

LEAN ACCOUNTING

BEST PRACTICES FOR SUSTAINABLE INTEGRATION

Edited by
Joe Stenzel



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FOREWORD

ENACTING, NOT IMPLEMENTING, LEAN MANAGEMENT

Managers always want to do something to improve how their organizations function. The combined effects of global competition, the growth in business books and magazines, and business consultancy has led to a never-ending series of fads to fix organizations. It often seems that these do more to confuse than inform people, leading to one change program after another, what the people at Harley-Davidson dubbed many years ago, “AFP,” Another Fine Program (often translated differently internally).

“Lean” is the fad of the day. For a top team to not have its version of a lean management program is tantamount to managerial negligence. Yet, few of these succeed in achieving their intended outcomes, just as few process redesign programs succeeded, and, before that, few TQM programs. In fact, Dr. W. Edwards Deming, one of the pioneers of total quality, became so disgusted with the fad fetishes of contemporary managers that he refused to use terms like TQ, TQM, or Total Quality in the latter years of his life. For him they had lost all meaning: “They mean whatever people want them to mean.”

The essays in this book represent the struggles of thoughtful and experienced people to get their arms around why otherwise useful ideas and tools can contribute to ongoing improvement in a few organizations and become mindless pabulum in so many others. Some of these contributors are good friends and long-time colleagues. While in no way summarizing their insights, the following three *core premises* capture a bit of where they are coming from, I think.

Genuine Reflection Will Always Trump Simplistic Solutions

Dr. David Cochran talks about the failure to establish agreement on important functional requirements. Why would this occur? It should be evident to

everyone that such agreement is important, that forcing people to strive for goals they care little about is not likely to compel commitment or success. Yet, the agreement behind most lean initiatives is often token at best. It is not that people do not see the need for improvement. It is more the case that they usually doubt that this latest “AFP” is likely to address the deeper issues that frustrate them.

Deming used to say, “No reflection, no learning.” But, what he meant by this is lost on most managers trained in the instrumental problem solving popular in modern management education. By these approaches, we first “externalize” problems to a set of symptoms, usually measurable symptoms. We then figure out clever ways to address those symptoms and then “implement” the respective solutions. But throughout, the process is limited by unquestioned assumptions, like, “We really do not need to understand how the problem has arisen,” or “I am (or we are) separate from the problem.”

When pressed as to why they do not reflect more on how the problem has arisen, the standard response is, “We just don’t have the time to do this.” But the resulting superficial solutions rarely ever achieve lasting change—something that people often readily acknowledge. So, they may not have the time to do it, but they have plenty of time to “redo it,” often many times over.

Our experience has always been that there are deeper reasons than not enough time for why we shy away from reflection. Paramount among these is that people either feel unable or unwilling to confront the quality of conversation that is required. A conversation based on reflection on what exists that we “do not see,” as Cochran says, may lead to seeing ways that we are part of creating the problems, or that management systems in place focus people in ways that reinforce the status quo, or that there are underlying issues of power and personality about which people, in effect, have “taken an oath of secrecy.”

But failing to commit to more reflective conversation also masks our deepest aspirations and longings. It keeps people not only from talking about what is, but what they truly desire. Such conversations are difficult. They do take time. But they can end up saving much more time.

Systems Intelligence Will Always Trump Reductionistic Analysis

I am of the opinion that we are at the very beginnings of starting to wrestle with the profound implications of a systems worldview, and that this awakening, which started in physics, biology, and other basic sciences but which really

has its roots in timeless ways of understanding common to native people the world over, will continue to unfold throughout this century.

That said, the time to start is now, and the benefits can be immediate as well as for coming generations. Tom Johnson points out that Toyota, the most studied company in the world, still outperforms virtually all of its competitors, many by a very long ways. How could this be? What are people missing?

I recall a story Professor Johnson used to tell about a colleague at Toyota's Georgetown manufacturing facility. He had hosted literally hundreds of groups of visitors who had come to study the famous "Toyota production system." According to him, the visitors would often say, "Oh, you have a Kan-Ban system, so do we." Or, "You have quality circles, so do we." Or, "You have process and value stream maps, so do we." Professor Johnson added, "They all see the pieces. What they do not see is the way they all go together."

There is an old saying in the systems field, "If you divide a cow in two, you do not get two small cows." Systems have integrity. While they are composed of elements, they are not defined by their elements but by how all these elements function as a whole. The easiest way to perceive a system is to look at its functioning and then begin to imagine how the different elements must interact in order to produce this functioning. As one systems biology teacher put it, "There is a world of difference between memorizing all the parts of a cell and learning how the cell *functions*, how it processes nutrients, how it sheds waste products, and how it maintains the integrity of the cell wall in the face of continual onslaughts."

These are the rudiments of systems inquiry but they are not as simple as they appear—in part because of complexity and in part because we ourselves—our mental models and our relationships with one another—are all among the elements of the system. So, systems inquiry is, by its nature, reflective.

Moreover, in a living system, these elements are continually being recreated, unlike in machine systems where the elements are fixed and simply decay over time. So, how we continually recreate our relationships with one another, form our interpretations of our work and reality, or shape our sense of shared purpose and specific goals—these ongoing activities are all part of the organization as a living system.

As soon as people start to contemplate this, their eyes cross and they can easily see the task as impossibly daunting. But look around. We see countless examples of very complex living human systems that function effectively. Sporting teams, symphony orchestras, jazz bands, dance troupes, and even

many families and working teams. It is not that creating healthy living systems is impossibly complicated; it is the *way we usually think* about them that is impossibly complicated. Human beings have immense innate capacity for systems intelligence.¹ Our task is to understand this intelligence and how it either develops or stagnates. While rational and conceptual capacities are part of it, it is also an active intelligence that is evoked by *doing* things that matter together. In short, we build systems intelligence by continually and reflectively attempting to enact better ways of doing things. Systems intelligence cannot be broken down into simple rules or tools. It can only be learned, or as the Chinese would say, “cultivated.”

Closely related to the folly of rules of systems intelligence is the naïve belief that the right measures will save the day. Measurement by its nature fragments. To measure someone’s temperature is to capture one tiny facet of how one’s particular mind-body-heart system is functioning at that instant. This is the difference between the physician as mechanic who looks at all the fragmented indicators and the gifted medical practitioners who also looks at the person as a whole. Managers need measures. All learners need ways to assess how they are doing relative to their aims. Very often measures can contribute to this assessment. But it is foolish to confuse the metric with the assessment—like confusing your temperature with your health.

Humility, openness and asking for help, from everyone, will always trump arrogance and the naïve belief in the next greatest tools or leaders

“There are no answers—and even if there are, we do not have them.” This could serve as a regular mantra for all those serious about the journey. At one level, that we have not figured it all out is probably obvious to everyone. But we do not act as if this is so. Leaders regularly communicate that the new strategy is the right strategy—that the new change program or this new set of tools will solve our most intractable organizational issues—that the new boss will transform a mistrusting, non-reflective, under-performing culture. We bow to

¹I am indebted to Esa Saarinen and Raimo Hämmäläinen for the concept of systems intelligence: Systems Intelligence Research Group at the Helsinki Technological University, www.systemsintelligence.hut.fi. See, “Systems Intelligence: Connecting Engineering Thinking and Human Sensitivity,” 2005, Hämmäläinen and Saarinen (eds.). “Systems Intelligence—Discovering a Hidden Competence in Human Action and Organizational Life,” Helsinki University of Technology, *Systems Analysis Laboratory Research Reports*, A88, October 2004.

humility and then act as if we have all the answers. Perhaps, it is because we do not know how to act otherwise.

Surely, regularly confessing ignorance and incompetence to your direct reports does not constitute a compelling management style. But confusing insight with “the answer,” or compelling vision with “the plan” undermines an organization’s genuine learning spirit.

One of the corollaries of adopting a systems perspective is that there is no complete answer, no definitive analysis. We have only working hypotheses, and we are inevitably guided by vision and intuition. People in leadership positions grounded in these simple truths can build an enormous sense of common undertaking and shared responsibility. As one CEO once put it, upon his retirement after a remarkable time of turnaround in a Fortune 50 business, “My greatest learning was the power of my vulnerability. When I could, at certain times, simply say, ‘I do not have a complete plan and there are things about our business setting that I don’t fully understand, it turned out to be a tremendously effective invitation to others. People started to realize that, “Phil does not have all the answers, and we all have to be part of figuring out what is needed.”

The simplest way I know to summarize these three premises is that *We* are the organization as it operates today—what is visible, what is invisible, what is working, and what is not working. The structures and systems that dominate, both formal and informal structures, do so because we create them, day-by-day, hour-by-hour, by the way we think and act. No one is holding a gun to our heads. The rules we follow mostly take the form of habits we have acquired, habits of thought and action. And, most of these habits, especially the deep ones, are beyond our daily awareness. If the organization is stuck in counter-productive ways of doing things, it is because we are stuck, both individually and collectively.

This is the theory of “enacted systems”—that the systems that govern how families, organizations, industries, and societies work are created by their members. It is always tempting to find someone else to blame. Yes, there are external forces. Yes, there is history. These must be understood. But at some level it is pointless to attribute our fate to these. Comforting perhaps. But pointless.

Enacting alternative systems is not easy. It requires tools, methods, and guiding ideas—like those you will find in the following pages. But, the right tools used with the wrong spirit will amount to little more than symptomatic fixes, short-term improvements but little longer-term change.

Hopefully, appreciating these three premises will contribute to a learning spirit that can make the insights and ideas that follow truly helpful in enacting lean management rather than getting others to implement it. As this begins to actually happen on a larger scale, “lean” can take its place, not as “the answer,” but as one more step in the long journey toward truly healthy organizations—organizations that, by their nature, contribute to economic, social and biological health and well being, for all.

Peter M. Senge

December 30, 2006

INTRODUCTION

Why are established lean enterprises so durably successful while so many attempts to become lean fail? The answer lies in the Anna Karenina principle, an extension of Tolstoy's observation: "Happy families are all alike; every unhappy family is unhappy in its own way." In general, this means that a deficiency in any one of a number of factors critical to overall system function dooms the new relationship. Human interactions with nature are replete with examples of this principle. When an otherwise healthy species of plant or animal is introduced into a new ecosystem, the new species must harmonize with many critical subsystems—longitude and latitude, rainfall, terrain, predators, competitors, and sources of nutrition. More often than not, the introduction of a new species fails because the new ecosystem cannot support the alien life form, or the newly introduced species significantly disrupts the balanced subsystems of the finely tuned native ecosystem.

Unlike the balanced scorecard, activity-based costing and management, quality management, or many of the other fine tools that can be integrated into the overall enterprise ecosystem, lean is an ecosystem unto itself—an entirely integrated set of subsystems (like a good marriage) that cannot be adopted in a piecemeal fashion to manage a limited number of enterprise activities. An enterprise might choose to become more lean, but its managers should not expect to become lean by borrowing here and there from an integrated system where all practices are interdependent.

No single person can master the many details of the many interrelated lean subsystems, so this book maintains an appropriate focus: to provide perspectives on the ways that established lean enterprises treat accounting and performance measurement practices as subsystems that support an integrated approach to product and service delivery. Each chapter addresses important elements of these two practices. The best way to introduce this book is to characterize its authors and define the premises that guide their experience and writing, and the best way to introduce the authors and the core theme of this book is with its first premise.

If the business of business is business, the business of the lean enterprise is continuous, sustainable adaptation and well-being.

This first premise sounds like a strategy, and that is just the point. While strategy has become a universal paradigm for organizational management, lean is a universally sustainable strategy that leads all other evolving strategic choices. Lean enterprises universally seek to deliver value to the customer by designing and endlessly perfecting value streams to meet customer needs with continuous workflow processes from order to delivery that aggressively identify and eliminate any form of waste that impedes work flow. Clearly, the implementation of such a strategy does not fall within the purview of any single individual or functional discipline.

As learning leaders of the annual Lean Accounting Summit, this book's practitioner and academic authors have made a full-time commitment to lean and to each other from many different accounting and performance measurement perspectives. Just as lean is a comprehensive enterprise strategy that depends on all employees working as informed decision makers, any thorough treatment of lean management depends on a balanced team of informed experts who share a common understanding of how each person contributes only one or two perspectives to the whole picture.

This book presents the collected insights of some of the most experienced lean accounting and performance measurement practitioners in America, but a single question dominates the organization and presentation of their insights: Why does a comprehensive understanding of the formula of lean principles embedded in the Toyota Production System continue to elude and frustrate otherwise intelligent people trying to implement it in their own enterprises? The answer to this question comes in part from our second premise.

Learning lean is not a matter of personal initiative alone and cannot be acquired from textbooks, classrooms, conferences, or seminars; people learn lean by working together as they actively practice lean principles in an enterprise culture committed to lean from top to bottom, side to side.

In every chapter the authors emphasize the importance of building a culture that levels the conventional information and authority hierarchies so typical of traditional economy-of-scale organizations. Whether the topic is leadership, process design, quality, performance measurement, employee motivation, or accounting, people throughout enterprises choosing a transformation to lean learn how to implement lean principles and reconfigure the workplace side by side. Lean is a transformation of the enterprise, not a transition. Each chapter

discusses concrete steps that employees at all levels can use to accomplish the lean transformation together *in the workplace*.

This means that lean transformations cannot be sustained without first establishing the appropriate enterprise-wide culture, and an important reason why Western enterprises so frequently fail at lean transformations lies in the unwillingness of leadership to redefine their roles from financially biased commanders-in-chief to operationally informed facilitators and resource providers. Lean transformations depend on cultural transformations, and culture can only evolve when executive leadership understands the principles of the new culture it wants to build. Once again, each chapter describes clear steps for executive leaders and managers to use as they work with fellow employees to lay down the cultural foundations necessary to support sustainable lean processes.

Why bother? The answer to this question comes from many sources, but the third premise answers the question by capturing the essence of each source.

When followed as a comprehensive system, lean is simply a more mature way for organizations to function in the current business environment.

Although it was conceived in the economic poverty of World War II Japan, lean seems to have anticipated the newfound power that the Internet has placed in the hands of the customer, and everyone is scrambling to capture customer information for strategic advantage. Anchored in order-to-delivery process structures where customer orders eliminate guesswork and waste by providing the enterprise with full customer preference information, lean practitioners continue to perfect cost-effective customer satisfaction with processes that actually learn—from the customers, suppliers, and the enterprise employees who seek to perfect the processes that serve the customer. Wall Street increasingly values intangibles, learning organizations, and human capital. Lean systems by their very nature seek to optimize these three areas and represent a more mature means of doing business than traditional economy-of-scale enterprises.

Consistent with this premise, new sciences like systems thinking, quantum mechanics, and field theory have become increasingly more influential in the management science literature over the last 20 years. Managers at all levels and from all disciplines recognize the parallels between living organisms and human organizations, and one of the most important parallels is the importance of information sharing, connectivity, and relationships—cells to cells, cells to organs, organs to organisms—and the natural ways that a decentralized relationship structure of these elements promotes maximum efficiency and survival

advantages. This organic perspective on the lean enterprise is built into the language of lean cultures where many “work cells” contribute to a “value stream.” Traditional enterprises seem mechanical and inflexibly brittle by comparison.

In *Profit Beyond Measure* (New York: Free Press, 2000), H. Thomas Johnson distinguishes between two enterprise cultures: the traditional, financially driven, hierarchically structured management by results (MBR) culture and the lean, operationally driven, distributive management by means (MBM) culture. In MBR cultures, leadership focuses on quantitative results to achieve unlimited growth through command and control relationships (a tribal stage of organizational development). MBM culture leadership focuses on sustainable growth by building current and future relationships with customers, with suppliers, with fellow employees throughout the enterprise in a system where all these participants contribute to the ongoing perfection of customer delivery processes (a democratic stage of organizational development). Lean is more mature, but cultural change is the bottom line challenge. Each chapter addresses the challenges of evolving rigid traditional cultures and their organizational structures into adaptive lean cultures from the shop floor to the executive suite.

Because lean is a transformation of enterprise maturity, and because so many enterprises fail to make the total commitment to the steps that lead to lean maturity, this book presents the steps from the starting point of the traditional enterprise—financial command and control systems designed to support economies of scale. The primary components of traditional systems are strategy, quality, cost, and performance management methodologies. The authors contrast traditional understandings of these methodologies in terms of lean principles so that managers can learn to create a more mature culture and guide the enterprise-in-transformation to sustainable, integrated, interdependent work processes that incorporate the customer, supply chain, and employee learning.

The book is organized in three parts that remain consistent with the sequence that people can best learn how lean principles support a radically new enterprise structure and culture. Rather than jumping straight into accounting, Part 1 addresses the lean principles, enterprise design, and leadership characteristics that form the foundation of a successful lean transformation. The order of Parts 2 and 3 tacitly suggests another important characteristic of lean. Despite the obsession Western enterprises have with cost, cost is simply another highly specialized form of performance management. Part 2 sets the stage for an examination of lean accounting by focusing on performance measures in

lean systems and how those systems motivate employees beyond the measures and results incentives so characteristic of traditional reward and punishment methods. From this platform, Part 3 provides a detailed examination of accounting relevance in the lean enterprise with a focus on the information that managers in traditional enterprises need to facilitate the transformation.

A recurrent theme haunts Western enterprises in lean transformation and serves as our fourth premise.

The *comprehensive* application of the lean principles embodied by the Toyota Production System guides the cultural transformation necessary to support the continuous, sustainable adaptation and well-being of the lean enterprise.

To their detriment, financially driven Western managers have grown accustomed to displacing their focus on universal enterprise strategies for continuous, sustainable adaptation and well-being with the tactics and methodologies designed to support strategy, as H. Thomas Johnson and Robert S. Kaplan describe in *Relevance Lost* (Boston: Harvard Business School Press, 1991). The many individual tactics and methods for strategy development, quality, performance, and bookkeeping are bought and sold in piecemeal fashion like commodities. This form of enterprise management lacks cohesion, consistency, and sustainability, and lean implementations eventually languish along with other poorly integrated management solutions of the month.

After more than 60 years of unwavering practice in lean principles, the Toyota Production System is the unquestionable gold standard of lean practices marked by continuous, sustainable adaptation and well-being that place Toyota at the top of a highly competitive marketplace. The authors make no excuses for learning from and writing about the longest-lived, most evolved lean practitioner. While many other enterprises have learned to adopt the lean principles of the Toyota Production System, expect to hear an in-depth treatment of the many different ways that Toyota uses its integrated system to maintain its competitive advantage from chapter to chapter.

The final premise of this book is primarily editorial and serves as a challenge to the reader: Traditional levers of control have no place in the lean enterprise.

Lean systems replace the notion of traditional control with system regulation, but high-level managers have little or no incentive to relinquish the status they enjoy as controllers—especially management accountants. Strategies for profit and financial results breed mixed agendas for all managers. Conscientiously applied lean principles provide an enterprise with a truly fiduciary culture where

the fiduciary relationships among all employees are highlighted by good faith, loyalty, and trust—not control.

CHAPTER 1 EXECUTIVE SUMMARY

“Lean Dilemma: Choose System Principles or Management Accounting Controls—Not Both,” by H. Thomas Johnson

Written by one of the world’s most influential management historians and committed lean researchers, Chapter 1 analyzes the current business climate and discusses why it leads to so many lean initiative failures. Remaining consistent with all the book’s premises, this discussion looks at the root causes of lean initiative failures rather than just the symptoms. Historical perspectives help people see and understand legacy practices that do not work well in emerging, more mature systems. Lean is based on a long history of committed practice by an organization from the Orient, and this chapter characterizes and contrasts the evolutionary sequence of two evolving business philosophies: traditional, financially focused command and control structures and lean systems. The inability to recognize and understand these different philosophies is the prime obstacle to successful lean transformation.

CHAPTER 2 EXECUTIVE SUMMARY

“Limited Production Principles: Right-Sizing for Effective Lean Operations and Cost Management,” by Jim Huntzinger

Chapter 2 begins by analyzing the profound differences between traditional economy-of-scale production methods and lean limited production methods and their work process designs in terms of efficiency, waste, and adaptability. This chapter then introduces core lean principles and terms that all employees in a lean transformation must understand before focusing on how lean organizations appropriately size each element of their work processes to eliminate waste, facilitate continuous improvement, and optimize enterprise adaptability to changing business environments and customer preferences. This chapter concludes with a discussion of the implications of lean principles for enterprise accounting systems.

CHAPTER 3 EXECUTIVE SUMMARY

*“Lean Strategy and Accounting: The Roles of the CEO and CFO,”
by Orest Fiume*

Chapter 3 examines lean from leadership and strategy perspectives. The chapter begins with an overview of the critical relationship of strategy to the cultural characteristics essential for transforming a traditional organization into a sustainable lean enterprise and names the two people who must know lean principles well enough to make this happen—the CEO and the CFO. The chapter then discusses 12 critical aspects of the transformation process that the CEO must lead if the company is to successfully implement a lean business strategy. Finally, the chapter discusses the difficult task of the CFO in implementing a lean strategy. The CFO must be concerned with the same focuses as the CEO but also address other lean strategy implementation obstacles embedded in traditional financial accounting practices that undermine lean cultures—perhaps the most common reason for the failure of sustainable lean transformations.

CHAPTER 4 EXECUTIVE SUMMARY

“Creating a New Framework for Performance Measurement of Lean Systems,” by Bruce Baggaley

Chapter 4 takes a critical look at the book’s second major focus, lean performance measurement. Since lean strategies are universally based on continuous, sustainable adaptation and wellbeing, many lean performance metrics are uniform across similar classes of lean enterprises whether oriented to product or service delivery. This first performance measurement chapter focuses on process measures, the first of two essential measurement categories for lean enterprises. The chapter begins with an analysis of the ways that traditional measures undermine lean transformations because they focus more on the shareholder than the customer. The discussion then moves to the ways that managers must structure lean performance measurement systems to enhance employee involvement and ownership to facilitate continuous learning and creative solutions to problem solving rather than the color-within-the-line mandates of traditional command and control measurement structures. Then, after describing the essential characteristics of lean performance measures and the way appropriate

measures reflect core lean principles, this chapter concludes with the presentation of a starter set of lean measures.

CHAPTER 5 EXECUTIVE SUMMARY

“Motivating Employee Performance in Lean Environments: Respect, Empower, Support,” by Frances Kennedy and Peter Brewer

Chapter 5 focuses on the second and most important of the two essential measurement categories for lean enterprises—employee motivation. Measurements motivate human behavior, and lean measurement systems borrow from a growing body of traditional research suggesting that people simply perform better when intrinsically motivated by their work rather than when extrinsically motivated by money, job titles, and working hours alone. This chapter describes the way that lean systems encourage employees to own and take pride in their work—with an enterprise culture that proactively takes formal steps to respect, empower, and support employee ownership of their work processes. In three parts, this presentation details the ways that lean managers involve employees in the creation and ongoing stewardship of the measures that monitor the quality and efficiency of the work they perform and the enterprise’s processes themselves. This chapter discusses concrete methods that lean enterprises use to capture the most from their human assets—the collection of talents and ingenuity employees possess and can apply to their work if given the opportunity. Enterprises lose these competence assets when employees are constrained by the extrinsic rewards of traditional performance management systems; this chapter gives managers an alternative that embodies the best of core lean principles.

CHAPTER 6 EXECUTIVE SUMMARY

“On Target: Customer-Driven Lean Management,”
by Dr. C. J. McNair, CMA

Chapter 6 launches the third and most extensive part of this book—lean accounting—by discussing how lean accounting is a specialized extension of performance management that addresses the driving force behind all lean en-

terprise management decisions: the customer. Maturing the financial accounting focus of the traditional Western enterprise is the make-or-break point for the lean transformation, and the growing emphasis Wall Street places on the customer just might be the easiest way for the traditional enterprise to justify a commitment to the lean journey. Chapter 6 examines lean accounting and performance measurement from a customer-driven perspective and gives equal treatment to considerations of service and manufacturing concerns. The chapter begins with an analysis of customer economics and the impact of customer perspectives on lean accounting and performance measurement system design with plenty of proven lean implementation examples from successfully transformed enterprises. The discussion then turns to customer segmentation strategies for the market by showing how lean enterprises analyze and group customers based on a common set of preferences for specific product value propositions, again with many examples from actual practice. The chapter concludes with ways that lean enterprises act on the customer perspective by building it into their accounting and performance measurement systems.

CHAPTER 7 EXECUTIVE SUMMARY

“Value Stream Costing: The Lean Solution to Standard Costing Complexity and Waste,” by Brian Maskell and Nicholas Katko

Chapter 7 addresses the crippling impact of legacy standard costing methods for enterprises on the road to lean transformation. Traditional enterprises continue to use these outdated practices from the mid-twentieth century, and standard costing methods are significant obstacles to a lean transformation because they support the traditional financially driven cultural values so inconsistent with customer- and employee-focused lean cultural values. After an analysis of the ways that standard costing undermines the lean transformation, this chapter presents the lean solution: value stream costing. A value stream is all the activities required to design, order, and manufacture a product or service from raw material to the customer and along with the work cell embodies the most important element of lean process and work flow design. Chapter 7 details how lean managers use the value stream as the focal point of all their cost management practices in terms of using cost information to manage the value stream, product costing, and implementing a value stream costing system.

CHAPTER 8 EXECUTIVE SUMMARY

“Obstacles to Lean Accountancy,” by Lawrence Grasso

Before moving to Chapters 10, 11, and 12, which give practical steps that managers can take to transform their accounting practices, Chapter 8 presents a thorough analysis of the obstacles traditional enterprises face at the start of the lean journey from the standpoint of accounting system relevance. The discussion emphasizes how strategic, measurement, and accounting practices influence each other, creating a self-reinforcing cycle. Appropriate accounting practices inform and lead to successful lean decisions, and successful decisions lead to favorable results measures that reinforce an evolving strategy based on lean management. As a management accounting domain, cost and performance measurement is a positive force enabling lean. Since this self-reinforcing cycle works both positively and negatively, inappropriate information inhibits continuous improvement, and inappropriate measurement focuses encourage behaviors that subvert lean management. This chapter identifies the five primary obstacles to lean transformation with an emphasis on the strengths and shortcomings of some of the most recent accounting and performance measurement system innovations like activity-based costing (ABC), *grenzplankostenrechnung* (GPK), resource consumption accounting (RCA), and the balanced scorecard for the lean enterprise. Chapter 8 concludes with some practical steps managers can take to overcome the barriers to lean transformation.

CHAPTER 9 EXECUTIVE SUMMARY

“Lean Application in Accounting Environments,” by Jean Cunningham

Chapter 9 pulls together virtually all themes from previous chapters discussing how to apply lean principles in the accounting environment seasoned by examples of practical, personal experiences. The central tenet of this chapter is that “effectively adopt lean” means first and foremost that the accounting function must adopt a new primary goal: *add value to the company bottom line for all activities*. To accomplish this goal, the lean accounting function must focus on three broad, overarching areas: (1) follow change and adapt accounting processes and deliverables; (2) establish how people use accounting information and supplement, modify, or eliminate reports to support the primary goal; and (3) seek out and eliminate waste in the accounting processes that do not add

value to decision makers. After a discussion of the ways that accounting participates in Kaizen events, Chapter 9 presents a ten-step process that guides the accounting function through the early stages of the lean transformation.

CHAPTER 10 EXECUTIVE SUMMARY

“Sarbanes and Lean—Odd Companions,” by Fred Garbinski

Chapter 10 addresses the lean perspective on a subject near the top of any manager’s list in the American business environment: Sarbanes-Oxley compliance. It begins by describing how and why the auditors were handed the role they now enjoy in a post-Sarbanes world because it is management’s responsibility, not the auditor’s, to design and implement effective control processes. The discussion then addresses how a management-led process, such as a lean initiative with its standard work, continuous improvement, and team-based organizational tools, can and does meet the Sarbanes requirements, thereby appropriately realigning responsibilities for the integrity of financial reporting and compliance requirements. Lean enterprises repeatedly demonstrate how lean processes are more effective and efficient than processes used by traditional, transaction-based mass producers. With the underlying purposes of simplicity, availability, understandability, and capability, lean process design easily meets the Sarbanes requirements of ensuring the reliability and integrity of financial reporting. The chapter discusses how this greater purpose actually allows lean enterprises to meet not only the financial reporting objectives necessary to comply with Sarbanes, but all the other Committee of Sponsoring Organizations of the Treadway Commission objectives as well.

CHAPTER 11 EXECUTIVE SUMMARY

“Collective System Design to Enhance and Sustain Lean as a Tool to Rethink Lean Accounting,” by David S. Cochran, PhD

Chapter 11 brings this book full circle by articulating a practical, systematic way for accountants to contribute to redesigning systems for the lean transformation. As a comprehensive, integrated approach to enterprise guidance and management, lean principles inevitably filter down to the system responsibilities of the management accountant in the traditional enterprise—accounting

and performance management. What should an accountant do when the enterprise attempts to transform itself according to lean principles? What is the actionable role of the management accountant that makes accounting more relevant in the lean enterprise?

Chapter 11 captures all of the lean principles and perspectives from earlier chapters and articulates the pathway that management accountants need to understand to guide the emerging lean system design. Each preceding chapter has focused on the importance of cultural change and the ways that accounting language and communication methods support cultural change. This chapter addresses lean enterprise environment functional requirements and physical solutions that lead to the lean transformation by articulating the language that accountants use in successful, sustainable lean initiatives.

Lean is an ecosystem composed of many self-regulating, balanced, supportive subsystems. Accounting is but one of those subsystems, but it must conform to the overall system design and balance. As one of the most important articulations for the management accountant, this chapter demonstrates the many ways that lean principles map the correct directions for the accounting profession.

ABOUT THE CONTRIBUTING AUTHORS

Bruce Baggaley (Chapter 4) is senior partner and cofounder of BMA, Inc., a firm that specializes in assisting companies that have adopted lean manufacturing to implement lean accounting practices and tools. Mr. Baggaley is a frequent speaker and author on management control for lean companies and is coauthor of the book, *Practical Lean Accounting* (Portland, Ore.: Productivity Press, 2003). He can be reached at baggaley@maskell.com.

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Dr. David S. Cochran (Chapter 11) is the founder of System Design, LLC. He was part of the mechanical engineering faculty at MIT from 1995 to 2003 as assistant and associate professor. He established the Production System Design (PSD) Laboratory at MIT and his company to advance the science of system design and integrated performance measurement, which provides a road map to sustain lean and the Toyota Production System and advance enterprises beyond these system designs. He is a two-time recipient of the Shingo Prize for manufacturing excellence for his work in the design of lean systems, and

he received the Dudley Prize for best paper from the *International Journal of Production Research* in 2000 for his work to integrate system design theory.

Dr. Cochran facilitates system design change with major companies. His work is presently focused on the collective system design of enterprise, and integrated product design and delivery systems with the Missile Defense Agency, Lockheed Martin, and RAC Advanced Composites.

Dr. Cochran is a visiting professor at Meijo University in Nagoya, Japan, in the management-engineering program. He is a former board member of the Greater Boston Manufacturing Partnership and is affiliated with the Society of Organizational Learning founded at MIT. Dr. Cochran received his PhD in industrial and systems engineering from Auburn University and MSc in manufacturing systems engineering from Pennsylvania State University.

Jean Cunningham (Chapter 9) is a thirty-year financial professional with wide-ranging experience in public and private companies. Her lean accounting journey started while the chief financial officer and vice president of company services, responsible for accounting, human resources, information systems, and telecommunications at Lantech, LLC. From 1991 through 2004, Ms. Cunningham was a leader in Lantech's evolution from a small, family-owned business to a lean industry leader. She joined the continuous improvement effort at Lantech from their first Kaizen and took the revolution of lean from the manufacturing floor to the accounting department and throughout the business office.

Jean is coauthor of *Real Numbers: Management Accounting in a Lean Organization* (Durham, N.C.: Managing Times Press, 2003), a Shingo Prize-winning study of real-life applications of lean accounting. Another book is in prepublication on information systems in a lean organization. More recently, Jean has expanded her consulting activities into a full-time endeavor. She consults with clients throughout the United States on business strategy, process improvement, and growth and acquisition planning, and she regularly writes and lectures on lean accounting and operations management. Jean has a BS in accounting from Indiana University and an MBA from Northeastern University. Jean and her husband live in the Chicago area.

Orest (Orry) J. Fiume (Chapter 3) was vice president of finance and administration and a director of the Wiremold Company, West Hartford, Connecticut, which gained international recognition as a leader in lean business management in *Lean Thinking* (New York: Free Press, 2003), by James P. Womack

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Mr. Fiume led Wiremold's conversion to lean accounting in 1991 and developed alternate accounting systems that supported the company's entire lean business efforts. He went on to install lean accounting at more than 20 Wiremold acquisitions. He has studied lean production in both the United States and Japan. In addition, he has taught courses on management accounting in a lean business at the Lean Enterprise Institute, the TBM Institute, the University of Dayton Center for Competitive Change, Manufacturing Extension Partnerships in five states, and numerous companies. He was a member of a delegation to China to discuss U.S. financial management practices.

Mr. Fiume is coauthor of the 2004 Shingo Prize-winning book, *Real Numbers: Management Accounting in a Lean Organization* (Durham, N.C.: Managing Times Press, 2003), and was inducted as a life member of the Shingo Prize Academy, which has been referred to by *BusinessWeek* as the Nobel Prize in manufacturing. He has a master's degree in management from Rensselaer Polytechnic Institute and a bachelor's degree in accounting from Fairfield University. He is a certified public accountant, a member of the American Institute of Certified Public Accountants, a member of Financial Executives International, and serves on the board of directors of several companies.

Frederick P. Garbinski (Chapter 10) is currently an assistant professor with Case Western Reserve University in Cleveland, Ohio, where he teaches financial management control systems and works with Brian Maskell Associates (BMA) assisting companies in implementing lean accounting methods. Before his retirement in 2005, he was with Parker Hannifin Corporation, a leading producer of motion-control components and systems. While with Parker, Mr. Garbinski led a number of financial initiatives including reengineering finance, lean accounting, and most recently Sarbanes-Oxley. Previously, he was responsible for financial reporting, manufacturing accounting, and government accounting and served as the director of internal audit.

A certified public accountant, Mr. Garbinski began his career at Deloitte & Touche after receiving his BS degree from Indiana University of Pennsylvania. He is a member of the American Institute of Certified Public Accountants and has served on a number of its committees. He is also a member of the Ohio Society of CPAs and the Financial Executive's Institute.

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Jim Huntzinger (Chapter 2 and Glossary) is the president of the Lean Accounting Summit, LLC, and Highland Path, a lean enterprise consulting group and research network in Pendleton, Indiana. He began his career as a manufacturing engineer with Aisin Seiki (a Toyota Group company) when they transplanted to North America to support Toyota. He also spent eight years at Briggs & Stratton in a range of engineering and management positions working to implement and evolve lean into its manufacturing operations and business practices.

Mr. Huntzinger has spent over eight years as a manufacturing consultant helping businesses, ranging from global corporations to small privately held companies, implement lean tools and strategies and has researched at length the evolution of manufacturing in the United States and with an emphasis on lean influences and development. Mr. Huntzinger holds a BS in mechanical engineering technology from Purdue University and a MS in engineering management from the Milwaukee School of Engineering. He can be reached at jim@leanaccountingsummit.com and 317-813-5415.

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