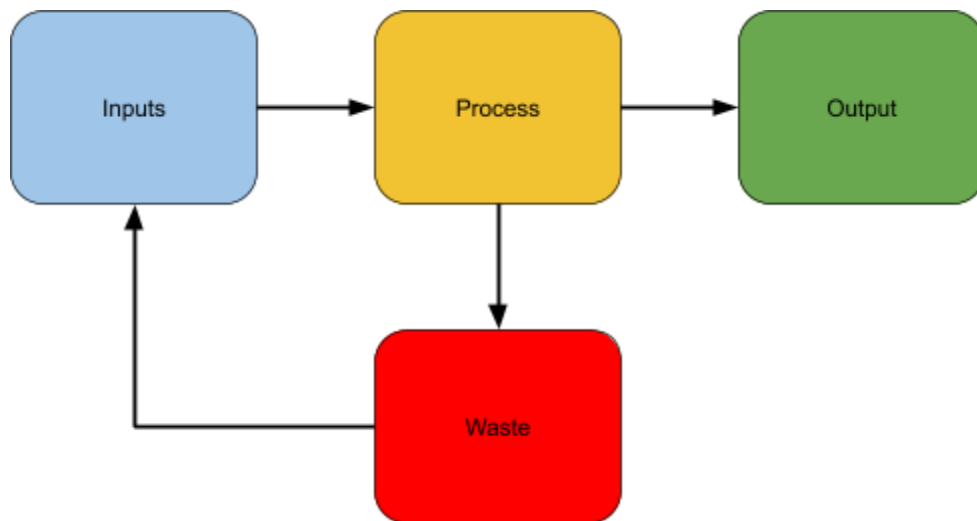
He’s either polite or genuinely interested because he asks a lot of questions so I grab an extra “menu” and draw out the Mass Balance Model on the back. Actually explaining it to him helps me reinforce my understanding about it as well. I draw out the boxes and the arrows connecting Input to Process and Process to Output and to Waste. And then I talk to him about how the Inputs and the Process create the Output or generate the Waste.

“We even found out that we can turn a Waste into an Input!”

I see the quizzical look on his face so I continue.

“There was one step in our process that was taking too long and we needed someone to cover it. We ended up using someone who wasn’t fully utilized. We’re paying him already but he had extra time.”

I drew an arrow from the Waste to the Input and turned the diagram around for Justin to see.



He looks at the drawing for a while and says, “You know we do the same thing at work. Except instead of looking at ingredients and ovens we’re looking at data. We have to collect data from our own devices and aggregate it with information we buy from 3rd parties. Then we have to compile it, study it, organize it and package it and then sell it to companies looking to gain insights into their customers. We make money based on how well a marketing campaign does and how much additional revenue it brings in.”

“Occasionally things go wrong and we end up having to eat the cost of a marketing campaign. Our Inputs are data and we have to pay big bucks for our data. Our Process is our computer algorithms that try to figure out data trends and commonalities. Our Output is our marketing insights that we sell to customers and our Waste is when our analysis goes wrong and we spend money but get no return.

When it goes wrong it's either the data we collected, the data we bought or what we did to it.

He pauses. "We even turn Waste into Inputs!"

He's talking slower as if he is formulating his thoughts as he is speaking.

"We're constantly investing in data and running it through our algorithms. Often we don't see any correlations and that's okay. But the other day we took one of those outputs that typically discard and accidentally fed that back in and we saw a correlation we hadn't seen before. It was an insight that we hadn't expected."

That's interesting. It works with ideas and data just like it works with tangible goods. I guess everything breaks down to receiving something, doing something to it, creating what you wanted to make or screwing it up and making a mess.

The burgers come and they are tasty.

"How have you been using the model?" Justin resumes after we've had a few bites.

"Well we've been mostly focusing on the process and more specifically the oven. We used to burn a few pizzas and that really pissed the customers off. We've implemented a few things so that doesn't happen anymore. We've also changed when we make sauce so we never run out. The thing is, we've created more Waste since we end up making more sauce than we use."

"Sell it!" he says confidently.

"What?"

"Put it in a jar and sell it!" he repeats. People love sauces and good pizza and pasta sauces can sell for a premium. Just ask Paul Newman or Mr. Ragu!"

That's a great idea. He turned a Waste into another Output. Why didn't I think of that!

“I’m going to have to take you out to dinner again!”

Chapter 12

The next morning I hustle into work. As I'm getting out of the car I find the Mass Balance Model I scribbled down at dinner with Justin. I grab it and head in. Justin's got a lot of good ideas. I've got to pick his brain more often.

Ted and the crew are already prepping for the day. I can smell the sauce cooking. I put my stuff in the office and head to the kitchen armed with my diagram and Justin's new idea.

Ted and the crew are busy at work. Jimmy is stirring the sauce and it smells good. The tomatoes, the oregano, the garlic. Yummy!

Ted comes over and after we say our good mornings I show him last night's drawing.

"A friend of mine had a great idea last night. You know how we're always struggling to make just the right amount of sauce? We don't want to make too little and make the customer wait and we don't want to make too much and use it the next day. My friend's idea was to sell it! Who wouldn't want premium pizza sauce for their own cooking? Essentially we're taking a Waste and turning it into an Output and it actually makes our pizza process easier. Win-Win-Win!"

Ted smiles. "That's brilliant! The sauce lasts if you refrigerate it. We just always want to use fresh sauce to keep the quality high and consistent. I love it. I'll get some bottles and we can print up a label and start selling it immediately."

He looks at the drawing and asks, "I wonder what else we are wasting that we can do something with?" We think about it.

"What about the dough which doesn't get used?" Jimmy offers. "Why don't we make pizza sticks or something?"

“Nice!” Who'd've thought Jimmy would come up with the next menu item. “In fact, why not offer both pizza sticks and bread bits? Instead of the traditional pizza stick why don't we make them into small squares and serve them as bread bits? It's the same ingredients and the same process, just a little bit different and little more fun?”

Now we're all smiling.

Ted casually flips the paper over. “What's this paper?” he asks.

“Just a menu from a place I had dinner in yesterday. I was just using it to explain the Mass Balance Model to my friend. That's where he came up with the idea to sell the sauce.”

“No, I mean what's this printed on the paper?”

“Oh that's just how they take orders. Customers fill this out and then they hand this to the kitchen.”

“Why don't we do this? Not just for customized pizzas but for everything. Half the time I can't read the handwriting or figure out the abbreviations. This way there is no guesswork. The box is checked or not checked. We could customize it for our needs and it could speed up the kitchen time.”

I like the sound of that. I take the paper and look at it. It's simple. I could print 4 to a page and it would make it easier to take orders and easier to check pizza's. Heck, we could even have customers fill it out while they are in line and they'll have to spend less time at the cash register.

“I'll do it. I'll print up the order forms before you can get the bottles for the sauce.”

I head back to my office to print up the order forms. It's a simple task but I make it more complicated trying to make the world's best order form. In the end, simplest is best and I print out a handful and take them up to the cashier. It's easy enough to adopt that system and before long all orders are coming in with an order form.

I also noticed that the cashier is labeling each order with a red Sharpie. Suddenly it's really easy to see which order is to be processed next. I hadn't noticed it in the time study but some orders had gotten rearranged from the cashier to the prep area so they were even further delayed. The numbering system seems to solve that.

I take out the crumpled Mass Balance Model drawing and taped it to my wall.

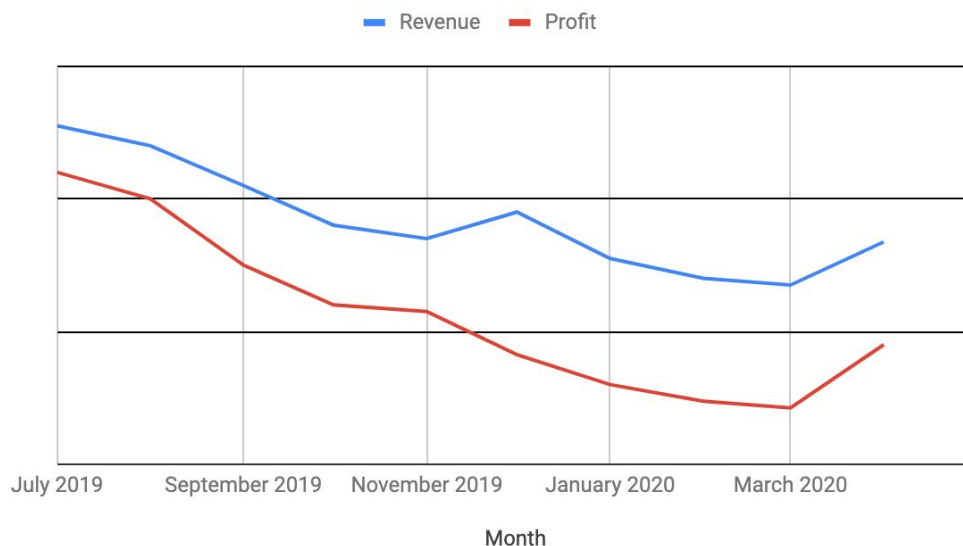
Chapter 13

I feel like we're catching our stride. We've spent quite a bit of time focusing on our process by improving the way we watch the oven, make the sauce, utilize the staff, and even mark the orders. The kitchen seems to be operating fine. We're even able to move personnel around in case someone can't cover their shift. And equally importantly, everyone seems to be enjoying themselves more. There are less stress and tension and even when a big order comes in we're able to manage it as a team.

I show up a little early which has become my practice just to get a head start on the day and look at the books before the restaurant activity takes over my schedule. With my coffee in hand, I review the finances and try to figure out how profitable we are.

It's looking better. We've literally turned a corner and both profits and revenue. The question is still why are profits growing slower than revenue and is this enough to save the restaurant?

Revenue and Profit



I look at the Mass Balance Model on my wall. I need to frame that.

“If I’m not getting the Output I want then I need to look at the Inputs and the Process.” I say out loud.

We’ve got the Process improvements in place. But I catch myself. Process improvements are tied to efficiency and those improvements were the result of asking the question “Why aren’t we able to get pies out quickly?”

Now I’m asking a different question. “Why are Profits not growing as quickly as Revenue?” The answer is Expenses are growing faster than Revenue. So now the question is “Why are Expenses growing faster than Revenue?”

“If I’m not getting the Output I want then I need to look at the Inputs and the Process.” I repeat to myself. “If I want to Increase Profits then I have to Reduce Expenses. So how can I Reduce Expenses?” I pause. “If I want to Reduce Expenses I have to look at the Inputs and the Process.” Now I get it. I just have to rephrase the question so that when I look at the Inputs and the Process I’m looking at it from the perspective of the Question I’m trying to Answer.

So how do I Reduce Expenses in the Inputs and the Process? Or said differently, where can I save money in the Inputs and Process?

Can I save money in the Process? Process expenses are kitchen costs, operating costs, and labor costs. The biggest driver there is labor costs which mean salaries. That means in order to reduce Process costs I have to pay people less or pay fewer people. I shudder at the thought of that conversation. “Now that you’ve all been doing such a great job I’m going to pay you less!” Yikes. If anything, I’d want to increase salaries.

I think about that a bit more. Actually I could totally Increase salaries if I could Increase Revenue faster. The equation works both ways. Maybe I should focus on Revenues first. Then I catch myself. “One thing at a time, Michael. Focus on reducing the Expenses right now. Then focus on increasing Revenue.”

Can I save money on the Inputs? Now here I'm sure I can do something. I think back on my conversation with Daniel. "You want to cut costs. What have you actually done about it?" Nothing yet but that's where I need to focus.

Our Input costs are our ingredients like dough, vegetables, meats and our equipment costs like the oven, kitchen tools, sauce pans. Rent could be an Input since we need a place or it could be a Process since we need a place to run our operations. I guess it doesn't matter too much. I just have to make sure I capture it somewhere.

I think about it some more. Rent is actually a rate like monthly rent. Each month we use the space we pay rent. That's an Expense so Rent is actually an Output. That means the Month we use is actually the Process item and the Rental Rate is the input.

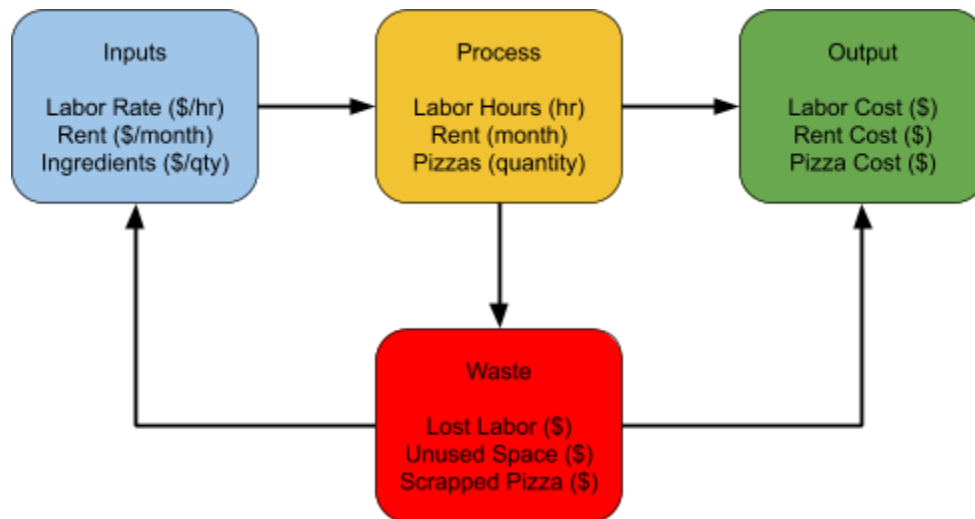
I add that to the diagram and look at it. The same thing applies to Labor Expense. The salaries I pay are the Output. The Labor Rate is the Input and the amount of time I use the Labor is the Process. I add that to the diagram.

It looks like Rates are Inputs and Time or Quantities are Process.

I wonder if there is a relationship to Fixed Expenses and Variable Expenses?

Process Variables seem to affect Variable Expenses. The more Pizzas I make or the longer I stay open the more my Expenses are.

Input Variables seem to drive Fixed Expenses. The Rent is per month but I can't change the days in the month. I know what hourly rate I am going to pay everyone and I know how many toppings I am going to add to each pie so that means Ingredients and Labor rates are Inputs. How I use them is Process.



I'm liking this. I stare at the drawing and zero in on Ingredients. Ingredients are a rate. Ingredients per Pizza which translates to Dollars per Pizza. So I could reduce expenses by using fewer Ingredients per Pizza. That makes sense but do I really want to do that? People love toppings and complain when they don't feel like they got enough. So I don't want to change the quantity. I could reduce the expense by just spending less on Ingredients.

It's an obvious answer but it somehow feels more complete now that I understand the logic behind it. If I lower my ingredient cost (\$), then I lower my ingredient rate (\$/qty), and if I make the same number of pizzas (qty) I lower my pizza cost (\$).

Alright, let's look at ingredient costs.

I get most of our produce from the Lorenzo family. We've been buying from them ever since the restaurant opened. I think Daniel has some connection with them so they were the natural choice.

I wonder if Daniel would be okay if I switch suppliers. I run that conversation through my head. Maybe, maybe not. I'd hate to get yelled at for saving money! Plus I like the quality Lorenzo's offers. The best would be to figure out a way to reduce the expenses without pissing everyone off. But how?

I call up the Lorenzos to schedule a meeting with them. "Hey Peter. How is it going? I was wondering if I could drop by today at the Farmer's Market."

"Yeah sure," Peter answers gruffly. "You can come around 1:30 to 2. What's this all about?"

"Well, we haven't spoken in awhile. I wanted to chat about our produce and our volumes and see if there is any way we can help each other out."

"That'll be fine. Not many people come around that time so you can head on over then," he says.

Around 1:00, I drive over to the Farmer's Market. The Farmer's Market is sprawling with tables covered with an array of colorful fruits stacked on top of each other on long tables, with sweating farmers behind the tables shielding themselves from the blazing sun. Parents along with their kids are feeling out the fruit, checking for spots and bumps, looking for the perfect one to take home.

I start looking for the Lorenzo stall but get distracted by all the other stalls. The vegetables look great! The colors are vibrant, the vegetables are firm and they're all organic. I check out the prices and jot down a few phone numbers. They're all local so that's a plus and they already drive up here to come to the Farmer's Market.

I finally make my way to Lorenzos selling their produce in the corner of the market.

Wearing a baseball cap, Peter and his wife are tiredly standing under a stall. "Hi Michael. How's it going?" Peter asks.

"Good," I lie. "How about for you?"

"Ah you know. Farming is tough business. There is a lot to manage. How much water? How to keep the pests away? When to harvest? Lots of decisions and if you get it wrong suddenly things are over ripe and it's wasted."

There's that word again. Waste. I wonder if the Mass Balance Model applies to him. I'm sure it does but I want to focus on my problem.

"What brings you out here today?" he asks.

"Well the restaurant is struggling. Daniel is threatening to shut the whole place down and he's got me on a really tight leash. I need to see what I can do to reduce expenses so I thought I'd come and see what you and I could do."

He laughs. "Man, you guys are already getting a great deal. I give you some of my best produce and some of my best prices. I can't go any lower. Plus my bills are increasing. I've got to pay more for labor and gas is not cheap."

Sounds like my problems. Now I'm sure the Mass Balance Model could help him.

"I get it," I say and I mean it. "It's tough all over. But let's see if there is something we can do. We always get about the same amount each week and then we call you if we start to run low."

"Yeah those extra drives cost a lot of money since I have to drop everything and send you a truck. That's labor, gas and time. And you want me to lower my prices?"

"Good point." I think. "Well what would happen if we didn't need the extra delivery. How much would that save?"

"That would be great! It would save me a two hour round trip plus the labor to load the truck. Probably about three hours plus gas. You order the same amount in one delivery and I'd knock a couple hundred off your fee. But you gotta pay that back if you ever need a second delivery, okay?"

"Sounds fair. I'll order the same amount but take it all in one delivery. What else can we do that would make this a win-win for both of us?" I ask

I think about how we use vegetables on the pizza, in the sauce and in the salad bar. I think of his customers picking through the vegetables to get the best ones. I put myself in his shoes. What does his Mass Balance Model look like? What are his Inputs and Processes? What are his wastes? Then I see it.

“Let’s talk about tomatoes! We use tomatoes as a topping of course but we use them mostly in our sauces. To make a good sauce we have to crush the tomatoes and then we stain them so the sauce is smooth. How about you sell me your damaged tomatoes at a discount? I only want lightly bruised tomatoes but anything that is just cosmetic damage that you can’t sell to a regular customer I’ll take at a discount.”

“Huh” he says slowly. “That could work.” He thinks some more. “Actually, that’s a great idea. I lose a lot of tomatoes in the field and in transport. Folks always want firm tomatoes so there’s a lot I can’t sell. I’ll tell you what. You take all those tomatoes and I’ll give you a serious discount. You’re essentially buying stuff that I can’t sell! Heck yeah!”

Now we’re talking. What else can we do? “How about we do the same thing with imperfect vegetables. I know everyone wants squash to look perfect and be the right size. How about I take that off of your hands too?”

He’s loving it. Suddenly he has a market for products that he thought was waste.

“This sounds great! I’ll work up the number and send you an estimate. Then I’ll show up on Sunday with one truck load of our finest and our not so fine produce and we’ll save you some money!”

I like the way that sounds!

Chapter 14

The next day I show up at the office and Ramon and Jeff are hunkered down over the soda machine.

“What’s up, guys? You guys having soda for breakfast?”

“This dang machine. It’s down again. Customers started complaining about it last night and the mixture isn’t right. All it is is syrup, gas, and water. How hard can it be to mix it all together? And every two weeks we gotta do something with the machine!” Ramon rants.

I get it. Why are we wasting our time fixing their machine? The deal is we buy soda from them and they give us a free machine.

“There. That should do it,” Ramon says as he puts the screwdriver down. He reaches for a glass and dispenses some cherry cola. “Yeah - just the way I like it! That’ll last for another two weeks.” He grins.

Both he and Jeff head back to the kitchen and I start thinking he’s right. This is frustrating and it’s a waste of time. Why are we the ones fixing the machine?

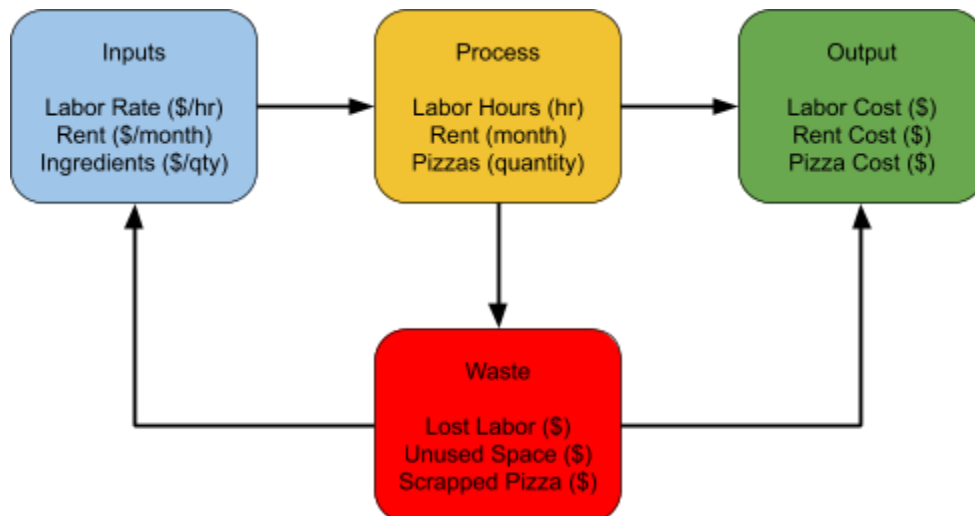
I put my stuff down in the office and give our soda supplier a call. It’s always a hassle with these guys. It’s hard to get your rep on the line and all they want to do is sell you more. I get the automated system and after I press 1 for Customer Support and 5 for the Western Region and 3 for Technical help and 2 for Soda Machine. I get a pre-recorded message that I’m important to them but they’re busy helping other customers and I should leave a message. I leave my name and number and put the phone down.

These guys don’t seem to have a problem. They’ve got more customers than they can handle. I lean back in my chair as that thought lingers for a bit. Then I spring forward and start looking for another supplier.

In an hour I've left 3 messages and spoken to another rep to have them work up a quote for me. This is a good opportunity to see if I can lower another cost.

But the whole issue has me thinking about Time. If you can waste Time does the Mass Balance Model apply? I take out the diagram again and look at it.

Actually, I already have Time as a Process Variable. The Labor Hours is Time and it is the key variable in the Process of converting ingredients into pizzas. If we can waste Time that means I need to add it to the Waste box. But if I can waste Time that means I can also Not waste Time. So there has to be a measure of Efficiency built into the Output.



The Time Study we did showed us how long it takes to make a pie. We measured the time at each step and then tried to figure out how to reduce it or optimize it. Essentially we were focused on eliminating Wasted time from the process. How does this apply to Labor time?

We want our Labor focused on things that increase our Revenue so whenever the team is doing something that isn't making pizzas or improving the restaurant or focused on the customer then we're wasting time. By looking at where our employees spend their time, I can see what activities are Revenue focused and what activities are not revenue-focused. Then my job is to see how I can get someone else to do the non-revenue focused jobs, like fixing the soda machine!

There is some commotion outside so I casually step outside to see. Apparently a customer is complaining that they've been waiting almost forty minutes for their pizza. That's odd. I slip into the kitchen to see what's happening.

"We're working on it, boss," Ramon says as he sees me coming. "We found a piece of plastic in the sauce so we had to throw out that batch of sauce and any pizzas we had just made. We didn't want to take the chance that anything could accidentally reach the customer."

I totally understand and it looks like the staff is working it but pizza production has come to a standstill. The thing I'm not happy about is that no one came to tell me. But I'll have to address that later. The current problem is we are waiting for another 30 to 40 minutes until the sauce cooks.

"What about the jars of sauce we were going to sell? I know it's in bottles but let's use those and keep going."

"But that won't be enough for all the orders," Ramon points out.

"Correct. But it is better than zero! Jeff, go get the five bottles we have outside on the counter and let's get rolling."

Jeff hustles out and Ramon preps the pizza line. The dough was already ready. A quick toss and it's ready to go. The sauces are opened and we put our first pizza in the oven in five minutes.

I hustle out to the front to help with the customers. It's not a great scene but we're managing it. A free trip to the salad bar calms people down. Now we just have to get the sauce made and we'll recover.

I look through the orders and anticipate which orders will be delayed. I purposely choose the takeout orders and call three customers to let them know their pizzas will be available 15 minutes after originally promised. I throw in some sodas and there are no objections.

Then my phone rings and is a rep from one of the soda delivery companies. Her name is Rachel. She seems like she's straight out of college but at least she's calling back.

"Hey there. Is this Michael? We got your message and we're returning your call. How can we help you?"

"Well, we run a Pizza restaurant and we're not real happy with our soda vendor right now so I wanted to shop around and see if there might be a better deal we could get."

"Sure happy to help," Rachel replies. "What is it you don't like about your current vendor?"

Wow, maybe she is good. That's such a great question to find out more about your prospect and make sure you deliver a complete solution!

"We're not too happy about the price but the biggest issue is that the dispenser keeps failing and we can't just stop having soda."

"Got it." She's writing in the background. "Anything else?"

"No, that's about it. Well, I guess I also don't like the fact that it's so hard to get a hold of my rep."

"Understood. And are you the decision-maker?" My opinion of Rachel is moving up.

"I am."

"So if I could beat your current vendor's price and solve your dispenser issue and promise you outstanding customer support, would you be ready to make a switch today?" She does a presumptive close. She's a pro!

“Yeah, I guess so. What can you offer me?” I ask.

“Well, how much do you currently pay?” she asks.

“Can you instead tell me what you can offer?” I reply. “I don’t want to sell out my current vendor. You understand right?”

“Of course I do. Here is what we can do.” She proceeds to give me a great price on the soda and upgrade my dispenser. As long as I keep buying a minimum from them the dispenser is free and she offers a two-hour dispenser replacement if it ever breaks. “Plus, I’ll be your customer service rep and you can contact me whenever you have an issue.”

I’m sold. She’s knowledgeable, the company has been around for a number of years, and the price is awesome. “When can you install?” I ask.

I finally make my way back into the kitchen. The sauce disaster is over. The plastic came from a cup someone was using as a measuring device. It broke while measuring the sauce and transferring it from one pan to another. The crack is obvious now but when it had sauce running over it it would have been hard to see. The kitchen did the right thing to stop making pizzas.

“Guys, thanks for doing the right thing. I just wished someone had come and alerted me. I only found out when a customer started complaining and I heard the noise.”

Ramon steps up. “You’re right. My fault. I got so focused on figuring out where the plastic came from I forgot to loop you in. I’ve never seen anything like that happen before. Won’t happen again boss,” he sincerely tells me.

“Let’s also do two things. First, let’s get rid of any plastic in the kitchen. It’s too fragile and easy to break. Second, let’s actually make a few extra bottles of sauce. I’m thinking if we always budget having about 6 extra bottles we’ll always have something we can fall back on.”

Now what was originally Waste and then became an extra product is becoming a life saver. Who would have thought.

Chapter 15

I'm looking at the numbers and we're doing well. Revenues are up and Costs are starting to trend down. The kitchen is humming and we're able to get high-quality pizzas out in fifteen minutes or less with up to fifty pizzas an hour. We've gotten so good that often we could do more than we currently have orders for. Whereas initially, we were just holding it together now we have excess capacity. That sounds like an opportunity. The question is how to capitalize on that.

Traditional marketing would suggest targeting new customers with mailers and coupons and promotions but that only brings us, one customer, at a time. I wonder if there is something we could do to make larger individual sales.

"How do I increase sales?" Boy if I knew the answer to that I could write the best selling book! And yet, I feel confident that I have the intuition to solve this problem.

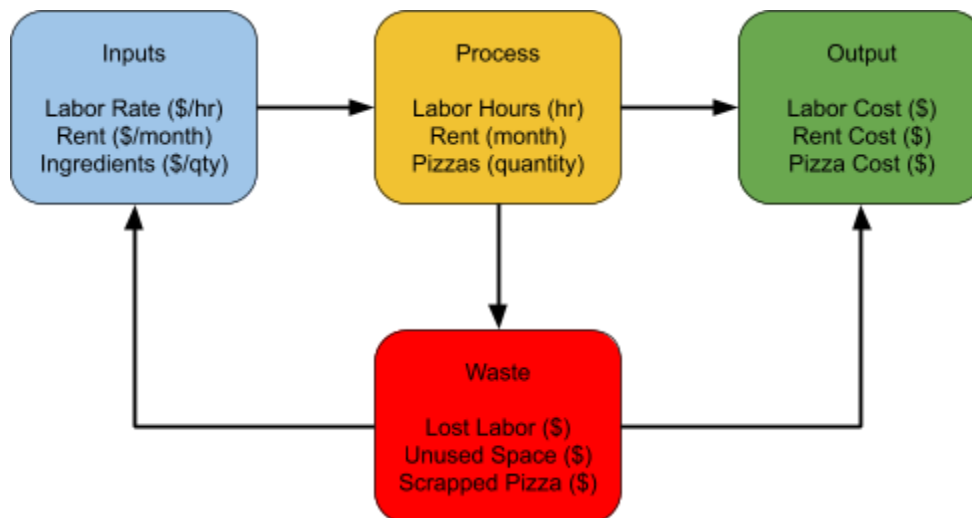
Our customers tend to be workers during the lunch break and families during the evening. The weekends tend to be filled with little league sports teams and birthdays. All very family-oriented and repeatable. Everyday people have to go to work, every season there is a new sport, and every year everyone has a birthday.

In terms of the MBM the Revenue is clearly the desired Output but what is the Process? Well, Revenue is in dollars and is the result of Customers coming in and spending money in the restaurant. Number of Customers times Amount spent per Customer is Revenue. Number of Customers must be the Input and that makes the Amount spent per Customer the Process. That makes sense. It's the Process of Ordering.

So I can increase Revenue if I increase the number of Customers and increase the Amount Spent per Customer. Or I can win big if I bring in lots of Customers who each spend a lot of money! How do I do that?

Where are there lots of Customers who have a lot of money?

The answer is obvious as soon as I ask the question - Companies. If I could cater to companies I could make 1 sale at a higher dollar amount and consume a lot of excess capacity.



Now all I have to do is figure out how to do that!

Somehow I've got to figure out how to make this a win-win for me and the company. Everybody loves pizza and pizza is the go-to food for lunch meetings since it is easy to order and eat. Maybe there is a way to sell a company a fixed amount of pizzas each day and they can provide them to any lunchtime meeting. Maybe they could have Pizza Fridays and provide free Pizza to their employees as a Team Building perk. Maybe there is a way to work with each company's catering arm to provide pizzas in case they need extra food or they run into some sort of issue with their own meal prep. These are good ideas and any one of them could be very good for Lucky Pizza.

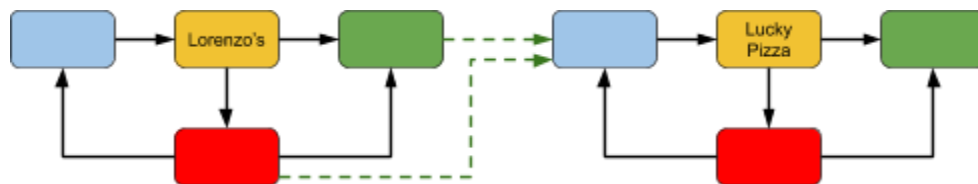
I hear this large rumbling sound outside and a horn. My thoughts are interrupted and when I can't quite figure it out I head outside to take a look. It's the vegetable deliveries from Lorenzo's.

They start to unload and unload and unload. So many vegetables. It's really amazing to see how much we consume in a week. I take a look. Man, these really are good vegetables. I pay particular attention to the tomatoes that Peter is giving

me a discount on. There are a few dents and bruises but these will do very nicely. He's also done me the favor of separating them from the perfect ones so I know which ones to use first and which ones to use as toppings. The savings is totally worth it.

We clear out the walk-in cooler and organize the vegetables. It's a job unloading, washing, drying, sorting, and prepping the vegetables for use. We get most of it done before we open but it's easy to side work to do when we are slow and it's time we would have to spend later in the week anyway. This time we just did it once and as a team. What a win-win.

I think of Peter who must be delighted to make a sale from something he thought was going to be Waste. Somehow his MBM got hooked up to my MBM and it helped us both.



It's after lunch before I get back into my office and start thinking about companies and catering again. How am I going to find companies that need catering? Who would order from us?

I think about it and start making a list of big companies I know are in the area. They've got lots of money but they also have in house cafeterias. I jot down about twenty before I realize I have no way of contacting these companies in a meaningful way.

I smile thinking about calling reception and saying "Hello? This is Michael, the manager over at Lucky Pizza and I'd like to make you a deal on Pizzas!" Smooth man. Real smooth. But then I think of Daniel. He knows people at all of these companies. In fact, he came up through the ranks in a few of them and did quite well before he decided to become an investor. I pick up the phone and call him.

“Daniel, this is Michael,” I start. “I have an idea that could really help the bottom line but I need your help.” I’ve got his attention. He’s listening. “I’ve got three ideas of how we could dramatically increase sales without increasing costs.”

I talk him through my ideas of selling to companies and he likes it. He starts thinking about the companies he’s still involved with and promises to start on a list for me.

“You’re sure these big orders aren’t going to screw up our day-to-day operations?” he asks.

“Not a chance. We’ve got excess capacity in the ovens right now and the team is getting very good at processing pies in the kitchen. We’ll be fine. You get me the list and I’ll take it from there,” I reassure him.

We hang up the phone and I think that’s the first time in a long time that it felt good to talk to him.

Chapter 16

Sunday.

I get up well-rested and without an alarm clock. I'm liking it.

I start slowly and make a cup of coffee and suddenly decide to take a run. I haven't even been able to think of running since I started a Lucky Pizza but I'm feeling good.

I lace up and head to the local park. There's a nice trail by the lake.

The place is empty this early. There are a few couples out for a stroll. There's a stretching class on the grass and a few joggers. We nod as we run past and after a few nods I feel like a pro. Yeah, I do this regularly. I smile.

My mind wanders as I go through the motions. I think of my parents and how they helped me out. I think of Daniel and how he chewed me out. I think of the job and how I love it and hate it at the same time. It's the greatest stress in my life but it's also what gives me purpose. The happiness I feel right now is the result of the stress I felt earlier. It's almost like the Stress was a Waste and it became the Input that made the Happiness. Interesting.

I think about where we were a few short weeks ago and where we are now. Unhappy customers complaining that their pizzas were late and now we've got pizzas coming out with high quality and predictability.

And we're really starting to outdo ourselves. The productivity increases have started to kick in so that we can handle the larger crowds. In fact, our average delivery time has actually fallen as we've increased the customer load. The kitchen is humming with the new ordering form, the reduced check time, the attention paid to the oven, and the improved sauce-making process. We're operating as a team, watching out for each other, and making sure we only deliver high-quality pizza. Plus the cost savings are really starting to pay off. The reduced vegetable cost had Daniel actually smiling. I haven't seen that in a while. Plus we're working on some

interesting ways to work with our other vendors. We got the savings on the soda machine but we've been looking at the other contractors as well to see how we can structure win-win deals with them as well. All-in-all, we're happier and they're happier. Not bad.

But the team really gets the credit. Ramon and Ted have been in from the start and working with me to achieve the results. We've really got a good crew. They needed some training but once we invested in them they really started shining. There is bound to be some turnover in the future. College students come and go. But as long we train them and follow-through it will be fine.

But all of that is if my meeting with Daniel at the end of the month goes well. That's when we are going to review the numbers and he'll let me know what he's planning on doing with the restaurant.

He'd be crazy to let it go. But then again I don't know what he's going through and what kind of financial pressures he's seeing. I know this restaurant is going to make him way more money than simply shutting it down but it's not my money and it's not my decision.

But if he calls it quits what happens to me? What happens to Ramon and Ted and the crew? They've got families to take care of. Me, I end up with my parents. I've got a safety net. I'm not sure about those guys. This is what they do.

Maybe he sells it? Then we'd all still have jobs at least for the short term but it really depends on who he sells it to. They'd likely want their own manager and maybe even their own crew.

He's got to keep us open! I shake my head almost as if to get the thoughts out of my head.

I round the bend and the trail goes uphill a bit. The morning air feels good against my face.

No matter what he does, I have learned a lot from this process. From working with vendors to negotiating pricing to motivating teams to improving processes. What a skill set! I'm proud of what I've done and I'm sure I could do it again if necessary but I don't want to find another job. I'm happy here. Now that we're improving that is. Now that the yelling has stopped.

Anyways the most I can do is keep trying and keep improving. The Mass Balance Model really gave the structure from which to ask the right questions. I had to come up with the answers. In hindsight it almost seems like common sense but yet none of it occurred to me before I changed my thinking.

Once I got the structure right, I got the questions right. And once I had the questions right I started getting the right answers. All in all, it's been quite a ride!

Chapter 17

Success!

The meeting with Daniel went better than expected. I knew we had done well over these past months but Daniel wasn't just happy, he was enthusiastic.

He gave me a list of 14 companies to contact for catering and partnership opportunities. He had even approached a few himself and was confident we could work out a deal with them. That could solve both our excess capacity issue and bring in some new revenue.

The thing that surprised me the most was that he had negotiated our rents lower! I had mentioned to him earlier how rent is an Input and just like vegetables, we would benefit if we could reduce the overall cost but I wasn't sure he took the message to heart. Of course, that was when we weren't sure if the restaurant was going to survive. But now, he negotiated a lower rent by signing a longer lease. That means we get a great rate locked in for ten years which means I have a future I can count on. He has enough faith in me that he is willing to keep the business open and invest in it and in me!

Heading back to the restaurant, I can't stop smiling. I first tell Ted and Ramon the good news. "Through your diligence and perseverance, the restaurant has been saved. Daniel has decided to renew the lease because of the work you've done. You guys have been doing an excellent job!"

I gather the rest of the employees around the kitchen.

"These past few months have been intense and I've really had you guys buckle down. We trained you guys to get better quality pizzas. Then we did time studies to speed up our process and you guys continued to make progress with that. Now we're operating like a well-oiled machine. We've got happy customers. You've

seen the orders increasing and you know how busy we get in the evenings. Based on all that, Daniel has chosen to ...”

They know the answer but I pause for dramatic effect and they gulp awaiting the decision.

“.. renew the lease. That means that Lucky Pizza is still in business and we’re all keeping your jobs,” I tell them. “Congratulations!”

They let out a sigh of relief. “You did an incredible job with your work!” I exclaim.

They’re happily slapping each other on the back and high-fiving each other.

“And as a reward for going above and beyond, I’ve given everyone a bonus! I’ve cleared it with Daniel and you’ll be seeing it in your next paycheck. You’ve earned it!”

I look around the room at the beaming faces. I can see the pride they feel and as I look at each of them I’m reminded of the ideas each of them brought to the table. It really was a team effort. The Mass Balance Model helped us organize our thinking and the Team hit a home run. I’m proud to be part of this team.

Outline

1. Intro: Problem
2. Revenue vs Profit, Kitchen Chaos
3. The Process
4. Cross Training idea. In-Process-out model. Cost Linkage. Oven breaks
5. Daniel Arrives
6. Training Day (basic Process)
7. Friends
8. Time Study. Link to Revenue
 - a. Faster time = Customer satisfaction
 - b. Faster time = velocity or revenue (more \$/hour)
9. Mass Balance Model In - Out - Waste, Physical & Cost
 - a. What's the problem? Bad Output or Waste
 - b. Input or Process issue?
 - c. What can you do?
10. Improve the Process
 - a. Order delay - speed up time
11. Dinner
 - a. better handwriting/check boxes/new order form
12. Implement
 - a. Waste - extra sauce (speed up time, don't waste), ingredient prep ethylene bags
 - b. Waste - extra dough - bread sticks
13. Focus on Waste
 - a. Appliance waste Waste - Soda Machine - cost of extra soda
 - b. Mistakes - minimize impact - Reduce batch size
14. Focus on Cost
 - a. Use fewer ingredients (process)
 - b. Ingredients (commit volume, take less attractive veggies, contract with farmer directly) (input)
 - c. Rent (input)
 - d. Minimize risk - smaller batches of sauce.
15. Excess capacity

- a. Vegetables arrive
- b. Off Peak specials, Night Prep
- 16. Focus on Revenue**
 - a. Monetize Speed - Fastest Pizza Pay more
 - b.
- 17. Turn Wheel Faster (do more with what is already in place)**
 - a. Excess capacity - Catering, Business Meetings (input)
 - b. Attract more customers (input) - local schools, soccer
 - c. Sell more per customer (process) - arcade, sauce, breadsticks, merchandise
- 18. Linking one MBM to another MBM**
 - a. Waste - Soda Machine - cost of extra soda?
- 19. Success
 - a. Rent (input)