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BRIGHTVIEW PLUMBING AND HEATING: A NEW BUSINESS MODEL

Kenneth Sousa wrote this case solely to provide material for class discussion. The author does not intend to illustrate either effective or ineffective handling of a managerial situation. The author may have disguised certain names and other identifying information to protect confidentiality.

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On February 6, 2015, Louis Moore, the president of BrightView Plumbing and Heating (BrightView), was reviewing the company’s final financial statements. Louis had asked his controller, Samantha Connors, to provide a comparison of the financial statements for fiscal year (FY) 2014 against the previous four years. Louis was worried that the new business model he had introduced and implemented several years earlier might not be working as originally intended. The financial statements clearly showed that some of the key performance financial indicators were not trending in the right direction. Samantha expressed concerns about the financial performance of BrightView for FY 2014, especially compared with previous years. At a weekly managers’ meeting in February, Louis was frustrated with the lack of solutions. He believed that BrightView could have and should have performed better. He asked for an analysis of the current situation and recommendations to address the current problems.

The Plumbing Service Industry

The industry was composed of many small, sole-proprietor plumbing contractors. While there were a few nationally based plumbing businesses, most plumbing companies were operated by one person who performed all work to install and repair plumbing in homes and businesses. In most situations, these contractors operated their business out of their home. Their employees consisted of only an apprentice and a family member who coordinated the various non-plumbing business functions (see Exhibit 1).

A plumbing contractor’s billing normally consisted of only two components: labour and materials. The standard labour billing rate ranged between US$60[[1]](#footnote-1) and $90 per hour, and was charged based on the number of hours that were required to complete the job. The billing rate often needed to include the work of both the master (i.e., licensed) plumber and the apprentice who helped on the projects. The contractor would also bill the customer for all parts and equipment that were installed to complete the project. These parts were purchased at the wholesale price (sometimes called the contractor’s price) from plumbing supply companies. The customer was billed for parts at the wholesale price plus a markup to capture the costs of ordering, storage, and delivery.

In many situations, contractors ordered large, expensive items directly from the supply companies for a specific customer project only when needed. This approach eliminated the need for warehousing and storing expensive, cumbersome parts (such as water heaters). However, without the availability of inventory, customer appointments could be scheduled only based on the delivery (or availability) of a part needed to complete the project. Therefore, additional effort was needed to coordinate the appointment with the delivery of the parts. If the contractor had several open customer projects, scheduling appointments effectively could become challenging and tedious.

Many plumbers who worked for other contractors often aspired to start their own plumbing business. They were aware of the hourly rate that the contractors charged customers, so they expected to earn more income by running their own business. Simply comparing the hourly wage they earned against the contractor’s billable hourly rate led them to conclude that they could easily increase their income.

BrightView Plumbing and Heating

BrightView was founded in 1997 by Louis’s father, Brent Moore, to provide plumbing services for both residential and commercial customers. After graduating from high school, Brent began working as an apprentice for a master plumber. A minimum of two years’ experience as an apprentice, as well as passing a series of standardized tests, was the requirement to provide plumbing services to customers. Brent worked diligently as an apprentice while studying for the various licensing tests. He learned the concepts of installing plumbing and diagnosing problems. He also attempted to understand the basics of estimating, customer service, and operating a plumbing business.

After four years, Brent passed the necessary certifications and tests to be granted a plumber’s licence. Once he had the credentials and technical knowledge, he believed that it was time to start his own business and provide his services directly to his own customers. He wanted to build a company that his two sons, Louis and Ben, could someday develop into a sustainable family business, after graduating from college. Both Louis and Ben eventually joined their father’s business.

When Louis joined the business in 2008, he believed that the company could develop a brand that would alter the perception and business model of the local plumbing contractor. He knew that customers were frustrated when a contractor either did not return customer calls for service or did not show up at the scheduled day and time. Louis thought that there should be a better way to offer plumbing services.

He also realized that inventory needed to be managed more efficiently. When working as an apprentice, he would often be sent to purchase and deliver parts to the customer location during the appointment time, which he saw as a very inefficient system. He would continually ask the owner, “Isn’t there a better way to do this?” or “We do not seem to be doing as many appointments each day [as we would] if we were not always trying to get the parts.”

A New Business Model

Louis felt that it was important to load the service van with the required parts for each day’s appointments at the beginning of the day. The attention of the plumbing technicians would thus be focused on the customer’s needs at each appointment, without distractions from needing to pick up and deliver parts. He believed that having the required parts for each day’s appointments would increase the company’s efficiency, and increase revenue and profit.

This operational model required that customer service representatives schedule appointments for customers in advance with a guaranteed day and time. Dispatchers could then assign appointments to the service technicians based on the geographical locations. Having completed the dispatching task in advance, the service van could then be stocked with the necessary parts and equipment for the day’s appointments. However, the model assumed that in-house inventory of parts was available to adequately stock the vans.

New Warehouse and Inventory Process

After a year of analysis and discussions, BrightView moved into a building that included a warehouse and office area. Louis designed a separate warehouse area with shelving arranged in aisles. He also decided that BrightView would purchase its inventory directly from manufacturers, thus eliminating the parts supply intermediaries. The reduction in costs from direct purchase was intended to improve profit margins on the parts sold to customers, which could offset the costs of maintaining the warehouse and additional labour. Louis expected the profit margin to exceed those new costs, thus providing additional profits to the business. Louis added a warehouse clerk position to manage the warehouse. The clerk would be responsible for receiving incoming part orders and stocking the warehouse shelves.

The new process required service technicians to request the necessary parts and equipment for the scheduled appointments from the warehouse clerk. The clerk would then retrieve the parts from the warehouse and assign them to the service van for the technicians to use on their day’s scheduled appointments. BrightView purchased and implemented an inventory management system to maintain, track, and report the inventory transactions.

The inventory management software, which came highly recommended, maintained a parts database to track and report on relevant warehousing and inventory data. The system was capable of processing daily transactions (e.g., purchases, returns, adjustments, and sales) for all inventory parts either manually (i.e., by typing) or through machine-readable images (i.e., bar code scanning). Everything about the new system seemed to meet Louis’s objectives.

Operations in the Warehouse

The Process

Mark Boyle was hired as the warehouse inventory clerk to manage the new inventory management system for the company. He was responsible for all inventory item shipments (i.e., purchases from suppliers) and transfers (i.e., parts allocated to customer projects).

Shipments to BrightView

When a new shipment was received from a supplier, Mark would validate the products and quantity against the packing slip. If there were no issues, he would stamp the packing slip “RECEIVED/POSTED” and enter the appropriate parts into the inventory system, thereby increasing the quantity on hand. The packing slip was then given to Lori Canning, the purchasing clerk, to authorize payment to the supplier for the items received. If there were issues with the shipment, Mark would note the discrepancies and forward the packing slip to Lori for resolution. That shipment would not be entered into the system.

Parts Allocated to Customer Projects

When a service technician or other personnel needed a part from the inventory, Mark received an inventory part sheet with three details: the part numbers, the quantity, and a job number to identify the specific customer project. He would then retrieve the inventory from the warehouse and place it into an empty storage bin. The location of the inventory items was not marked, but he knew where to find the products from memory. If all products were available, he would manually enter the adjustments into the inventory system. The job number was entered in the notes section of the transaction to trace the project to the customer. If any parts were unavailable for a plumbing project, the service technician would need to make arrangements to procure them or ask Lori to do so.

A Day in the Warehouse

BrightView’s service technicians normally gave Mark their inventory part sheet for each scheduled appointment at the start of the day. One particular service technician, Jay Holden, needed several fittings and pipes for his appointments that day. Mark took the list to the warehouse to gather the necessary parts. However, Mark returned to the inventory desk a few minutes later looking puzzled. He logged into the inventory system and stated, “I cannot find the copper double elbows that you want. I went to the shelf and there are none available in the bin.”

Jay looked at Mark and asked, “Isn’t that elbow supposed to be one of our standard parts for the inventory?”

“Yes, I know, Jay. The system says that there are 10 elbows here in the inventory, but they are simply not there.”

“I have to get out to my customer appointments. I won’t be able to complete one of my jobs if I can’t get that double elbow,” replied Jay.

“Yeah, I know! And I cannot find two other parts in the warehouse either,” Mark remarked.

Jay was becoming impatient, realizing that he would be late to start his appointments.

Finding the Inventory

After failing to locate the missing parts, Mark approached Lori, the purchasing clerk. “Lori, how come our inventory is all wrong! I have technicians waiting to be dispatched and I cannot find the parts.”

Lori quickly responded, “Don’t blame me for the warehouse issues!”

“Look Lori, the inventory system says we have copper double elbows, galvanized steel elbows, and cast iron cleanout parts on the shelf and there are none in the bins. When did you last purchase these parts?”

Lori looked at her inventory listing and found that they had just received 40 copper double elbows the previous week. “We could not have used 40 elbows in the last week. Impossible! We probably buy about 200 a year. Maybe you are not processing the technician inventory adjustments properly.”

Mark snapped, “I process everything when it is done! I have to talk to Louis about this!”

Helping Themselves

On February 12, the previous week, Ben had received a call from Tom Harrington, the owner of Seaside Grill, one of BrightView’s most important commercial customers. Their water heater had failed and needed to be replaced immediately or they would not be able to open their restaurant the next day. Ben wanted to be sure that he could get a service technician to the restaurant early the next morning. He was very familiar with the restaurant’s plumbing layout, having made repairs at that location himself on one occasion. The water heater installation needed several special fittings, including a copper double wye and a copper union. He checked the inventory system to see that all parts were in stock. He then went into the warehouse and took two copper fittings. Ben did not bother notifying Mark about the inventory changes.

Customer Dissatisfaction

Concerned about his lateness to start the job after the delay in locating parts, Jay decided not to keep the customer waiting much longer. He arrived at the job site and began to install the new parts. He progressed to the point where he could not go any further without the copper double elbows and called the office to see if Mark had located the missing parts.

When he was told that the parts could not be found, Jay asked for assistance. “Mark, can you call around to see if you can get this part? I also need a 515 backplate. I do not have any on the van. I am stuck here and cannot finish the job without the elbow.”

“Jay, I will call around and see what I can do,” replied Mark.

Half an hour later, Mark called back to confirm that he had located the parts at a local store, but it was about 15 minutes from Jay’s location. “Jay, you can go to Smith’s Plumbing Supply. They have an elbow and the backplate waiting for you. Just charge the $5.50 for the parts.”

“I guess so,” replied Jay. “That’s another 30 minutes that I did not plan on.”

The Meeting

Irate Customer

On February 18, Jake Roberts, the dispatching supervisor, received a call from an irate customer. The customer was just notified that her scheduled appointment for that day had been cancelled. “I changed my schedule to wait here for your service technician,” complained the customer. “Now I have to be here for another day so that I can get my dishwasher installed?!”

Jake apologized to the customer. He then assured the customer that he would arrange another appointment personally, and that he would extend a discount for the missed appointment.

The Weekly Managers’ Meeting

Two days after the cancelled appointment incident, the senior managers met with Louis to review issues and upcoming items.

During the meeting, Jake conveyed the story about the customer’s recent missed appointment. “I don’t know what is going on. But this has been happening four to six times each month. I found out that our service technicians are having to purchase parts that are not on their van, which then adds more time to the technician’s time and some appointments are cancelled and re-scheduled.”

Louis said, “We have a problem. I hate having a dissatisfied customer that I also have to return money to in order to soften our mistake.” The managers discussed various situations and issues for over 20 minutes, after which Louis said, “This discussion is not helping to solve the problem.”

Margie Peters, the customer service manager, offered a solution. She suggested that the service technicians should be required to complete all of their appointments for the day, even if it stretched into after-business hours. “We need to contact the customer and inform them that we will be late, but all projects should be completed before the end of the day,” stated Margie.

Louis was not convinced by this suggestion. “So my choice is to [either] discount the customer bill for our mistake or pay overtime to our service technicians. Those do not sound like great choices to me.”

At that point, Mark knocked on the door. “Sorry to interrupt the meeting,” he said. “Lori said that she had ordered 40 elbows just last week. But yet the bin was empty. Then, she walked down another aisle in the warehouse and saw a box on a shelf unopened. Lori said, ‘When I checked the label on the box, guess what? It was the missing box of elbows.’”

Louis interrupted Mark, “So how did you miss that box when it was received?”

“Louis, when I saw the box, I immediately looked in my folder where I keep every packing slip of all shipments. There was nothing in there. I was out sick on the day that this order was received. I am not sure who put the box there and why I did not get the packing slip.”

Louis became agitated:

How do these mistakes happen? We have procedures to manage our inventory system. Our technicians need to have the right parts to complete their day’s appointments. I don’t understand why I have to pay overtime or have dissatisfied customers. I hate dealing with problems like this! I want this solved! I just received the financial statements for the 2014 fiscal year. I am not pleased with the financials.

Mark put his head down and left the room upset.

After Mark left the room, Louis conveyed to the group his findings from the company’s financial statements. His analysis showed that the cost of goods sold was increasing, but he was not sure why (see Exhibit 2). He knew that BrightView had been diligent in negotiating cost-effective purchasing agreements from manufacturers and suppliers for parts and equipment. Louis said, “I do not believe that the issue is because of contract pricing with our suppliers. We have been holding them to tight margins too!”

A few hours later, Mark walked into Louis’s office. He seemed to have something to say but his face showed reluctance. Louis told him to go ahead and speak. Mark said:

Louis, I am sorry for all of this. I am trying my best. Maybe I need to do more. And I will do whatever you tell me. But you should also know that Ben has come in multiple times to take inventory out of the warehouse. I have asked a few times to let me know what he is taking and he tells me he will send it to me later. Honestly, I don’t feel like I can tell an owner what to do.

There are also situations, Louis, where we just simply run out of parts and I can’t explain why we do not have them on hand. The service technicians are scheduled to a customer’s home and we are missing simple pipefittings. These fittings cost [only] a dollar or two. And the plumbers need [them] in their van. Why don’t we have them in stock? Then the technicians blame me.

Louis nodded and assured Mark that he understood. As Mark left the room, Louis shook his head in disbelief. How had everything become so complex? Why was the process breaking down?

Exhibit 1: Tasks and Duties Performed By Plumbing Contractors

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| --- | --- |
| **Task** | **Duties** |
| Incoming calls | Answering incoming calls from prospective and current customers, consisting of scheduling (and sometimes rescheduling or cancelling) an appointment, responding to a request for warranty service, dealing with a service complaint, receiving a payment for services, or providing a price estimate |
| Service appointments | Scheduling service appointments |
| Parts orders | Ordering equipment and supplies for customer appointments |
| Inventory | Managing and tracking inventory equipment and supplies inventory |
| Accounting | Maintaining the accounting and financial records—including customer receivables, customer payments/billing, accounts payable to suppliers, financial statements, and employee payroll. |

Source: Prepared by the authors.

Exhibit 2: Analysis of Financial Statement Data from Operations, 2010–2014 (in US$)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Fiscal Year** | **Net Sales** | **Materials Cost** | **Billable Hours** | **Labour Costs** |
| 2010 | 9,054,211 | 950,692 | 44,567 | 1,261,252 |
| 2011 | 9,212,660 | 1,022,605 | 45,804 | 1,302,670 |
| 2012 | 9,406,126 | 1,091,111 | 46,132 | 1,328,145 |
| 2013 | 9,613,060 | 1,143,954 | 44,829 | 1,344,867 |
| 2014 | 9,838,967 | 1,220,032 | 48,527 | 1,393,198 |

Note: COGS = cost of goods sold

Source: Prepared by the authors.

1. All currency amounts are in US$ unless otherwise specified. [↑](#footnote-ref-1)