Lean Culture for the Construction Industry

Building Responsible and Committed Project Teams
Anyone can become angry—that is easy. But to be angry with the right person, to the right degree, at the right time, for the right purpose, and in the right way—that is not easy.

—Aristotle, The Nichomachean Ethics

It is with the heart that one sees rightly; what is essential is invisible to the eye.

—Antoine De Saint-Exupery, The Little Prince

Much unhappiness has come into the world because of bewilderment and things left unsaid.

—Fyodor Dostoevsky
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Foreword

The construction industry is exceptional. Our products have stood the test of time and stand as lasting reminders of the collective work of hundreds of architects, engineers, and craftsmen whose combined efforts build the very structures we admire, the places we work, and the facilities that ensure our health and well-being. Combining brains and brawn, this small group of individuals makes up about 12% of the GDP and transforms dreams into reality.

Unfortunately, these feats of construction have not been easy. Territorial in nature, each discipline, each company, each trade, and even each individual function of the construction process seeks to maximize its own results, even if they come at the expense of the overall project objective or other members of the team. In the end, the project is completed but the cost of completion both financially and emotionally is often too high to recover.

While much attention is given to the financial cost, little has been done to address the emotional impact on the project participants, the underlying root cause of the financial downfall and one of the major factors causing a widening concern in the construction industry.

The construction industry is faced with an ever-growing shortage of an effective, skilled workforce. Marked by a propensity for conflict at every level, it is very true that “buildings leak at the intersection of contracts.” Whether that contractual relationship is between the owner and the general contractor, the general contractor and the subcontractor, or a supervisor and his or her direct reports, these conflicts are having a direct impact on the financial results of the project and driving the best and brightest from the construction industry.

But the good news is that over the past several years our industry has sought change—revisions to the way we approach work, the way we collaborate, every aspect of the way we treat one another. The growth of design build and other forms of integrated project delivery is evidence of how construction is working to openly engage all participants in the building process. We are finally getting it: construction is more than a zero-sum game. Marketing, engineering, planning, architecture, and production strategies must be executed in harmony.
We know all too well that attempts at change, especially ones of this magnitude, are difficult at best, especially in our industry, where when placed under stress, we have a tendency to revert to traditional ways of doing things, seeking conflict rather than collaboration, excuses rather than solutions, and blame rather than results. This cannot be business as usual or construction will never really progress.

“SEEK FIRST TO UNDERSTAND BEFORE YOU SEEK TO BE UNDERSTOOD”

Transformation needed in the construction industry will require old fractional job descriptions to change, maybe even blur, as stakeholders focus their energies on the best interest of the project, not themselves, their trade, or their organization. We must accept responsibility for every project participant’s success. Construction is not a zero-sum game; someone doesn’t have to lose for someone to win.

People have used the word accountability in business for years. Books have been devoted to the subject. Our industry brandishes it like a weapon—we expect, even demand accountability. If something isn’t going well, someone must pay!

While I believe we must all hold ourselves accountable to one another, there is one aspect of accountability that has always caused me concern, and that is that it is a “lagging indicator” of something that has already happened. To me accountability says, “Let’s wait and see what happens and then we will decide who gets the blame or credit.”

Instead I like the word responsibility. Up front, right now, before anything has even happened, we are responsible for and to one another for the results that follow. We will not let one another fail. Instead, each project participant is looking out for one another, all in harmony with the overall project objectives of the client, the project owner. While more the exception than the rule, when it is applied in our industry as it is with one of our long-term clients, we see production increased by as much as 40%, customer satisfaction at its highest level in our organization, repeat business a given, and a happy and effective workforce that feels engaged and takes pride in the results we provide!

This is the reason I told Gary I would write this foreword. Our industry does need change.
Over the years, Gary has been instrumental in the evolution of our organization, helping us through everything from strategic planning to personal counseling. His engagement has helped us be a better organization. By working with our teams on most of the principles outlined in this book, we have seen our company grow tenfold, our customer satisfaction improve dramatically, and our geographic influence expand.

I’m sure that you will find Gary’s approach to our industry fresh, enlightening, and beneficial to your organization. He will challenge your conventional thinking and provide you with practical applications that you will be able to implement quickly in your own organization, regardless of what position you hold.

**Tom Sorley, CEO**

*Rosendin Electric*
Acknowledgments

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Introduction

There are two kinds of people in the world: Those who are fools because they think that they are wise; and those who are wise because they know that they are fools.

—Socrates

My infatuation with the construction industry began with a phone call in June 1996. My wife, then a project manager for a general contractor, received an urgent message from her operations manager: “We need someone to do team building,” he said. “Doesn’t your husband do (expletive deleted) like this?” “Yes,” she deadpanned, “My husband does (expletive deleted) like this.” And I’ve been doing it ever since—and loving every minute of it.

What’s not to love? It is, after all, a noble enterprise, one in which we alter our world by creating structures that make our harsh surroundings more hospitable. Beyond the practical, the efforts of construction professionals—from highbrow architects to sweat-of-the-brow laborers—determine the greatness of a city and a civilization. What would New York, Chicago, London, Paris, Moscow, or Beijing be without their unique churches, temples, houses, apartments, skyscrapers, bridges, roads, and infrastructures that define them?

I love construction people unreservedly, particularly those in the thankless role of middle management. Yes, they can be stubborn and even arrogant at times. But oddly enough, these same qualities are what make them so endearing to work with; they consistently go about their business with unusual passion, pride, and the intent to do the best job possible. Decently paid but overworked and underappreciated, these managers perform a juggling act beyond comprehension. They routinely make sense of, organize, and build off of literally thousands of pages of contract documents and conceptual drawings—all of which are constantly being altered and amended via a seemingly endless stream of emails and bridging documents. Not only are they charged with physically getting the project built, but they are called upon to balance the often adversarial needs of designers, owners, lawyers, government bureaucrats, and inspectors—all the
while trying to buy out materials and services, conceptualize the flow of the work, and determine the best means and methods possible to reach the goals set forth by their own companies (i.e., find a way to make a meager profit).

On top of this, the people they oversee—those who do the actual work—are a wildly varied lot, ranging from the brilliant and talented to the self-serving and slothful. The former are true artists and geniuses at their craft, while a significant number of the latter often have one foot at the job site and the other close to the county jail.

Somehow amid this confluence of competing interests, challenging workforce dynamics, and information overload, operations managers, project executives, project managers, superintendents, general foremen, and foremen bring order to the chaos, provide direction and key decisions, and get the job finished on time, on budget, and to design—regardless of the insanity swirling around them. The fact that they are able to get it right as often as they do is a real testament to their intelligence and intestinal fortitude.

But despite all of their efforts, waste bedevils every construction project. Over the past forty years, productivity for most manufacturing processes in this country has gone up by over 100% (1.77% per year). In this same time period, productivity in the construction industry, as measured by contract value/labor hours, has gone down by a staggering 25% (or an average compound rate of −0.59% per year). In recent years, advocates of Lean construction have cited numerous causes of waste, including poor planning and scheduling, ineffective methods of procurement and material handling, and haphazard work plans. What is talked about less frequently is the amount of waste that is directly related to ineffective leadership. A great deal of lost productivity and lost revenue is caused by poorly devised organizational structures, unclear roles and responsibilities, unresolved interpersonal conflicts that are allowed to fester, and an overall lack of focus on improving team process—all of which is under the direct purview of project leaders.

That is why I am writing this book—to draw a connection between how construction professionals act as leaders (both positively and negatively) and the subsequent affect their attitude and behavior has on productivity and waste—each and every day. To me, this is the very essence behind most Lean principles—understanding the impacts that the supposed little

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* From AECbytes viewpoint 4, by Paul Teicholz, PhD, Professor Emeritus, Stanford University.
things have on what, in today’s economy, is a very crucial thing indeed—the bottom line.

Simply put, Profit = (Price − Cost) × Volume. Given that the greatest risk factor on any project is manpower costs, anything on the people side of the job that results in delays, reworks, or overtime will lower profits via increased labor costs. And the sad fact is most of these people-generated costs are fully preventable.

As much as I like and respect construction professionals, I have found that they can be their own worst enemies. Most construction managers greatly underestimate how hiccups on the people side can negatively impact the quality and profitability of the product they generate on the technical side—and how they themselves can, inadvertently, be the biggest contributor to these types of problems. Over the years, I’ve seen even the best managers struggle with the following:

- Failing to conceptualize, create, and distribute an organizational structure that accurately reflects how project flow and communication actually works, resulting in confusion and numerous processing and coordination hiccups.
- Paying too little attention to how people are communicating and instead overvaluing people for merely “cranking out” work, thus creating a high volume of uncoordinated people-generated inventory that is often either poorly executed or simply gets lost in the informational sauce.
- Favoring short-term fixes over long-term solutions; often dropping down to do someone’s job for them instead of teaching them how to do their job, thereby creating unintended people problems in the form of leadership-assisted incompetence.
- Possessing insufficient understanding about how to influence people; instead, often punishing people for showing initiative or, conversely, rewarding them for doing things that violate standard practices.
- Neglecting to create a forum to identify critical issues and to strategize how to tackle these issues—as a team. They inadvertently reinforce the repetition of poor performance.
- Underestimating the impact that unresolved conflicts and poor role delineation can have on productivity and how these dysfunctions can contribute to issues falling through the cracks, long lead items not being identified, or work put in place without proper owner approval.
• Overvaluing people for their technical prowess and often overlooking their “team killing” behaviors, such as when a technical “star” talks negatively behind a teammate’s back, hoards information, publicly tears someone down, or doesn’t provide coaching or training—and failing to appreciate how these behaviors can negatively impact profitability.

• Being thing-aware, not self-aware. While they are phenomenal at solving technical problems, they often fail to see how having a poor attitude (pointing fingers when mistakes occur) or their own lack of approachability can prove harmful to project flow.

• Underestimating the need people have for a sense of purpose about what they do.

• Becoming overly enamored with engineering processes and procedures, and thus viewing people merely as objects who satisfy these functions rather than as individuals with distinct needs, concerns, and goals.

• Being adrenaline junkies; they want to go, go, go, when they should really slow down and build a unified plan.

• Being mavericks and individualists, they often unwittingly choose to reinvent the wheel rather than ask for input, help, or advice.

Any of these listed attitudes and behaviors alone can cripple productivity and result in waste and lost profit. In combination, they are truly deadly. Creating a team out of a random bunch of people who just happen to be stuck in a trailer together is a true art, but some construction managers rely on a more prosaic approach—they simply put people with the right technical skills together and call it a team. My hope is that this book will convince them leadership skills that go hand in hand with Lean thinking, an approach that involves far more than just-in-time delivery, Pareto charts, pull planning, and value stream mapping. The art of team building in a Lean world is about the art of culture building, i.e., developing new ways to think about how you do what you do more productively and with less waste.

Transitioning from doer to leader and developing this Lean mindset is a particular challenge for construction industry professionals. Most people get into this business because they like the technical side of the
work. They enjoy figuring out how to dewater the site or how to get a balky new exterior curtain wall system to work. In many cases, particularly for those who grew up with fathers and grandfathers in the industry, it’s literally a part of their DNA. Most construction managers have been lauded, promoted, and given other perks precisely because of their ability to achieve short-term results. That’s why most have little trouble writing purchasing requisitions, drawing up schedules, generating manpower reports, writing potential change orders (PCOs), or tracking requests for information (RFIs), but often struggle with how to transmit the knowledge contained within these documents to their people, or find it difficult to foster the communication or organizational structure required to knit the people on their team into a well-functioning whole. Therefore, the same person who has the ability to look out his or her office window and immediately discern that the conduit on the eighth floor has been installed incorrectly, may at the same time be perplexed by his or her staff’s lack of urgency or tendency to repeat the same mistakes over and over again.

This book is precisely for these folks. It is intended as an accessible reference that can be easily adapted to just about any job site situation—and something that people in construction won’t have to translate from a generic “one size fits all” list of tired managerial tropes at their local bookstore. It offers the tools to cope with the nontechnical side of their job, and the confidence that they can deal with just about any people situation they encounter efficiently and effectively. Most importantly, it explains how such seemingly non-construction-related activities such as developing trust, direct communication, role definition and clarity, and actively engaging with one’s team will have a positive impact on a team’s efficiency and the bottom line.

But before moving forward, please allow me to explain why someone with my credentials as a cognitive behavioral therapist is qualified to write a book for construction professionals. I could tell you about my fourteen years of experience as a consultant with all sorts of companies in this industry, or my background in the corrugated box industry, but I’d prefer to share one specific story.

Many years ago, I was hired to facilitate a two-day partnering/conflict resolution session between a general contractor (in the role of construction managers [CM]) and various mechanical, electrical, and plumbing (MEP) subcontractors on a $350 million dollar CM/multiple prime
public hospital job. The project was plagued by poor coordination and interrupted workflow, which in turn triggered numerous back and forth bouts of accusatory emails and formal letters. What brought things to a head was an incident where the plumbers had deliberately ripped out drywall well beyond what was required in order to access a particular area of the building. Unfortunately, on the first day, I was greeted with a heavy dose of skepticism and wariness as I tried to deal directly with the issues.

After a night of heavy drinking (at the general constructions [GC’s] expense) and other eyebrow raising activities that I managed to avoid, the next day, the group dragged themselves in—predictably hung over, curiously bruised (there are some things that I really don’t want to know), and more than a little embarrassed. Exploiting their guilt and physically compromised condition for all it was worth, and with the aid of several gallons of high-octane coffee, we actually got down to the business of assessing the situation. But unlike the previous day, the comments expressed weren’t dripping with sarcasm. As we probed deeper, it became clear how truly frustrated everyone was with this job—and had been since its inception. And what stood out even more was the fact that nobody really knew why. All they knew for certain was that they were sick and tired of repeatedly showing up on site and being told that an area that they were expecting to work in wasn’t ready or, conversely, being berated for not “manning up” to unexpected requirements and losing gobbs of money in the process. Of course, they all had plenty of theories as to why this was happening: the damn architect wasn’t responding to their RFIs in a timely fashion; they weren’t getting adequate direction from the CM; some (unnamed) people didn’t care about the job as much as they did; and yes, maybe *they* hadn’t been attending the coordination meetings as they should have been.

But the more they talked, the more the true root cause became apparent. And this is where my ignorance of the industry actually became an advantage. As I continued to ask questions about the contract and how the job was set up, I kept noting the quizzical looks that were popping up on the faces around the table. Despite the fact that they were working under a CM/multiple prime contract for nearly two years, most of the people in the room had no idea what it meant to work in such a delivery system. The subcontractors kept treating the job like a regular GC job (waiting for the GC to generate updated work schedules, waiting for the various and
sundry reporting requests to trickle down from the GC, waiting for the GC to give them specific daily direction) when the reality was, in this type of delivery system, per contract, it was the subcontractors’ responsibility to assume the primary role of project coordination, scheduling day-to-day activities as well as adhering to vital administrative processes. Yes, the CM was to provide a master schedule, but in this delivery system, it wasn’t the CM’s job to provide specific daily direction. They were to provide clarification, information, and guidance—not for their own plan, but for the one that the subcontractors were supposed to generate and follow.

Even though these expectations had been identified in a high-level meeting at the beginning of the job, the subtleties of this delivery system did not trickle down to the most important people—the on-site managers who were expected to run the job in the day to day. So, as is usually the case when people are under stress, they simply reverted to familiar, overlearned behaviors. And in this case, this meant that everyone was treating this job as if it were a traditional GC job. Making matters worse, the CM hadn’t been direct about their own frustrations. When they saw things going awry, they took a somewhat passive-aggressive stance. Instead of shutting down the job and recalibrating the process, they dogmatically stuck to the contract and withheld all forms of direction without providing any clarification as to why they were doing so. At other times, they directed their own laborers to do tasks that were in the direct purview of the subcontractors, which was perceived as a negative intrusion by the subcontractors. Quite often, the CM went so far as to simply withhold payment without explanation—particularly when they determined that proper administrative procedures hadn’t been followed. Why did the CM act in this manner even though the data suggested that such behaviors weren’t helping the situation? The CM had convinced themselves that by acting in an indirect fashion, the subcontractors would somehow magically “get the message” and fall in line. Unfortunately, all this actually did was introduce a tremendous amount of waste into the system.

After a thorough and objective discussion, everyone had the same epiphany: if they didn’t take a step back and treat this session as if it were the first day of the project, this is, redefining roles—and expectations of these roles—per the contract and committing to carrying out the implied promises of these roles each day, this job stood no chance of recovery. So that is precisely what we did. To everyone’s credit, they were able to let go of the past and formulate a plan to carry the job forward. By the end of the second day, everyone was cautiously optimistic.
That’s when I realized I had something to offer these construction professionals. The problems that were infecting this project weren’t at all technical or engineering in nature—those kinds of problems always had a solution. It was the lack of role clarity, the unspoken frustrations, the false assumptions about each other’s poor performance, the implied accusations of wrongdoing, the angrily withheld exchanges of information, the well-intended manipulations in the heat of action, the breaks in chain of command for expediency sake—these were issues that I knew how to deal with, and they, because of their highly technical backgrounds, didn’t.

Over time, I became aware that my years of assessing and working with teams dovetailed well with Lean principles. Let me give you a sense of how this is so. I had developed my own method to assess team functioning, largely based in cognitive behavioral and industrial psychology. For instance, I would evaluate how much time is spent on value-added activity (doing actual work that contributes to the project) versus time wasted due to communication misfires, confusion, or unwanted duplication of service. Through this evaluation, I discovered the factors that impede productivity and produce waste. Using this information, I worked with managers and helped them to think in broader terms about a project. As a result, project management teams are able to direct their energy to areas that really matter. By using the data derived from my work with these teams, I could help them measure their progress and facilitate continuous improvement. In essence, I could help them shift their thinking away from focusing on short-term results, to taking a broader view that would help achieve overall project success.

After doing this type of work for some time, and as Lean construction practices began to take hold, people well-versed with such thinking told me that my methods were aligned with Lean principles. The more I read and talked to people about Lean concepts, the more I realized that this was true.

But I’ve also learned that certain obstacles exist when attempting to apply Lean thinking to construction practices. Obviously, the traditional assembly line model doesn’t translate cleanly to the construction world because many people in construction are staunch individualists—they don’t like to think of themselves as assembly line workers; therefore, their eyes tend to glaze over at the very mention of concepts derived from an automated world. A second obstacle is that each project built is usually best described as either “one off” or “custom made,” suggesting that implementing the
type of systematic, repeatable practices that Lean is noted for won’t readily apply. The third obstacle is pure pragmatism: due to conventional contracting methods, most construction entities struggle between competing for the limited resources at hand (i.e., money) and looking at ways to work in a cooperative manner to conserve and share these resources. The final obstacle involves the constantly rotating cast of diverse characters that populate each project—each coming with their own set of dynamics and personalities. This constant flux amid the usual pressures to produce in a timely manner tends to make people focus on immediate deliverables and personal differences rather than focusing on a more standardized, collaborative, and systematic way of approaching the work.

Fortunately, my experience has taught me that these obstacles can be cleared—and cleared with relative ease—if one knows how to do it. This book will take these obstacles into account and suggest how to overcome whatever resistance to Lean thinking might exist.

This book will help you think, in fresh ways, about what you do every day. To give you a sense of how your thinking might change for the better, here are some people-oriented assessments that you might never have made before. As you read through them, consider how much time (if any) you’ve spent on these assessments in the past, and how thinking differently about how your team works together will improve your overall efficiency:

**Attitude:** Does everyone on your team (particularly the leaders) care about succeeding? Are the leaders (and everyone else) ethical and willing to make tough and decisive calls? Do they care about the people they work with and are they committed to their success? Are they focused on eliminating waste and continuous improvement?

**Planning:** Is there an overall design, estimate, budget, and logic for the sequence of work and an organizational structure in place that people can orient to? Are execution and overarching philosophies in place?

**Preparation:** Does everyone understand the contract, the delivery system, scopes of work, roles and responsibilities (theirs and each other’s)? Does each person have a specific work plan?

**Requisite skills:** Do people know how to process RFIs, PCOs and submittals, and do they know how to log them? Can they track budgets and generate cost reports? If not, is there a plan in place to train them so they don’t negatively impact the overall flow of the job?
Timing: Do people understand the schedule and have a working understanding of job priorities (keeping design and engineering out in front of construction), the importance of identifying long lead items, getting people paid on time, etc.? Are people working off of the current documents?

Execution: Can people make the best deal, get materials on site, manage to a budget, and accomplish a work plan (i.e., complete assignments in accordance with a specific deadline)? Is the work in place progressing to plan? Most importantly, can people do all of these things under pressure?

Responsibility/Accountability: Are people accountable for delivering what they promised, in a timely fashion, via their work plan? If they can’t complete an assignment to plan, do they communicate this to the rest of the team or do they keep this vital information to themselves?

Communication and coordination: Are people constantly seeking to knit their disparate functions together? (That is, do engineers, PMs, superintendents, and general foreman walk the field together and look at drawings and contracts together?) Do people communicate where they are at, what they need, and when they will need it by—constantly? Is anything impinging on their ability to do this (e.g., poor leadership practices, lack of trust, etc.)?

Waste: Are there lots of reworks, issues falling through the cracks, duplications of service, or people producing less than what they could?

Process for continual improvement: Do the leaders constantly assess how the team is functioning? Do they seek team and owner feedback about what is “working” and what isn’t? Do they examine processes to identify breakdowns in team function? Do they use staff meetings to identify and solve problems? Do the leaders encourage innovation? Do they use lessons learned and best practices?

As foreign as some of these questions may seem, they become second nature once you adopt the Lean principles that will be put forward in this book. Construction is a tough business for tough managers, and in the past, you may not have given many of these questions a moment’s thought. You may rue that the business has changed, that you don’t want to have to deal with all this “people stuff” on top of all the other craziness. But in a business intrinsically loaded with people and personalities, ineffective management structures and poor communication, thinking in a Lean way can make the
difference between a profitable, competitive construction team and mass frustration and lost profit potential. Because many of the activities that occur on any given site are distinctly nonvalue added (i.e. things that don’t add the actual construction process—like the paperwork requirements to mitigate risk), it behooves managers to be as efficient on the people side as humanly possible so they can get the most out of activities that are value added (contribute to the actual building of the project).

And believe me, I understand the craziness. A while back, I took a construction management and law class at a local community college. At the end of the class, the professor looked at me quizzically and said, “Gary, you’re not a construction person, so I’m just curious—what precisely did you get out of taking this class?” I thought for a moment and gave the only answer that came to mind. “To be honest, between the potential lawsuits, onerous contracts, and the inherent risks, the only thing I keep wondering is why anyone in their right mind would want to do this for a living?”

So why do you do it? I know the answer many of you have given me, and it demonstrates that you’re willing to tackle the people issues if the end result is higher productivity and less waste. There is something very pure about construction—something very tangible. When it’s done right, you know it—and when it’s done wrong, you know that too. But there is also something else. I’ve seen that wistful look in your eyes when a project finally emerges from being a pipe-and-conduit-filled hole in the ground—that point when the mythical and seemingly unattainable punch list starts to seem like less of a fantasy. There is something truly magical about being able to take a set of two-dimensional drawings and transform them into a living sculpture and know that you were a part of it.

But the deep satisfaction you derive from the technical side of construction isn’t what you usually get from the people side of the business. Unlike rebar and concrete, people actually expect to be listened to and cared about. And if they make a mistake, they don’t accept being torn down, ripped out, or replaced on the spot. I remember a fuming operations manager once saying, “You know, this would be a great business if it weren’t for the people.” He had just come from a job site where several of the staff had threatened to quit because they were frustrated with their boss. What they wanted from him seemed very simple. They were tired of toiling away without any clear direction or overall vision for the project. They wanted instruction on how to carry out certain procedures and wanted to understand how these
procedures fit into the overall plan. And they wanted to know what was expected of them beyond what was listed in the procedures manual. Most importantly, they wanted to be engaged by their manager before he felt compelled to scream at them for something they had done wrong. The fix, in the operations manager’s (OM’s) mind, was so obvious: set a course, provide feedback, make yourself available for questions, and then stay engaged. A no brainer, right? So why did so many of his managers struggle when attempting to bridge the gap between the technical world and the world of people? Well, because in many ways, bridging this gap isn’t that simple. The world of things is easy; you can beat them, cut them, pound them, shape them, and manipulate them to do just about anything that you want them to do. The world of people is much more complicated and convoluted. Or as Anthony Bourdain wrote in his best seller, *Kitchen Confidential*:

> Though I’ve spent half of my life watching people, guiding them, trying to anticipate their moods, motivations and actions, running from them, manipulating and being manipulated by them, they remain a mystery to me. People confuse me. Food doesn’t. (2000, 299)

I believe that before you’re finished with this book, you’ll recognize that the bridge between the technical and the people side not only must be built, but also can be built. More than that, you’ll see how the complex world of people can be managed effectively, even with its myriad personalities, time-specific demands, and uncompromising technical rigor. If you learn to think in Lean ways about how you approach your leadership, the people side will not only become less of a struggle, but also the culture that emerges will be the source of your future success—even if your project isn’t contracted with integrated project delivery in mind.

One final note: Though their name is synonymous with mud right now, I will be referring to Lean practices originated by Toyota, simply because it is important that we not throw the baby out with the bathwater. Toyota’s current quality problems are a direct result of their deviation away from the very Lean practices that helped them build the most reliable vehicles in the world. This temporary insanity that caused them to value production and market share over quality should not distract us from the fact that they became one of the greatest manufacturing enterprises in history because of the Lean methodologies that they pioneered.
About the Author

Gary Santorella, owner and president of Interactive Consulting, is a team building, strategic planning, and partnering facilitator, executive coach, and corporate instructor who has worked exclusively in the construction industry since 1996. He has pioneered a method of assessing construction teams at the job site and top organizational levels—in accordance to Lean principles—with the sole purpose of building efficient, flexible, and functional work groups. He has worked at sites across the country and in Europe. He has a BA in behavioral psychology from Providence College (1980), a master’s degree in occupational social welfare from UC Berkeley (1990), and is also a licensed cognitive behavioral therapist, specializing in the treatment of PTSD and anxiety disorders, in the state of California. His client list includes Turner Construction, Rosendin Electric, Swinerton Builders, Ballast Nedam, Hensel Phelps, McCarthy Construction, Pan-Pacific Plumbing, the State Seismic Program of California (DGS), Vanir Construction, KCS West, Kajima Construction, St. Joseph’s Health Care System of California, and the Port of Seattle.

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