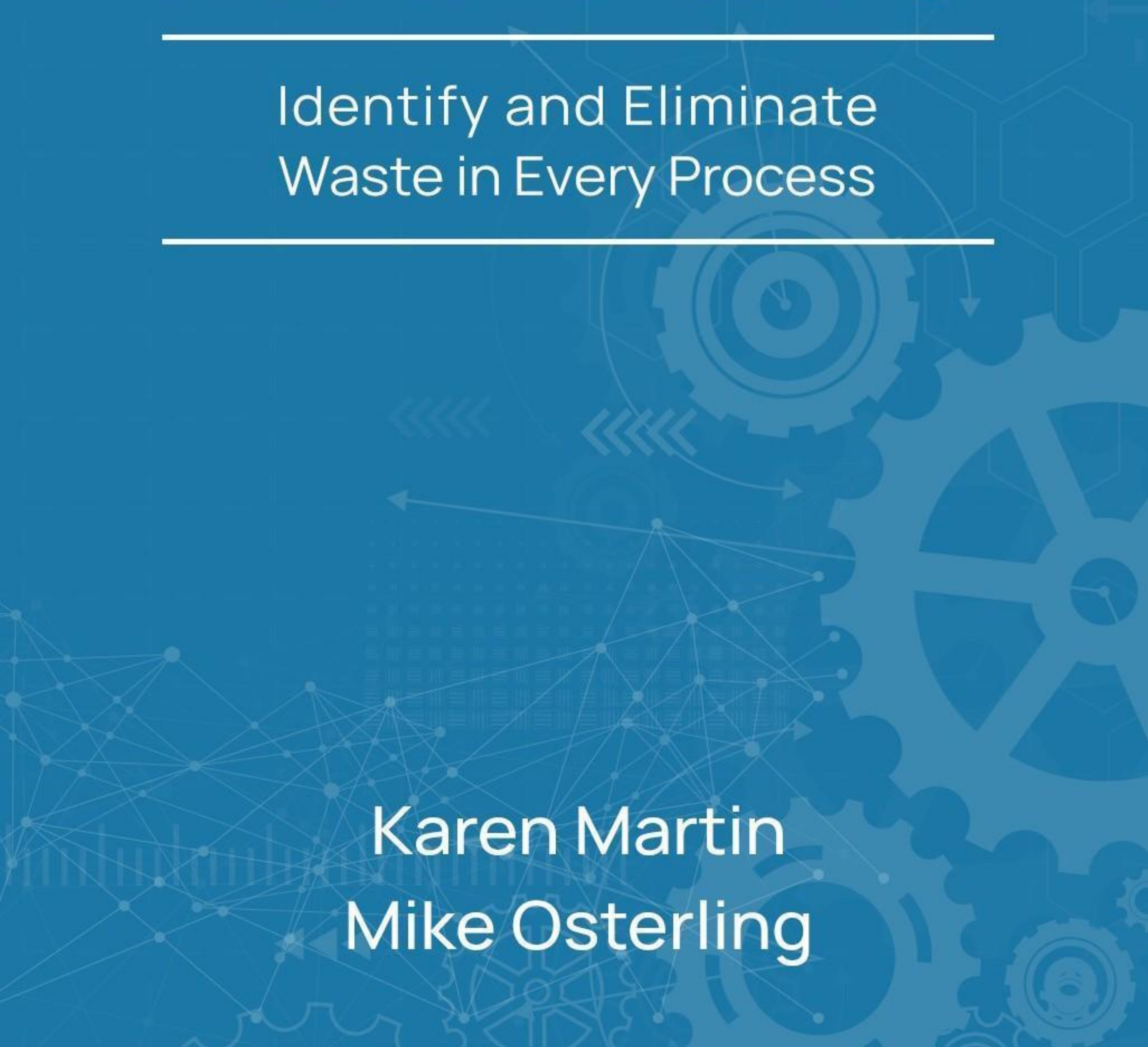
METRICS-BASED PROCESS MAPPING

Identify and Eliminate Waste in Every Process



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Introduction

In the years since we published *The Kaizen Event Planner*, in which we introduced Metrics-Based Process Mapping (MBPM), and the many years since we released the Excel tool to electronically capture one's results, Lean management practices have evolved. Where many of the early Lean books—and, therefore, field application—were heavily tools- based, today's Lean practitioners, consultants, researchers, and business leaders recognize that, while tools are necessary, they are not sufficient. As we've explored more deeply what makes Toyota and other outstanding organizations tick, we've recognized that operational excellence and lasting transformation are the result of developing deep organizational capabilities for problem solving and continuous improvement.

We've also learned that proficiency in process measurement and analysis remains low, which slows improvement and creates significant risk when attempting to solve problems. Without a clear understanding of current-state performance—which requires the use of key process metrics—improvement teams risk drawing inappropriate conclusions and making improvement that is neither effective nor measurable. Let us be clear: it's impossible to make informed process design decisions and measure one's progress without relevant metrics.

While many organizations are making headway on their journey to excellence, nearly all could benefit by improving how they improve. This book and the accompanying Excel-based mapping tool provides the knowledge you need to create efficient and effective processes that enable the continuous flow of work, and creates a more joyful work experience for team members.

In Chapter 1, you'll learn what a process is, how processes vary, and why process management is critical to organizational excellence.

Chapter 2 focuses on why we developed this method, how to use it, its benefits, and how process mapping fits into the overall Plan-Do-Study-Adjust improvement cycle. Chapter 3 addresses preparation for mapping, including team formation, logistics, and crafting a charter that serves as a planning and communication tool.

The step-by-step approach for creating a current-state map is covered in Chapter 4. Here, we also introduce the three key metrics you need to gain a deep understanding of current state—process time, lead time, and percent complete and accurate—and design an improved process that reduces both time metrics, while increasing process quality.

Chapter 5 provides guidance for designing and implementing improvements to your process, while recognizing that every process's performance needs are different. To this end, we avoid prescription. We've also included some tips we use to counter resistance to improvement.

Chapter 6 serves as a user's guide for the downloadable Excel tool (which is included when you purchase this book) should you opt to electronically archive your mapping team's work. The electronic map also serves as the new standard work for the improved process.

And finally, Chapter 7 shows you how to monitor and continuously improve your processes, a step where organizations often falter.

As you begin reading, we encourage you to conduct an honest evaluation about where your organization currently sits in regards to process design, management, and improvement. We find that—even in organizations that have been applying Lean and/or Six Sigma practices for many years—processes remain largely undefined, riddled with waste, not monitored, and not continuously improved.

The behaviors, habits, and practices that must be adopted in order to transform into an improvement-minded organization that performs at increasingly high levels are conspicuously absent in most companies, government agencies, and nonprofits. It's time to change that. It's time to put an end to:

- Organizational performance that limps along due to excess waste and confusion
- The poor morale that results from poorly defined and managed processes
- The leadership frustration and poor decisions that can result from not knowing how processes will perform tomorrow, compared with today
- Customer experiences that make them more likely to turn elsewhere for solutions to their problems.

It's time to put an end to the organizational chaos that holds you back from performing at the levels you want and need to. It's time to create a work environment that has fewer fires, happier employees, and the bandwidth to innovate and add customer value.

While this book provides the know-how for applying an effective method for defining, improving, and managing processes, it does not include detailed content about how to create a culture where metrics-based process mapping is used as the means to build the organization discipline needed for continuous improvement. Ideally, nearly everyone in your organization knows how to create MBPMs and they are highly proficient in thinking about processes in terms of the three key metrics: process time, lead time, and percent complete and accurate.

Your ultimate goal is to operate with processes that are well-defined, error-proofed, standardized as much as is prudent, waste-free, documented, and regularly monitored. This book—in conjunction with the Excel tool—has proven helpful to many. We hope you find this to be the case as well and welcome you to share your experiences by contacting Karen at www.tkmg.com and Mike at www.mosterling.com.

Let's get to it. There's much to be done.

Chapter 1

What Is a Process?

How many times have you heard, said, or felt, “Well, that was a grueling process”? Whether grocery shopping, filing an insurance claim, or trying to get through the security line at the airport, we are surrounded by processes. Some go so smoothly we hardly take note; others can be downright painful.

In the work environment, processes are how all needs or requests are satisfied. More and more organizations are beginning to understand that they need to improve their processes. In fact, due to ever-changing customer requirements, technology, and competitive factors, they need to be *continuously* improved. But before we can discuss how to improve processes, it is helpful to understand what a process is, what the common components are, the types of processes, and why process management is important.

Definition of a Process

Merriam-Webster defines a process as “a series of actions or operations conducing to an end.” Taking this definition to the next level, a process is a sequence of activities performed to design, produce, or deliver a good, service, or information to an internal or external customer. In Lean lexicon, processes are classified as either *value-adding* or *non-value-adding* as viewed through the eyes of an external customer. Non-value-adding processes are further classified as either necessary (essential for meeting business, customer, or regulatory requirements) or unnecessary (nonessential). Necessary non-value-adding processes are sometimes referred to as *value-enabling* processes.

The individual steps one takes to get work done (or the specific tasks one performs) connect together to form processes, and processes connect together to create value streams, the way in which you deliver value to your customers. We discuss value streams in greater detail in Chapter 2.

Process Components

A process has three primary components: inputs, activities, and outputs. Process *inputs* may be verbal (phone calls and in-person requests), electronic (orders, reports, downloads, EDI, email requests, etc.), physical (e.g., hard copy reports and forms, service parts, equipment, specimens for analysis, etc.), or human (people seeking a service). Process *outputs* are typically the product (good, service, or information) required by the customer of the process.

Process *activities* are the actions that are taken to convert inputs into outputs. Many of these activities could be classified as transformational (e.g., calculating a price in response to a request for a quote); other activities do not transform inputs but are still classified as work (e.g., moving a document from one person to another, etc.).

Documenting process inputs, activities, and outputs serves a variety of purposes. First, formally and clearly defining customer requirements and expectations is necessary to ensure that process outputs are properly designed and delivered. The quality of process outputs is directly related to the quality and consistency of process inputs and the process design itself. Second, understanding and documenting inputs and activities is necessary to identify and eliminate wasteful activities that add expense, slow delivery, erode quality, create unnecessary risk, and frustrate employees, customers, and other stakeholders. Finally, process documentation is also necessary for training process workers, measuring process performance, and serving as the foundation for continuous improvement.

Types of Processes

In considering process improvement, it's helpful to understand the different types of processes. Some processes involve physical transformation such as repairing a computer or baking a cake. Other processes convey information such as a loan approval. And other processes transform information and ideas into a new product or service.

Processes range from low to high variation. In a low-variation process, the inputs, activities, and outputs are fairly consistent—for example, processing loan payments or insurance claims. In higher-variation processes, the inputs, activities, and outputs may vary significantly, both in terms of the type of input, activity or output, and the time it takes to accomplish the work.

Processes ultimately serve either internal or external customers, and receive initial inputs from either internal or external suppliers. For example, expense report processing serves an internal customer (the employee), whereas processing a credit application serves an external customer (the applicant). In some cases, the suppliers are both internal and external, as in an estimating process that requires cost inputs from both manufacturing and external subcontractors. And, in many office and service processes, the customer and the supplier may be one and the same, as in credit application and expense report processes.

Other ways in which processes can be differentiated include the frequency with which the process is performed (repetitive or one time), technology used (automated versus manual), and the mental processes involved (analytical versus rote).

Process Management

Processes that are properly defined and executed will produce predictable results—and in today's work environment, demands for well-executed processes are coming from all directions. External customers demand predictability in delivery and quality. To stay competitive, owners and managers constantly seek cost reductions, better quality, and faster delivery. The workforce wants greater engagement, reduced interpersonal and interdepartmental friction, and less frustration and stress while performing their jobs.

Poor process management can hinder the realization of all of these needs. By understanding process inputs and focusing on improving how the work is done, outputs can be measurably improved. But improvement can only be achieved if you know how the process is performed, you can measure process performance, and you have the ability to see where the gaps exist within the process. This is where Metrics-Based Process Mapping comes into the picture.