Office Lean

Understanding and Implementing Flow in a Professional and Administrative Environment

Office Lean

Understanding and Implementing Flow in a Professional and Administrative Environment

Ken Eakin

Routledge
Taylor & Francis Group
A PRODUCTIVITY PRESS BOOK

First edition published in 2020

by Routledge/Productivity Press
52 Vanderbilt Avenue, 11th Floor New York, NY 10017
2 Park Square, Milton Park, Abingdon, Oxon OX14 4RN, UK

Routledge/Productivity Press is an imprint of Taylor & Francis Group, an Informa business

No claim to original U.S. Government works

Printed on acid-free paper

International Standard Book Number-13: 978-0-367-19665-3 (Hardback)
International Standard Book Number-13: 978-0-367-19664-6 (Paperback)
International Standard Book Number-13: 978-0-429-20381-7 (eBook)

Visit the Taylor & Francis Web site at
http://www.taylorandfrancis.com

Contents

Preface: Caring for People

I started my professional career in an entry-level job in the glamorous world of container shipping. Having avoided the real world during most of my twenties with unprofitable adventures like earning a graduate degree in film theory in Wisconsin or trying my hand at being a photojournalist in South America, I finally had the desire to settle down and purchase furniture. I took a job as documentation clerk in the local offices of a large, international container shipping firm. I typed out bills of lading for exporters in a "green screen" software program on big, chunky computer terminals. Noticing that I could spell the names of faraway ports like Nhava Sheva or Tanjung Pelepas, management soon promoted me to being an Export Customer Service Representative.

I soon found out that I had been right all along in avoiding the reality of full-time work for all those years. I felt like I was working at the lost luggage counter at the airport: the only time a customer would contact us was when they were angry. Something had gone wrong and they needed me to fix it. If they were simply placing a booking or submitting documentation, they did so via email or fax (this was the early 2000s). But if they needed a problem fixed right away, they wanted a real-live human being to abuse verbally. I was one of the unlucky few whose job it was to pick up the phone, absorb their rage, and then try to find a mutually agreeable solution with them.

The shipping industry's main goal was to fill its ships with paying cargo. Thinking in economies of scale, the shipping lines kept building bigger and bigger ships with the rationale that the cost per container would go down the more they could put on the same ship. As soon as one giant shipping line announced plans to build the world's then-biggest ship, another competing line would, a year later, build one just a little bigger. Currently the biggest ships are as long as four football fields and can carry the equivalent of

over 19,000 20-foot containers. This problem is, this "bigger-is-cheaper" logic only works if there are enough paying customers to fill every voyage.

The worst thing you could hear around the office was that a ship sailed "light". As a result we, like every other shipping line, regularly overbooked our ships to ensure they were fully utilized at sailing time. Customers, predictably, would place "buffer" bookings with more than one carrier, and then choose which one to go with based on which was cheapest or most conveniently scheduled. It was a vicious circle of mistrust for everyone involved.

The industry, like global trade, goes through boom and bust cycles. During my 13 years in the industry, I saw both sides of these cycles a couple times. In boom times, the lines charge high prices and leave a lot of cargo on the dock due to overbooking. In bust times, they drop their prices to nearly nothing. Even if the customer pays $1 to ship a container of lumber to Hong Kong, it is $1 more to offset the cost of financing the $300 million ship carrying it. It is $1 more not lost to the competition and one less empty space on the ship. Nonetheless, the low prices were not sustainable. The layoffs inevitably arrived. And then the offshoring of operations. Hiring and salary freezes. Those still left in the office started rationing the post-it notes.

Customer service had the delightful job of telling customers that we "rolled" their booking to next week—meaning that we cut it from this week's sailing. I remember hearing: "F---ing [name of my employer]! You guys are the worst … the absolute *worst*!"; "You guys totally *suck*! I need you to get that container on that ship NOW or I'm gonna call up _____ [name of sales person or CEO] and have you fired!"; "You can't do this to me. You're killing me. How can you do this to me? You really want to kill me like this? You know what my customer's gonna do to me when he hears this? You better get that container on that ship TODAY or I'll come over there and beat you with a baseball bat!"; or the all-time favorite: "Let me speak to your supervisor!"

After a few years as a customer service representative, I was promoted to that supervisor. When the calls got really ugly, they were all escalated to me.

> *Unfortunately, sir, there is no alternative ship we can put your cargo on.*
>
> *I'm so sorry, but the only other departure to Dubai this week would have to transship in Melbourne, Australia, and that has a transit time that is, at minimum, three weeks longer than if we wait until next week's sailing.*

> *I agree it's totally unfair. No, I am not trying to give you a heart attack. Still, I'm afraid we can't airfreight your 350 tons of steel to Kuala Lumpur. I truly wish there were something more we could do. Sir, if you'd like me to continue to help you, please do not threaten my staff with violence.*

This was my job for five years. I appeased angry customers as best I could, even though I could offer them nothing in compensation for our company having screwed up their shipments in its desire to fully utilize their ships. My staff and I were told how bad our company was so many times a day that it was hard to feel proud of who we worked for and what we were doing. We were all deeply demoralized. We worked hard and really cared about our customers, but it is hard to constantly offer "service with a smile" when you are being cursed at all day, and are essentially powerless to help customers. Leadership would complain (behind our backs) about our sullen attitudes, and, to our faces, encourage us with empty boosterism about being more upbeat and cheerful. They believed this was motivating. I found myself working long hours, only being able to turn my attention to the unread emails once the phones stopped ringing around 5 or 6 pm. I frequently stayed until 7 or 8 pm. One of the unfortunate things about working in an international business like shipping is that the emails from overseas would start pouring in just as the domestic ones subsided. It is a 24/7/365 business.

Our company's operations were almost as bad as our customers said they were. I do not think any of our competitors were any better, but that did not exactly make us good. We had archaic and inflexible IT systems that often caused operational nightmares when they did not interface correctly with the port's IT systems. Our transshipment hubs were frequently congested, and containers would sit for weeks with no notification from anyone. We had to track and babysit our customers' shipments as they moved around the world because the company could not provide such a service (at that time) in any reliable electronic way. No one in any of our 125+ offices around the world seemed to care about anyone's cargo but that of their own domestic customers (just as we did not really care about theirs). The global operations machine that was our company was not about caring for customers. It was about filling ships up with steel boxes to make profits or, at least, minimize loses.

When we were not being abused on the phone, we would send frantic and urgent emails across all sorts of time zones in hastily written

English—and English was our *first* language, at least for many of us. English as a second language and cultural differences in our overseas offices exacerbated email communications. Sometimes we would make phone calls in the middle of the night asking transshipment ports to please not overlook our customers' most urgent containers in Manzanillo, Singapore, or Rotterdam. There was rarely a dull moment. We always had some issue going on with customs holds, rail delays, container shortages, stormy weather at seas, longshoremen's strikes, trucker shortages, port congestion, plagues of locusts (seriously, they can shut down ports in West Africa), trade sanctions, and the like.

As more and more functions were offshored in the early 2000s, it took longer for customers to reach customer service, in large part because the "front office" was substantially reduced in number to realize the "savings" of offshoring. Offshoring turned the front office customer service into the middleman. Imagine wanting to hold a conversation with Person A, but, instead of being able to speak directly to Person A, you can only ask Person B to write down what you want to say and then Person B would hand the written note to Person A on your behalf. Person A would then, after a few days, misinterpret your note, dictate a nonsensical series of clarifying questions back to Person B, who would then tell you that, while a response from Person A was received, it was full of questions and would need to be clarified before giving you an answer at some indeterminate time in the future. Now multiply that by thousands of customers wanting to talk to customer service at the same time and you have an idea of how effectively offshoring worked for customers.

Work friendships with my colleagues were what made work bearable. Another good thing about working in the shipping industry was that there were many repeat customers. You could build a relationship with them. I came to know many of our regular customers quite well. Once I had built some trusting relationships, they did not get quite as mad at me. Some of them came to understand that we were trying our best, even when the Byzantine system of the shipping business did not work in their favor. And I genuinely wanted to help them. We all did. We just felt powerless.

It was not realistic to think we could influence dock workers in Algeciras or Dar es Salaam to prioritize our customers' containers, but what really annoyed me was how the overbooking practice was, ostensibly, within our control. The trade and marketing team was right down the hall, and yet there was extraordinarily little teamwork between them and customer service. The trade and marketing team sat closer to the President's office, were

more highly paid, and generally regarded customer service and operational logistics employees as lowly order takers. (We were, in fact, very creative problem solvers).

The typical service cycle that customers went through was that sales people would promise them the moon and the trade analysts would overbook the ship. When the customers were informed by customer service that their bookings were cut and their containers were sitting on the dock rather than onboard a ship, they would call up their salesperson in anger: "you promised me that I would be guaranteed to load that ship!" and the salesperson would say something to the effect of, "oh, I'm really sorry to hear that. You'll have to speak to customer service to get that fixed. They must have screwed up the load list again. I'll put you through to our export supervisor." And my phone would ring again.

At management meetings the salespeople would complain how many calls they had to handle from customers who were upset about operational issues. It was not *their* job to handle the menial and shabby operational issues. Why couldn't our customer service people simply get their act together and handle these calls? It was taking time away from their noble selling activities!

When I got a chance to become a Process Improvement Manager in 2006, I jumped at it. Here was my chance to make things better! Better for our employees; better for our customers; and better for the company! I was incredibly naïve about what sort of real change I could really bring about, as one individual up against the entrenched culture of the container shipping business, but I was super passionate and willing to try. We did have some local successes. We shortened lead times for documentation, created better inventory management, and automated a lot of manual, tedious work that customer service reps were doing.

I have since lost my naïveté but still have the passion to improve the working lives of people. My process improvement journey started with wanting to help our customers, as well as the terribly underappreciated customer service agents who took all the blame and were powerless to do much about it. I continue to believe that my work's purpose is primarily to help people. It has never been about cutting jobs. Lean, to me, is (and always will be) about ending the suffering that our dysfunctional management systems are creating. It is about wanting to make work better for people, *all* people.

Acknowledgments

First and foremost I need to thank François Villeneuve, who gave so much of his time to read the manuscript and provide honest, direct feedback. Thank you to Joe D'Appollonio and Mona Draper for starting me on the LSS journey. Ken Miller inspired me to write a book and Kathryn Ross encouraged me to approach CRC Press. Additionally, Marcel Schneider, Michelle Huang, and Jacob Stoller gave me some very valuable feedback on early drafts.

EDC has provided me a great place to work, learn, and improve myself over the last five years. The amazing people I get to work with every day provided a real-world laboratory for testing out many of my ideas. There are too many people at EDC to thank individually, but I do want to call out Ken Kember and his staff in the Finance and Technology group: Marsha Acott, Sue Love, Stephano Carrera, and Marc Gervais, all of whom treated me with the utmost respect and kindness, even when I was expounding at length about all sorts of abstract Lean concepts. (Even better, they actually tried some of them!). Kevin Harris, Ken Shulha, Jason Bedard, Dave Rowsell, and Dan Mancuso all generously reviewed some chapters. A special thanks is also due to Scott Powell and the OpEx team—I learned a lot from my colleagues Sue, Elaine, Sassan, Sarah, Bern, Adam, Joe, Sylvie, Allison, Mike, Hafsa, Sharon, Dominique, and the many, many others in the wider Lean/Agile/BPM community at EDC. If it had not been for Scott and EDC, I would not have had the opportunity to learn from great Lean practitioners and thinkers like Jake Raymer, Mike Stoecklein, Mike Orzen, Tracey and Ernie Richardson, Richard Sheridan, and Tim Healey.

Craig Szelestowski is owed a special shout out for providing great conversations, insights, and the opportunity to hone my thinking and public speaking at conferences.

Finally thanks to my wife, Janie, and our two beautiful children who endured long periods of my being a somewhat absentee husband and father while I wrote on nights and weekends. My first priority is now to make it up to them with as much of my time and love as I can.

Author

Ken Eakin is currently a Senior Advisor of Operational Excellence at Export Development Canada (EDC), a government-owned export credit agency that is self-financing and operates on commercial principles. Based in Ottawa, Ken has been a Lean coach to leaders at all levels, including senior executives, in the areas of Lending, Insurance, Finance, IT, and Corporate Services. Prior to working at EDC, he worked as a Process Improvement Manager in the container shipping industry in Toronto, where he earned his certification as a Lean Six Sigma Black Belt. He holds an MA in Cinema Studies from the University of Wisconsin–Madison, and an MBA from the Rotman School of Business at the University of Toronto. He teaches a course on Lean to MBA students at the University of Ottawa's Telfer School of Management.

Introduction: We Don't Make Widgets

I was initially inspired to write this book back in 2015 when I was trying to explain the benefits of value stream[1] mapping as a means to finding and eliminating non-value–adding activities to a woman who is an investment portfolio manager. She sells bonds and commercial paper to raise funds for all of her corporation's short-term liabilities, primarily loan disbursements, but also all operating expenses and capital purchases. Her teammates also invest surplus cash in liquid financial instruments to maximize the use of idle cash. Their main job responsibility is to ensure the firm has enough cash or cash equivalents (in the right amount, at the right time, at a reasonable price, in the right currency) to cover all the company's obligations each day, without incurring the undue cost of carrying too much idle cash (a type of "inventory" in the banking world). Her daily tasks include monitoring market price fluctuations and cultivating favorable relationships with investment dealers who buy bonds and commercial paper. While she has no influence over market prices, she has to use her judgment on how much cash to raise, in what quantity and at what price. She also has influence over the "relationship" aspect of the job. But she feels it is fuzzy and intangible "thinking" work, not something that can be codified and standardized into explicit rules and standard procedures. She says to me, "Sure, this may work in manufacturing, but we don't make widgets around here."

What was a Leanster like me to say to that comment?[2] It turns out there is lots to say, but at the time I only spluttered out something to the effect that Lean concepts were "universal" and valid in any industry. She did not buy it. I moved her attention over to the whiteboard we were trying to design and dropped the value stream mapping subject.

As I ruminated over this afterward, I berated myself for not having a snappier and more convincing answer. I felt like I had let her down. I have encountered resistance (as all Lean practitioners have) to Lean ideas many times in over a dozen years of doing this kind of work in office environments, so I am hardly surprised each time skepticism comes to visit. But this incident made me realize that I believed too much in the benefits of Lean as an unexamined article of faith. I would become so caught up in explaining the tools and methods that I would too often lose sight of the fact that others do not share my degree of zealotry. I did not get why they did not "get it". So, I started to examine my faith in Lean, trying to understand why some people might not embrace it with quite the same enthusiasm I did. Maybe I am not explaining it right, I thought. This skepticism led me on a journey of learning that made me realize how counterintuitive some of Lean's fundamental concepts can be. Now I have written a book about it.

A number of exceptional companies all over the world have achieved amazing results (for their customers/patients, their investors, and their employees) by implementing Lean practices. Most of the big, enterprise-wide Lean success stories are in the manufacturing and healthcare sectors. Yet many of the local teams I have worked with in industries like financial services or transportation have also typically experienced real, meaningful, and measurable benefits like improved business performance, better customer satisfaction, and higher employee engagement.

So, while I was talking to the portfolio manager, it only seemed logical for me to believe, given my personal experience of having seen Lean's repeated success on the "frontlines" in many different teams and in different types of industries, that most frontline employees would want to embrace all this cool improvement stuff. I mean, who does not want to improve? *It is self-evident*, I had mistakenly assumed. *It should sell itself!* While I have come to expect some executives to be quite resistant to Lean, I had, in that moment, become so enthusiastic about its benefits that I had foolishly forgotten that sometimes the frontline employees will also resist it.

I am older and (perhaps) wiser now. Let's face it, Lean does not sell itself. Many people see Lean as some faddish Japanese thing, like Manga and Anime, and receive its zealous promoters with as much warmth as they do robocalls and door-to-door salespeople.

The so-called "white-collar" professions, based in offices and producing only intangibles like money and information, perhaps resist it most of all because there are no stellar benchmark Lean companies to point to, unlike the way manufacturing can point to Toyota and healthcare can

point to ThedaCare. Yes, there are plenty of good success stories in teams or even entire departments of many service/office companies (particularly smaller, entrepreneurial IT firms). There are plenty of inspiring anecdotes and blog postings. Yet without any industry-leading benchmarks to point to, many employees and leaders have concluded Lean is just another variant of a three-letter, flavor-of-the-month improvement program—Total Quality Management (TQM), Theory of Constraints (TOC), Just in Time (JIT), Business Process Reengineering (BPR), Business Process Management (BPM), Six Sigma, etc.

To make things even harder, Lean (and its three-lettered cousins) has acquired a bad reputation over the last 30 years or so of its existence because it has been used unscrupulously as a crude cost-cutting tool in many companies, causing many to say that "Lean is Mean" or that it stands for "**L**ess **E**mployees **A**re **N**eeded"[3]. It does not help that westerners tend to think of Japanese society as one where people work themselves to death[4]. While one could argue that this is not the "real" application of Lean, it is still guilty by association in the minds of those who have not yet experienced first-hand its transformative benefits.

Executives are also skeptical because they have seen these sorts of programs come and go before[5]. They know that if you throw a bunch of new tools and methods with enough enthusiasm into any area of a business, you are likely to get some gains . . . for a while. But does it stick? Does anyone like it? Does it really make a difference? Will it make me change my own behavior? Before jumping into the deep end, executives want some reassurance that Lean has produced real, bottom-line results, and, furthermore, not just at a couple of Japanese car companies, but at other companies just like theirs. After all, they do not make widgets.

The Lean community has the problem of not quite yet having the compelling evidence the skeptics are looking for when it comes to professional office/service work. There are plenty who are experimenting successfully with it. To name only a few: TD Ameritrade, Mass Mutual, Euroclear, Xerox Business Services, the State Government of Washington—have definitely moved it well beyond a superficial "flavor-of-the-month" status. A lot of major banks and insurance companies across the world have tried to deploy Lean in one way or another[6], especially after the financial crisis of 2008–2009 forced them to look at their operating models very differently. Many new and established firms (and even many government institutions) are now in a committed relationship with some aspects of Lean. Many call it "Agile" or "Lean Start-Up", which are essentially Lean ideas applied to new product

development. Some of these firms have achieved financial success, but it is hard to attribute Lean as the sole cause—in fact, it could be entirely coincidental, especially since Lean has only taken hold in pockets. None has yet to harness the full benefits of Lean at the enterprise level because almost all are still stuck in what Bob Emiliani calls the "Tool Age"[7]. That is, they are still overly focused on how the relatively superficial tools and methods can bring them short-term results, rather than on how deeper, principle-based behavior can ensure their success over the long-term.

The resistance and skepticism found in professional firms these days is the same kind of resistance and skepticism that Lean manufacturing faced in its early days as well. Yet some amazing and exceptional companies like Danaher, Wiremold, Lantech, and quite a few others overcame it, and continue to enjoy tremendous, undeniable success because of their Lean transformation[8]. So, what is holding back some exceptional professional, office-based firms from having the same breakthroughs?

Clearly, time is a factor. Deep Lean transformation of an entire organization is, by definition, not a quick fix—it takes many years, if not decades, to achieve and sustain Lean gains at a high level. Corporate culture generally takes a long time to change[9]. Even the revered Toyota—from whose business system[10] Lean is derived—started on their own journey in the 1950s and they did not perfect their business system in the first decade or two (in fact, they will tell you they are still perfecting it, and that it will never be perfect).

I am optimistic that time will not hold Lean back for very much longer in the professional world of work. The traditional model of management, a product of the industrial age, is struggling to adapt to the digital age. Mature, established companies in mature, established industries are discovering (often the hard way) that our digital age requires different management competencies and capabilities in order to thrive and succeed. Lean offers a progressive, humanistic alternative[11]. Amazon, one of the digital age's biggest financial success stories so far, is, in some ways, a Lean company[12]. In fact, all five of the most valuable firms in the world (by market capitalization, as of this writing)—Google (Alphabet), Microsoft, Apple, Facebook, and Amazon[13]—are all experiencing the benefits of Agile practices, which is basically Lean software development. And many smaller, tech-enabled firms like Netflix, Uber, Spotify, and Airbnb, to name just a few of the well-known ones, are doing the same thing[14]. As many more companies follow their lead, perhaps because consultants are making them scared of missing the "digital disruption" bus, Lean/Agile concepts are happily being introduced

into both small start-ups and large bureaucracies more widely and rapidly than ever before.

All of the firms outside of manufacturing and healthcare currently pursuing Lean/Agile are discovering, just as manufacturers pursuing Lean did in the 1990s and early 2000s, that *sustained* excellence requires more than the mechanical implementation of tools or blindly copying methods. Ask a seasoned Agilist, for instance, what it takes to sustain Agile at scale, and they will tell you that it is much, much more than a project management methodology—just like anyone who has been practicing Lean for more than a few years will tell you that it is much more than a set of operational tools to make the assembly line run better. Both Lean and Agile require a radical rethinking of management and value creation. It has to become a philosophy, a mindset, a set of principles that consistently guide thinking and behavior in the face of ever-changing business conditions and emerging technologies, at least if the enterprise is serious about sustaining it. But with so many embracing the technical (tool-based) aspects of Lean in the way they organize and deliver their work, it is probably just a matter of time before a company in the world of professional business will emerge to become the first great, fully-fledged, Toyota-level Lean benchmark for office-based businesses around the world.

A second, and more important, factor that is holding back those who think for a living (what is generally referred to as "knowledge work") from obtaining the full benefits of Lean, is that the concepts and methods have not been well-translated and adapted from their successful application in manufacturing into simple, relevant, and meaningful concepts for those who work in a professional office environment[15].

Since the vast majority of Lean success stories come from physical production environments (i.e. manufacturing), extracting the relevant lessons and then finding appropriately analogous situations in the intangible, electronic, and largely invisible environment of complex knowledge work is too steep a hill to climb for most. The mental gymnastics required to translate Lean practices from the factory floor into useful applications in an office are simply too demanding and time consuming for most professional workers.

Even if one leaves out the Japanese terms, consider the vocabulary found in most Lean books: scrap, defects, run ratios, takt times, tool calibration, the exchange of dies, scrap materials, pack-out quantities, inventory turns, safety and OSHA[16] incidents, shipping stocks, water spiders, hourly operators, and supermarket withdrawals. Lean articulates its financial benefits in terms of reducing inventory turns or reducing scrap and defects (including

returns) as percentage of sales. All of these terms, while perfectly meaningful in a manufacturing environment, mean absolutely *nothing* to professional office workers. Nor do more examples that involve activities like milling, stamping, painting, grinding, lathing, deburring, mitering, welding, painting, cutting, bending, washing, or assembling. Office workers just cannot relate to this language of work.

If you ask most Lean manufacturing pundits how Lean applies to the office, their go-to response might be that Lean principles are universal and apply to all types work, just as I had tried with the investment portfolio manager. The universality of the principles is true, but also completely impractical: people cannot take "universal principles" to the bank. They are just not specific enough. If its wider adoption beyond the factory is going to succeed, Lean's practicality matters. Lean has to convincingly promise to solve actual business problems that leaders can relate to if they are going to "buy-in" enough to try it. Lean has to use a vocabulary that is relevant to its audience, and, unfortunately, Lean has thus far limited its audience mostly to manufacturing and healthcare.

The poor translation of Lean into office contexts means there is a lot of misunderstanding about it—and humans do not generally want to do things that they do not understand[17]. Yet we can only truly understand Lean (or almost anything, for that matter) by learning through first-hand experience. In other words, we have to *do* it in order to understand it. But why would you even try it if you have never before experienced Lean's benefits, and neither have any of your industry peers, and, moreover, it seems hard to understand? Unfortunately, leaders too often resolve this chicken and egg dilemma by oversimplifying and "dumbing-down" Lean into something far more appealing but also far more akin to the status quo, thereby preordaining its lack of real impact to a company's culture or results. When the Lean "program" then yields disappointing outcomes, it causes everyone to conclude that Lean "can't work here", that it is only a "manufacturing" thing (or a "Japanese" thing), or that it was "poorly executed" by whichever suitable scapegoat was responsible for the Lean program[18].

The few books about Lean that do try to explain how it applies to office/service work often use too crude of a cut-and-paste approach, taking Lean manufacturing tools and methods from the "shop floor" and jamming them into the non-manufacturing world without much regard or appreciation for the complex and highly variable nature of the work that happens there (and the distinct professional culture that surrounds it). For instance, one very accomplished Lean author, whose thinking and writing I generally admire

a lot, in an article about applying a Lean tool (*kanban*, in this case) in an office environment, writes:

> Is office work that complex? The actual act of building a car and the act of ordering a car to be built cannot be compared. It is much easier to say something than to do it. Giving instructions is much easier than building a car[19].

So, immersed in (and enamored with) the car industry are the minds of many of the best Lean thinkers that conceptualizing office work requires them to invoke an analogy to automobile manufacturing. To make matters worse, there is an implicit assumption that all office work is comprised of simplistic and transactional data entry, electronically "giving instructions" to the shop floor to make something. Certainly, office work is *physically* easier than any sort of factory labor, but I cannot think of a surer way to alienate an audience of professional businesspeople than to say that the work they do is simpler than assembly line work.

While some of the existing "Lean Office" books have some very valuable teachings, they are almost all written by industrial engineers[20] who have worked most of their professional careers in manufacturing settings, and who have then gone on to apply Lean successfully in their factory's "back office", the very label suggesting that the work that happens in the office has a subordinate role to production operations (it is all just clerical order entry, right?). In these "back office of the factory" scenarios, the essential and difficult work of convincing senior leadership to embark on a Lean transformation in the first place had already been accomplished. The organization's Lean journey of struggle, resistance, fear, and setback, followed by periods of learning, discovery, and eventual progress was already over in the production area before the back-office implementation even began. Lucky for them. But what are the rest of us, without a shop floor or supportive executives or industrial engineers, to do?

This office-as-factory-extension approach diminishes the broader potential of Lean in two ways: 1. it misleadingly gives the impression that it is just a collection of tools that can be transplanted "as is" from the factory floor into any work environment, in any industry; and, 2. it largely avoids the topic of how Lean principles and systems can be used successfully to improve not only low-variation administrative work (i.e. repeatable tasks with shorter cycle times, like order entry), but also highly customized and variable knowledge work that frequently comprises the bulk of activities in today's professional offices.

I have come across very few books or articles that explain clearly and simply how to implement Lean successfully where the "production operations" of a company happen exclusively inside an office environment—i.e. where there has been no prior Lean transformation somewhere else within the company; where there are no tangible/visible raw materials or inventory; and where all the value-producing and revenue-generating "production" work is performed in cube farms, not on factory floors. Yet this is precisely how insurance, education, banking, law, PR, journalism, government, accounting, electronic media and entertainment, advertising, real-estate management, consulting, travel brokerage, software development, market research, telecommunications, and IT security firms—in short, most of the economy in the developed world—provide all or most of their value to their customers.

80% of US workers now work outside of the manufacturing and agriculture industries[21], and at least half of them work in an office (when you exclude healthcare, retail, and hospitality, 40% of the population works in the financial, professional, or business services, IT, real-estate management, education, or government sectors—i.e. the so-called "white-collar" professions). Manufacturing, it should come as no surprise, is in decline. Manufacturing used to provide 65% of all US jobs in 1965, and has, sadly, diminished to as low as 8% in 2014[22]. Even if the successful spread of Lean were to help manufacturing make a comeback in North America, it will likely not overtake office/service jobs' proportion of employment in OECD countries any time in the near future[23]. It seems important, then, given how strong a case there is for Lean's ability to increase prosperity and create value in our society, that the Lean community does more to help bring the full value of Lean to professional, office-based businesses. This book is a contribution toward that effort.

This book is divided into four parts. Part I sets the foundations. I explain the need for a more progressive management system in our bureaucracies. I explain how to distinguish traditional management and Lean management from one another, from a technical point of view, primarily through the way we think about efficiency. I assert that Lean management forces us to think about efficiency in terms of how a firm's operations or projects improve the flow of value to a customer. I also touch on the social or "people" side of Lean and how fixing work systems, not people or technology, is far more effective in bringing about positive, respectful Lean changes to one's office culture.

Part II explains the two fundamental design principles, continuity and balance, that help us design our work to achieve better flow.

These principles help frame problems and envision new and effective (but often counterintuitive) approaches to solving common organizational problems. I provide some real-life examples of implementing Lean practices in office environments in the areas of accounting, insurance, lending (commercial loans), and software development.

Part III gets into the structure and nature of problem solving and the (reviled and misunderstood) notion of standard work, two cornerstone practices of Lean thinking, and how flow both supports problem solving and standardization, but also depends on it. One particular problem that every company seems to want to solve these days is how to innovate with technology faster and better, especially now that larger, older firms are struggling to become "digital" lest they be "disrupted" by smaller and more nimble companies with better technology. I explain how Lean thinking can help us integrate digital technologies into our operations more effectively so that we can capture more customer value with them.

Part IV closes out the book with some new ways to think about leadership and strategy—topics which have been overly written about from a traditional management perspective. Lean can offer us a different perspective on our well-worn mental models. At the end of the book, I come back around to how vital and central caring about people is in a successful Lean enterprise.

Notes

1. See the Appendix for a definition of the term "value stream".
2. This was before I had discovered Ken Miller's excellent little book: Miller, Ken. 2013. *We Don't Make Widgets: Overcoming the Myths That Keep Government From Radically Improving*. Washington, DC: Governing Books.
3. See Dan Riley (aka Employee X)'s *Look Before You Lean* for an amusing diaristic account of an employee who had a bad experience with external consultants tactlessly imposing Lean on him and his colleagues. Employee X. 2013. *Look Before You Lean: How a Lean Transformation Goes Bad—A Cautionary Tale*. Vista, CA: The Nobby Works.
4. See for instance: Adelstein, Jake. 2017. *Forbes*, October 30, 2017: www.forbes.com/sites/adelsteinjake/2017/10/30/japan-is-literally-working-itself-to-death-how-can-it-stop/ (accessed May 19, 2019).
5. There are many good economic, social, political, philosophical, and historical reasons why most executives—especially in large, publicly-traded companies—resist Lean. Bob Emiliani's *The Triumph of Classical Management over Lean Management* (2018) discusses this in much further depth.

6. See, for instance, many of the companies that are mentioned in McKinsey & Company. 2011. *Lean Management: New frontiers for financial institutions*. Also, Swank, Cynthia Karen. 2003. *Harvard Business Review*, October 2003: https://hbr.org/2003/10/the-Lean-service-machine (accessed May 19, 2019).
7. Emiliani, Bob. *REAL Lean (Volume 2): Critical Issues and Opportunities in Lean Management*. Wethersfield, CT: The Center for Lean Business Management, LLC, 2007.
8. Wiremold was acquired by the French firm Legrand in 2000, and, from what I have read, its Lean culture has, unfortunately, not survived very well.
9. There are, of course, some exceptions to this, like the rapid and remarkable turnarounds that happened at Wiremold or NUMMI. The Wiremold story is detailed in Art Byrne's book *The Lean Turnaround* (2012). NUMMI stands for New United Motor Manufacturing, Inc. and was the famous joint venture between GM and Toyota that lasted from 1984 to 2010. A fascinating podcast of the cultural change story is available on NPR: Langfitt, Frank. 2015. *NUMMI 2015*: This American Life (NPR podcast) www.thisamericanlife.org/561/nummi-2015 (accessed May 19, 2019).
10. See the Appendix for a definition of the term System.
11. Lean, ironically misunderstood as being associated with "old" modes of industrial mass production, is a model of a new, progressive management capability entirely relevant to the digital age. And Toyota is nothing if not a "disruptive innovator": how else did a small, nearly bankrupt Japanese automaker, over the course of 50 years, displace the American Big Three auto giants and become the world's most valuable car company (more than four times the value of Tesla) in such a highly competitive industry?
12. Admittedly, Amazon has a long way to go in terms of showing greater respect toward its employees (the people side of Lean), but it's supply chain system has benefitted from the technical application of Lean practice: Onetto, Mark. 2014. When Toyota met e-commerce: Lean at Amazon. *McKinsey Quarterly*, February 2014: www.mckinsey.com/business-functions/operations/our-insights/when-toyota-met-e-commerce-lean-at-amazon#0 (accessed November 17, 2018); Amazon's current CTO, Werner Vogels, also blogs about companies of the future being "data factories" and that data factories can learn a lot about running a successful factory operation by studying Lean: Vogels, Werner. 2017. *All things distributed*, December: www.allthingsdistributed.com/2017/12/rethinking-production-of-data.html (accessed November 17, 2018).
13. Amusingly, the French came up with the acronym GAFA (Google, Amazon, Facebook, Apple) as shorthand for "America's evil internet empire": www.macmillandictionary.com/dictionary/british/gafa (accessed November 17, 2018).
14. For a good overview of how widespread Agile has become, see Denning, Steve. 2018. *The Age of Agile: How Smart Companies Are Transforming the Way Work Gets Done*. New York: Amacom.

15. Even though there are good economic, social, political, philosophical, and historical reasons why most executives might resist Lean (see note 3, previous), I am not convinced that most executives in white-collar professions even understand Lean sufficiently well to know what they are resisting.
16. OSHA stands for Occupational Safety and Health Administration, under the US Bureau of Labor.
17. I am paraphrasing Bob Emiliani here, who writes, "Leaders do not do what they do not understand". Emiliani, Bob. 2018. Supplement to the book *The Triumph of Classical Management Over Lean Management*: https://bobemiliani.com/wp-content/uploads/2018/07/Supplement_TCMv1.3.pdf p. 27 (accessed September 12, 2018).
18. The UK government's failed experiment with "Deliverology" (based on the book by the same name by Michael Barber) is a good example of failed improvement efforts based on oversimplification. In this case, only one aspect—the measurement of results—of a larger, complex system was substituted for the whole. Its disastrous effects are chronicled in Seddon, John. 2014. *The Whitehall Effect*. Charmouth: Triarchy Press Ltd.
19. Ballé, Michael. 2018. Is Kanban Relevant to Office Work? *The Lean Post*, March 19, 2018: www.lean.org/balle/DisplayObject.cfm?o=3612 (accessed May 18, 2018).
20. Let me make it clear that I have nothing against engineers. I respect engineers very much and have often been mistaken to be one myself (and I take it as a compliment!). I am suggesting only that their highly analytical and detail-oriented ways of thinking could well be producing an overly narrow and homogenous body of literature.
21. Bureau of Labor Statistics. 2017. Employment by major industry sector. www.bls.gov/emp/ep_table_201.htm
22. Morley, Robert. 2006. The Death of American Manufacturing. *The Trumpet* (February): www.thetrumpet.com/article/2061.24.80.0/economy/the-death-of-american-manufacturing (accessed May 20, 2019); Bureau of Labor Statistics. 2017. Employment by major industry sector. www.bls.gov/emp/ep_table_201.htm. The healthcare (including social assistance) and manufacturing sectors (including mining and construction), taken together, represent barely 20% of the labor force. Sadly, this means that Lean is mostly unknown (and seemingly irrelevant) for up to 80% of the workforce.
23. Even if more manufacturing were to be "reshored" back to developed countries (eliminating the waste of transportation) in the future, the rapid advances of automation in this sector mean that the number of jobs returning would not be the same as in previous times. See, for instance, Buttonwood. 2017. The manufacturing jobs delusion. *The Economist* (January 4, 2017): https://amp.economist.com/buttonwoods-notebook/2017/01/04/the-manufacturing-jobs-delusion (accessed November 23, 2018).