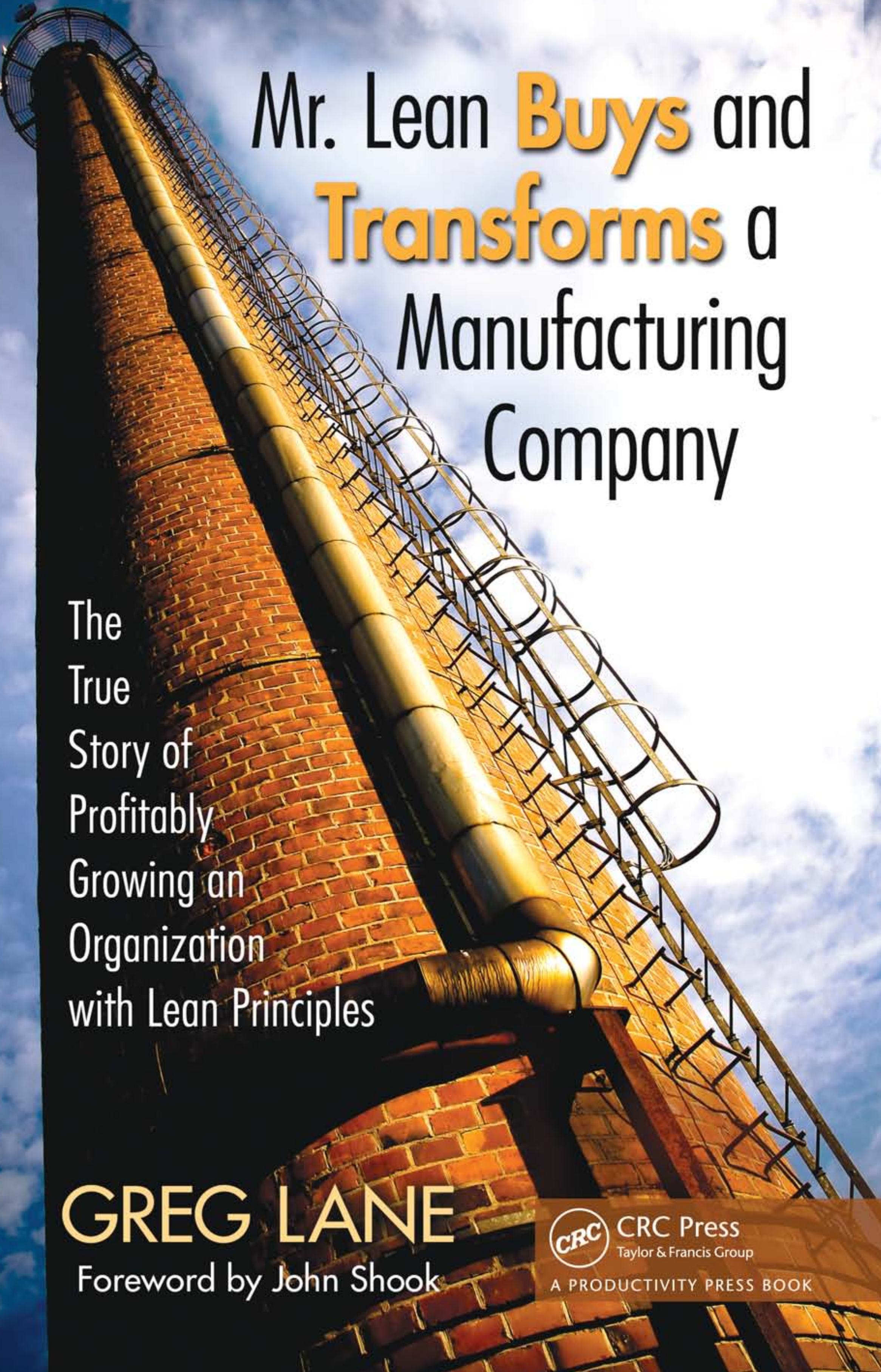

Mr. Lean Buys and Transforms a Manufacturing Company

The True Story of Profitably Growing an Organization with Lean Principles

GREG LANE

Foreword by John Shook

CRC Press
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A PRODUCTIVITY PRESS BOOK

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Foreword

There has never been a lean consultant who didn't consider buying his own company, to rid himself of slow-minded company managers who don't listen, to have a chance to do it the way it should be done, and to do it himself. That is, to finally do it *right*.

And there has never been a business owner who hasn't wished all the know-it-all consultants who lecture them on the obvious would put up or shut up: "Those who can, do; those who can't either teach or consult."

Mr. Lean Buys and Transforms a Manufacturing Company is for both camps — the consultant who secretly wonders what it would be like to actually lead the charge as CEO/owner and the CEO owner who simply needs the performance improvement.

Greg Lane has seen lean from all sides: as a lean specialist inside large corporations, as an independent lean consultant, and as a company owner. Greg learned the Toyota Production System directly from the source during his stint at New United Motor Manufacturing Inc. (NUMMI), the joint venture between Toyota and GM.

As owner of his own machining company, purchased on a shoestring and a prayer, Greg naturally reached deep into his bag of lean tricks. But, his company was small with few resources. He quickly realized every action he took had to be supremely practical. There could be no "lean for lean's sake." No kanban where they didn't make sense. No overblown, expensive andon systems. No extensive team of indirect employees who add no value.

As his organizing principle, Greg landed on a lesser-known Toyota approach to creating change in a workplace called "OSKKK." OSKKK stands for Observe deeply, then Standardize, followed by three stages of Kaizen. Kaizen is a lesser-known Toyota approach.

Greg first learned about OSKKK during his intense TPS Key Person training in Toyota City, Japan in the early 1990s. One of the fortunate, hand-picked few to undergo this specialized training, Greg learned directly at the hands of Toyota's most experienced Toyota Production Sensei in Toyota City. Later, as a lean consultant to his former employer Delphi, Greg was more deeply exposed to OSKKK through the work of former Toyota production control manager Yoshinobu Yamada, who was introducing OSKKK throughout many of the operational divisions of Delphi at that time.

Greg takes us blow-by-blow through the entire experience of searching for an appropriate company, completing the purchase, learning a new business, transforming it through the application of lean thinking and achieving a two-fold increase in sales during the first four years (an increase in capacity and real output of 25 percent per year), including a profit margin increase of 10 percent and finally selling the transformed business to a new, lucky, owner. Along the way, we learn about the application of OSKKK, the process of learning and improving not only the plant floor but also the office side of a small business. Author/business owner Greg even introduces a novel and cleverly simple approach to practical product costing for quicker and more accurate price quoting for new business, a little-discussed headache for every manufacturer.

Mr. Lean Buys and Transforms a Manufacturing Company is a fun read. If you've ever considered how you would go about transforming your own manufacturing enterprise or if you own such an enterprise that needs transformation — this book will definitely provide thought-provoking ideas and some guiding principles along with specific hints for dealing with challenges that your company faces today.

John Shook
President, Lean Transformations Group, Inc.
Ann Arbor, MI, USA

Preface

I am sure there are days when you sit at work thinking how things—all those things you imagine doing differently than the way they are currently done—would be different if you owned and ran the company. Maybe you imagine being at the top of the pecking order—or at least being able to advise your managers—to create a more efficient company instead of trudging along performing tasks that add no real value. How easily you could implement lean ideas to better the business if you were given the knowledge and authority. It is likely, however, that you have not been promoted to a high-enough level or your personal checking account does not contain enough money to buy the company (and if you had that kind of cash, you would probably retire to some wonderful place instead).

I made the jump from corporate employee to business owner by committing every penny I had as well as incurring heavy debt. Buying a business is not something I would recommend to everyone, especially those with a weak heart or a desire for stability via a regular paycheck.* But, you can learn a lifetime of lessons in the short term with this approach. In my case, I was able to become the owner, the boss, and periodically just another of the machine operators. I took the plunge, and my story follows. It was not a perfect transition by any stretch of the imagination and many mistakes were made, but there is a lot to be learned by these experiences.

This book tells the true story of how I purchased a stable, profitable manufacturing company and—despite having no prior experience in the industry—I was able to grow it successfully and increase its profitability just by showing up and applying a bit of common sense and the lean ideas, strategies, and philosophies I had learned.† These same ideas should be

* I would not recommend this course of action to others, especially if it involves selling off all your personal assets and assuming a lot of debt to purchase mostly "goodwill," as was my experience. Reflecting on it now that my situation has changed and I am supporting a family, I am not sure I would risk as much the next time around.

† I will not mention the name of the business because it continues to operate under the same name and the current owners might not want this type of publicity. When I purchased the business, I chose to keep the original name because, as I quickly found out, the purchase includes buying the "goodwill," meaning the name, the existing customers, the employees' knowledge, and any proprietary technology or processes. To change the name—especially to incorporate one's own name into it—seemed to me to be based more on ego than on a sound business decision (unless you have a really cool name).

applicable to most industries. My experience should help you to see how lean methods can lead to profitability in almost any manufacturing or service business, particularly a complex company with a high variation of products or services.

One item you will not find discussed in great detail is management culture and that is because I did not need to convince top management to change their culture in the direction of lean management. I came into the business with strong beliefs and experiences in lean. Often the more difficult part of these transformations is getting the top managers to lead by example; however, since these principals were already deeply ingrained in my style, it made the transformation much easier.

My purpose was not to implement the Toyota Production System (or lean principles) but instead to grow the business as a more profitable organization utilizing these tools. I did not explain or sell each idea to the employees as a "lean principle"; I merely implemented lean philosophies in their simplest and most logical fashion. Following a simple implementation method I began to learn while working with Toyota, a method known as OSKKK (Observe, Standardize, Kaizen Flow & Process, Kaizen Equipment, and Kaizen Layout), I was able to apply the steps in my transformation although outside influences periodically changed the order in which they were implemented. The OSKKK method was really reinforced later while I was working with Delphi Automotive during a period in which they utilized Mr. Yamada, a former Toyota production control manager, to lead and teach them continuous improvement.

Keep in mind that two things were taking place during this period in the business's history:

- I was trying to learn all aspects of the business so it could be managed successfully.
- I was implementing a lean transformation only after understanding basic aspects of the business.

It is critical to keep these things in mind because in the beginning a manager must patiently learn before he or she can successfully guide the improvements. Many managers overlook the importance of having an understanding of the tasks before trying to implement improvements. OSKKK is a methodology that helps both in learning the business and in guiding a lean transformation. All the improvements really come together as a system, and cherry-picking can lead to suboptimization—it will not maximize profits nor create a coherent business. If you require a simple, overriding transformation strategy, then I recommend OSKKK.

Most business owners have acquired experience in the industry prior to becoming owners or managers. Few assume that "lean" alone could be the answer to making that jump from employee to employer; however, the following account dispels this idea by showing that lean by itself (with its relationship to the customer's desires) goes a long way toward running a company and increasing its profitability. It also demonstrates that lean principles are applicable in a made-to-order or job-shop business.

ABOUT THE BOOK

It has been several years since I sold the business and I tell the story as well as my memory permits. Naturally, some experiences live in great detail in my mind while others are a bit foggy.

Shortly after buying the business, I was contacted about providing additional support in my former employer's lean transformation and I quickly learned that relating my own transformation experiences could benefit others. I started keeping some specific notes, which enhance the accuracy of this book. Over the years, I have often found that relating these real-life experiences has helped those wishing to better come to terms with making their own improvements. There was nothing easy about my experiences, but having a plan and sound, simple, and proven principles that I believed in proved to be a winning combination.

Although I named the chapters according to the overriding theme during each phase, the book is written chronologically; therefore, some points begin in a chapter and are developed in further detail later.

To help you in relating to my planned implementation steps and the tools I was focusing on, I have included "lean principle" boxes and "key points" highlighted throughout the text, and lessons learned at the end of each chapter. The appendices also contain examples of how I worked through some of these lean elements, and Appendix L captures what finally ended up being my implementation sequence.

This is not a technical book and it does not play "lean bingo" by throwing a lot of acronyms at you to try and impress. However, I do often use a few unique terms that are worth clarifying at this point:

- *Tribal knowledge* is when unique knowledge (e.g., the steps to complete a process, or some technical knowledge) is kept and managed inside someone's head instead of being generally agreed-to and documented.
- *CNC—Computer Numerical Control*—is a system that reads G-code and M-code commands and drives a machine tool (in this case, three- and four-axis machines for cutting metal and other materials).
- *TPS—Toyota Production System*—is Toyota's famous production system that I learned and used as the basis for improving my business though I did not continuously mention it by name or utilize much of its terminology during the transformation.
- *PDCA—Plan, Do, Check, Act*; also known as "management by fact"—creates a process-centered environment that continuously follows a loop that involves (1) studying the current situation, collecting and analyzing the data to identify causes of problems, and then planning for improvement (Plan); (2) implementing the plan (Do); (3) monitoring to determine whether it's successful (Check); and (4) implementing a permanent solution (Act).
- The List is a simple method to gather data and speak with the facts. Normally, an employee keeps a simple data sheet in the work place for a few weeks or months and records the occurrences (i.e., insert artwork).

As far as I know, I am the only lean practitioner who has purchased and managed his own manufacturing company armed only with "lean experience." I hope these simple fundamentals can inspire you to formulate a method to drive continuous improvement in your business. My experiences proved beyond a doubt that lean principles will lead to successful business management even in low-volume, high-mix companies. Waste can be found and eliminated in most processes if you have "eyes for waste" and the conviction and methods to minimize it. I think my experiences can highlight and simplify this.

Prologue: The Purchase

It was 1997 when I became serious about buying my own business. I was working for Delphi Automotive (owned by General Motors at the time, but later separated from GM and became a publicly owned corporation). I was Delphi Interior's manager/sensei of international lean production implementation. I had just returned to the United States from Zurich, Switzerland, where I had worked for about four years, directing and implementing lean all over Europe in GM's Opel brand car and component plants. I was in my early thirties and—at GM's highest management level—I was on the fast track to being made a director and entering the "executive" rank.

I was not frustrated by my job nor did I feel like I was stuck in a dead end; it was quite the opposite. I was convinced that once I settled into the perks of executive life, I would likely start to thrive on the responsibility, the respect, and those wonderful benefits that came with it. But, I had started to get the itch to try something on my own, and advancement at Delphi would likely lead to putting aside my entrepreneurial desires. I also figured that since I had arrived at this point *once* in my career, I could do it again—assuming that corporate America would consider a career interruption as an acceptable diversion and would provide me another chance to rejoin the ranks if things did not work out.

Being single and having no debt, I figured this was a great time to scratch that entrepreneurial itch and give it a try. In retrospect, it is funny that the only person I knew who did something similar was my father, though he did it at a much later stage in his life. His decision carried a lot more risk, like having the responsibility of a family and the realization that, if things did not work out, it might be difficult to return to corporate life.

Being a "company man" my entire career, I was not even sure I knew how to spell "entrepreneur," let alone grasp what it took to become one. With my life savings in hand and a very specialized lean production background from Toyota, I started by purchasing my first copy of *Entrepreneur* magazine. I found that, other than articles written by successful entrepreneurs, the magazine I purchased contained many ads to buy into franchises. The franchises were mostly in the service or food industry, which did fit my vision of owning an existing business that manufactured a product. If asked "Why not start your own business instead of buying an existing one?" my answer was simple: I had no ideas for a new business. Instead, I had "Kaizen eyes" and felt very comfortable identifying waste, especially in manufacturing environments. So, why not buy a going concern and improve it? My undergraduate degree was in mechanical engineering, so acquiring a company that involved a technical product was desirable.

After *Entrepreneur* magazine did not pan out, I moved into looking through the "business for sale" section of local newspapers in northern California, my target area. I also enlisted some business brokers—the equivalent of real estate agents except they sell existing businesses.

Obviously, the biggest limitation I faced was price. My savings totaled $200K after selling my home—actually, my boat, which I had lived on for four years before moving to Switzerland to work for GM. In reality, I might have had more money to work with had I previously owned a home, which would have appreciated in value, instead of a boat, which continuously depreciates.* On top of my $200K, my father was also willing to invest a bit and act as an advisor. Between us, there was about $200K to invest directly, and another $75K in cash to operate for a month or so until some of the receivables could be collected.

Certain banks work with the SBA (Small Business Administration) to partially underwrite business loans if certain criteria are met. The criteria were not difficult and I qualified under SBA's terms. After finding a business, I also had to qualify under the bank's terms for financing.† I learned most banks working with the SBA like to see an applicant put in about 30 percent as a down payment, so I figured I could borrow between $400K and $500K.

With my criteria for choosing a business loosely defined as an existing manufacturing business that was located somewhere in California and did not cost more than $700K (and obviously, there were also profitability and longevity conditions), I intensified my search. Whether searching for a business through a broker or a newspaper/magazine, the

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* Living on a boat was another experience that I had to get out of my system. I do not regret it at all; quite the contrary, it was a great experience. However, one saying still sticks in my mind: "The two happiest days for a boat owner are the day you buy it and the day you sell it."

† By the way, what a great deal for the banks: they were charging over 11 percent interest at the time. And, whatever risk the U.S. government's SBA program was not underwriting, the applicant was asked to sign for personally—you know the drill: your firstborn and anything else you might own.

first steps are similar: The potential buyer starts by signing a boilerplate non-disclosure contract and requesting some simple financial information. The information can vary greatly but often the first glance could include a P&L (profit and loss statement) and a balance sheet going back five years. If a broker is involved, the buyer will receive more prepared-in-advance financial information along with a write-up about the company and generally better-prepared marketing materials. At this point, the name of the company is not disclosed to the potential buyer and the seller is usually keeping the sale secret from customers and employees. Normally, as the buyer takes further steps, the seller discloses more financial information, provides copies of tax returns, and usually allows an after-hours visit of the company.

Two businesses that I considered at the time were a boat manufacturer and a coffin manufacturer. Boat manufacturing was exciting to think about because my hobbies include sailing, motor boating, and waterskiing. Plus, the boat manufacturer was located in California. However, the business had been for sale for a number of years and, at first glance, the financials looked shaky and the questions I asked about the product and market received very vague answers. That was enough to scare off someone like me because I was putting everything on the line.

The coffin manufacturer was a little different. The financials looked OK but the products were sold through a network of distributors. I learned about a problem between the company and the network that resulted in the manufacturer being blackballed. It wasn't just luck that led me to discover this problem: I remember that a recent sales decline had caused me to investigate further and uncover this information. Honestly, I was also having a hard time imagining myself manufacturing coffins. In addition to the product being a bit depressing, I imagined that, as the owner, I might find myself wishing for a local war or an epidemic to help increase sales.

A last potential worth mentioning that I became serious about was a machine tooling shop that reconditioned machine-cutting tools for airplane manufacturers. It was located in Southern California and, although not my first choice in locations, it had the type of production flow that I liked and it seemed lean improvements would be quite applicable. The numbers looked good and the owner, who had started the firm some twenty years prior, was ready to retire. The fly in the ointment was that one customer—although long-standing—accounted for over 70 percent of the business. This was a red flag.

I went through the preliminary due diligence steps that led up to my father and I flying down to Southern California to look at the business and get a better understanding. Prior to a site visit, a potential buyer is usually required to provide background information and show that the financial resources are in line with the required down payment. I guess I passed that test.

The tour of the business looked good. My Kaizen eyes identified a host of opportunities even though I was walking through after hours and no production was taking place. I had a good feeling about the owner, who seemed honest and straightforward. At this point, I also saw tax returns and more detailed financials, which I trusted at face value. Naturally, the business broker representing the business was in attendance and he couldn't help but point out all the positive aspects and how, with a few changes, the new owner could really grow the business. However, I came away with another big concern: The owner's ethnicity qualified him as a minority. Normally, this would not be a concern; however, upon further research I found that airplane manufacturers were under pressure to reach a quota for using minority-owned subcontractors and suppliers and the business's largest customer was borderline on reaching its quota. Not being a member of a minority, and knowing that the business could not survive if this customer went elsewhere, I decided this was not for me.

About the time I was reaching my decision, the owner was completing his financial statements for the previous year and was so impressed by his increased profitability that he decided on a drastic price increase. Many methods have been developed and entire books written on how to determine a fair selling price for a business. The three most typical methods are valuations based on market, assets, or earnings (or some combination of these). I had chosen to use only an earnings-based valuation, for which there are many suggestions of multipliers to use. After some research and many discussions, my father and I decided to use a multiplier of 3x EBIT (earnings before interest and taxes). We based this on an average of the previous three to five years of financial statements (i.e., fair sales price equals three times the three-to-five-year average EBIT). However, the owner of the airplane tool remanufacturing business had changed the asking price to something like 6x EBIT.

I never monitored any of the businesses I passed up to see how they fared. In reality, the only checking up I could do would be to call and see whether they were still in business, and I probably could have found the current owner's name (or the current corporation's name) in public records. But, I was too busy with the company I purchased.

Enough about what didn't come to be.

Sometime later in 1997, after close to a year of searching, I found the one I went after and finally got. Actually, I had come across it about six months earlier, but the price was out of sight at that time. I was reviewing so many Internet sites and had put the word out to so many business brokers that I don't remember whether this particular broker contacted me when the price fell into my range, or I noticed the price change on the broker's Web site.

What I found was a machine shop that manufactured parts for the semiconductor equipment industry. This industry is extremely volatile and cyclical not only because of the changes in demand by the end customer but also because of spikes in demand as new technologies are developed—and once everyone has the latest, all will go quiet again. Despite the nature of the semiconductor equipment industry, this machine shop, located in the Bay Area of northern California, had survived many of the big downturns even though only a small percentage of its business volume came from outside the industry.

A majority of development in chip-etching machine technology was taking place in the Bay Area during this period, but because of California's higher manufacturing costs, there was always the threat that any significant volume would be moved elsewhere (including offshore) and new local suppliers established. There were many similar businesses in the Bay Area because of all the development and small lot production work available. But, this one stood out because of its longevity and profitability. It had been a going concern for about eighteen years, originally started by two partners working from a garage. After a year or two, one partner had bought out the other. The primary customers were based in the semiconductor equipment industry, which basically produces the multimillion-dollar machines to etch silicon wafers to be utilized as computer chips for the likes of Intel and Hewlett Packard.

The business was small (under ten people) but looked manageable. The owner was basically a self-taught businessman with no formal education. He had some machining experience prior to starting the business and basically started with a machine or two in a garage. Although I had never even taken a machining class in high school, I figured it was a good fit with my degree in mechanical engineering and an MBA to help on the business end. Also, I am quite a handy guy and enjoy working with my hands.

Topping all of that, I thought of my lean background and my training from Toyota. Having helped others in making significant improvements to their businesses, why couldn't I do it for myself?

Although most of my training and support up to that point had been with higher-volume businesses that had a smaller variation of part numbers, I figured the principles had to be applicable in a job-shop environment. Naturally, when the time came to walk the flow through the shop and office processes, I noted many opportunities for improvements. Like many businesses, everything was learned in-house and based on experience or tribal knowledge, and without any lean experience, there were few established processes in place and plenty of room for productivity improvements.

I wasn't completely naïve to the fact that since I had no experience with machining, and especially CNC (Computer Numerical Control) machining, I was taking a gigantic risk. But, as everybody says during an interview, I am a "quick learner," and I tried to analyze the local machining industry and the semiconductor equipment market, and then I attempted to figure out how I could grow the business. Naturally, near the top of my list were goals like diversifying my customer base away from its strong dependency on the cyclical semiconductor equipment market. I also realized that the competition can be stiff in any industry where the cost of entry is not exceptionally high. However, the skill/knowledge level required for CNC machining, especially certain complex parts, is impressive, which narrowed the field of competition a bit. Also, some simple research made it clear that few of these small businesses had any lean knowledge or implementation.

So, after a lot of back and forth on price and terms, an agreement was reached, a contract drawn up, and a closing date set. Typically, the terms of sale are drawn up by a lawyer representing either the buyer or seller. I am not sure which is more traditional, but in my case I hired a lawyer to write the contract. The seller then had a lawyer review the contract and the other documents prior to signing.

Typically the terms of the sale included a provision for the seller to stay on for a month or more after the closing to help run the business and train the new owner or employees. We set this transition for a longer period—a total of six weeks—as I had never operated a conventional metal-working machine, let alone a CNC machining center. I had also asked to be allowed to hang around before the closing date to learn the business, but the seller did not want me on-site. I assumed this is frequently the case, as nothing's ever sure until "the money is in the bank," and until things were set in stone, my presence might only cause anxiety among the employees.

Next, it was time to secure financing. After soliciting some of the banks that were "SBA (Small Business Administration) approved lenders," I applied at two of them. Naturally, they were not only concerned that I had the down payment but they also wanted to see a résumé to understand how my skill sets might apply toward running a technical business. In many ways, you can compare some of the mechanics I was going through to those of purchasing a home. However, you must remember that most of the purchase price of an established business is in its goodwill, and that can disappear mighty fast if you upset a major customer or do not have the skill sets to drive the business forward. Whereas homes have a market value that is normally appraised near the purchase price, the value of a business is determined by various financial ratios, mainly its profitability. As I explained, I was valuing businesses based on their earnings and was willing to pay about three times the EBIT averaged over the previous three to five years. Naturally, many other factors contributed to the viability of the business as an ongoing enterprise. But, this helped to determine a fair price and, this time, the owner had dropped the price to 3.5x EBIT and further negotiations got him to about 3x EBIT.

Of the two banks to which I applied and received approval, I chose between the lesser of the evils based on their exorbitant interest rates and terms. I went to that traditional meeting where the banker sits behind the desk playing God and acting as if you are about to be bestowed with a great favor. After convincing the banker (who knew nothing about manufacturing, let alone machining) that I knew more than he did, and committing myself to make it work or lose everything I owned (a really compelling motivation), he graciously approved the loan on a five-year term at just over 11 percent interest. That probably makes most people feel just a bit better about their mortgage payment. I was also required to purchase a very expensive life insurance policy (sold through the bank, of course, at what I assume provided them a healthy commission) to cover any outstanding value on the loan in the event of my early demise. They really know how to cover every eventuality.

A whole host of other activities must be completed before the closing, one of which was the legal process of incorporating. At the closing, the corporation I set up bought the business assets and rights and the business name from the seller's corporation. Any lawyer will tell you that this at least affords a buyer some personal protection because the legal entity purchases the business and assumes all the liabilities. In my case, the previous owner's corporate name was different than the name of the business he was selling ("doing business as" or d/b/a). So, my recently incorporated corporation was able to take over the existing operating name the former corporation had used as a "d/b/a" for the last 18 years. After all, the "goodwill" is a big part of what justifies paying the asking price, since only taking into account the asset values would make many companies worth a lot less.

The actual closing is similar to that of buying a home except you seem to sign about double the amount of documents, if you can imagine that. Closing day for this purchase was set for Friday afternoon, and I had asked the seller to plan overtime for Saturday for two reasons: (1) although a seller may try to move as much volume through the door to maximize profits before turning the business over, there was still a backlog, and (2) as the new owner, I would need to know some important things right away, like how to unlock the doors, turn on the lights, and make the coffee. Sounds like I had set myself up for a stressful first day.

Since the purpose of this book is to tell my story of a lean guy buying a business and utilizing lean manufacturing methods to grow it profitably, and it is not a "how-to" guide for purchasing a business, I think this is enough background on the purchase. I did not highlight any of the lessons learned, as nothing pertained to improving an ongoing business. I just felt it may be interesting for you to know how it all got started. I also believe there are much more sophisticated methodologies for evaluating and purchasing a business, as there are many books written on the subject. Therefore, I would not necessarily recommend following the way I went through it.

1

The Beginning Observation and Documentation

1.1 INTRODUCTION

It was Saturday morning, day one of owning and operating my first business and I had bought donuts to encourage a little team building. I was staying at my brother's house while looking for my own place and, on my way out the door that morning, my brother asked whether the donuts were in lieu of a 401K plan for the employees. I guess they were, in a manner of speaking.

I think at the time there were four or five employees in the shop and two in the office plus the owner who functioned as the manager. The business grew from this point although, due to the cyclical nature of the industry, it periodically fluctuated in the number of employees.

Those of you hoping to make analogies between this business and yours might be thinking that because you are part of much larger organizations, you therefore have much more complex considerations, politics, and corporate cultures to get past and will not gain sufficient insights from the experiences I am sharing. Having worked for two large companies—General Motors and Toyota—and then owning my own small business, I can assure you that most of the simple principles that I implemented are applicable to your situation. The question is how to cut through the red tape, bureaucracy, fears, and personalities involved in larger organizations to get some of these things done. In most large companies, people will offer their theories on why change is so difficult, why there is so much resistance to change, even when new management is brought in to drive this change. Spending more than fifteen years helping mostly large and medium-sized organizations with their lean transformations, I agree that the complications, politics, and culture must be addressed in the plan but the overall steps remain the same. By reading about my experience, you are sure to pick up on many improvement ideas along with proven methodologies to gain buy-in, thereby convincing the organization. However, I had one very large advantage you or your organization might lack; I am a true believer in lean and that can be a difficult conviction to acquire.

Throughout this book, I have included highlighted text featuring the "lean principles" that I focused on at the time, and I have further enhanced the discussion with "key points" which are also displayed in italics. As a business owner, my purpose was not explicitly to implement lean methods but instead to increase the business's profitability. Rather than turning the employees into lean experts, I wanted to sell the ideas to them as simple and logical steps to secure our longevity ("job security"). I assure you, many of the basics I put in place in my own company are either absent or not truly supported in other organizations, but overcoming the issues introduced by the size, bureaucracy, and personalities in various organizations is not impossible. What is required is a similar simplistic approach and an unwavering belief in continuous improvement.

1.2 OBSERVING

With only a six-week training period to learn an entire business of which I knew nothing, I went in that first Saturday morning with a plan. I was going to follow an idea I learned at Toyota known as OSKKK (Observe, Standardize, Kaizen Flow & Process, Kaizen Equipment, and Kaizen Layout; a detailed breakdown of OSKKK is shown in Appendix A) to guide my learning of the business as well as for structuring the lean transformation. I figured I would follow this sequence of steps as closely as I could. And since I needed to learn the various processes, not only as a basis for improvement but as a necessity to manage the business, this would keep me from randomly jumping in with specific improvement ideas. The beauty of OSKKK as a method of improvement is that it also closely follows the conventional wisdom that, when taking over a new position, you first observe and understand the business and its environment before implementing changes.

The week before I took over, I had written down all the likely titles for the administrative and shop-floor tasks in this type of business. For the office side, I broke them down into sections like order entry, purchasing raw materials, subcontracting, invoicing, closing the books, etc. For the shop, I had grouped items like material preparation, setting up and changing over a machine, programming, scheduling, manual machining, quality checks, instrument calibrations, and many more. I organized a three-ring binder according to these categories and figured I would gather the information as I encountered it.

Basically, I planned to learn the business from the ground up. This entailed hands-on learning for each task by going to where the work was done and the value was being added. This is often referred to as going to Gemba. Naturally, I had put myself on the fast track with only six weeks to accomplish this. Realistically, I knew I could not decide the timing of learning a particular task—that would be dictated by the demands of an ongoing business—but the three-ring binder would help guide me, ensuring I did not miss anything that I felt was important. So, I would go with the flow and learn quickly, observing and documenting.

Lean principle: *In the lean world, going to where the work is done (or where the value is added) to learn about the process before making improvements or decisions is known as Gemba. At Toyota, new employees, regardless of level, normally start their employment with hands-on learning of tasks within their areas of responsibility.*

For the time being, I was planning to keep all the employees; therefore, I did not need to immediately learn the details of every job. But, I had to determine which things the former owner/manager did by himself and quickly become competent in them. One advantage was that I had purchased the business in the middle of the month, so the six-week training period spanned the end of the next two months. This meant that I could twice observe the end-of-month process of closing the books.

When I arrived that first Saturday morning at 5:55 a.m., the now-former owner, Bob, and the shop foreman, Tom, were already hard at work. Two