

## Introduction

At Toyota, where I worked for more than 10 years, the way of thinking about problems and learning from them for more effective planning, decision-making, and execution is one of the secrets of the company's success. The process by which the company identifies, frames, and then acts on problems and challenges at all levels—perhaps the key to its entire system of developing talent and continually deepening its knowledge and capabilities—can be found in the structure of its A3 process.

And so this book is designed to help you learn from your problems as you seek to solve them, while at the same time producing innovative and problem-solving employees. Many elements of the Toyota system have been held up as the key to its tremendous success, but the most important accomplishment of the company is simply that it has *learned to learn*.

Many people familiar with A3 reports see them primarily as a simple communication tool or problem-solving technique. It's understandable that they focus on this immediate, though limited, application. A3s are, indeed, powerful tools that lead to effective countermeasures based on facts. As a result, companies that successfully implement them for decision-making, planning, proposals, and problem-solving can realize instant gains.

But in this book I also want to reveal A3 as a *management process*. The widespread adoption of the A3 process standardizes a methodology for innovating, planning, problem-solving, and building foundational structures for sharing a broader and deeper form of thinking. This produces organizational learning that is deeply rooted in the work itself—operational learning.

### Discovery at Toyota

I discovered the A3 process of managing to learn firsthand during the natural course of my work in Toyota City beginning in 1983. I was mentored and saw my Japanese colleagues both being mentored and mentoring others in the company's most prevalent management tool—its most visible form of organizational “currency.” My colleagues and I wrote A3s almost daily. We would joke, and lament, that it seemed we would regularly rewrite A3s 10 times or more. We would write and revise them, tear them up and start over, discuss them and curse them, all as ways of clarifying our own thinking, learning from others, informing and teaching others, capturing lessons learned, hammering down decisions, and reflecting on what was going on.

Every year I saw new Toyota recruits, just graduated from the university, arrive at their desks to find a blank sheet of A3-sized paper, a mentor, and a problem or project for which they were assigned ownership. Over the course of the first months, each would be coached through A3 thinking. They explored how to “go see” and comprehend the real nature of a problem, how to analyze it, and how to take effective initiative to *work the organization* to develop reasonable countermeasures to improve the situation.

My own epiphany came when my boss told me, “Never tell your staff exactly what to do. Whenever you do that, you take responsibility away from them.” His comments revealed how Toyota operates not as an “authority-based” but a “responsibility-based” organization. Almost all organizations (certainly *all* large ones) are cross-functional in operation while being functional in structure. This results in a matrix that so often leaves ownership unclear, decision-making stymied, and everyone frustrated.

### **Pull-Based Authority**

In stark contrast, effective use of the A3 process can facilitate the shift from a *debate* about who owns what (an authority-focused debate) to a *dialogue* around *what is the right thing to do* (a responsibility-focused conversation). This shift has a radical impact on the way decisions are made. Individuals earn the authority to take action through the manner in which they frame the issue. They form consensus and get decisions made by focusing relentlessly on indisputable facts that they and their peers derive from the gemba.

However, for leaders to refrain—as much as possible—from dictating does *not* mean laissez-faire disengagement. As we shall see, the Toyota leader engages in the messy details of the work being done in order to learn and become thoroughly knowledgeable about the process at hand. Questioning, coaching, and teaching take precedence over commanding and controlling. That’s why Toyota pioneer Taiichi Ohno believed that one could learn what’s important about an operation by simply standing and observing it from one fixed location. Where the laissez-faire, hands-off manager will content himself to set targets and delegate everything, essentially saying, “I don’t care how you do it, as long as you get the results,” the Toyota manager desperately wants to know how you’ll do it, saying, “I want to hear everything about your thinking, tell me about your plans.” Only then can the manager mentor the problem-solver.

Therefore decision-making and actions are interwoven with planning and problem-solving. The manager’s job is to see problems, and he can only do so by knowing every messy detail of the work being done—the A3s of those working with him contain these facts. It is assumed that there will be problems, and that nothing will go according to plan. That’s why Toyota managers are known to say, “No problem is problem.” This recognizes that it is the very job of all managers—even all employees—to see and

respond to the problems that are there, the problems that we *know* must be there. By successfully incorporating the A3 into team activities, companies will not only learn to stop avoiding problems, they will begin to recognize problems as powerful opportunities for learning and for improvement.

Unlike traditional command-and-control leaders who rely on the authority of their position to instruct others how to deploy strategy, the Toyota leader is concerned more with responsibility. The Toyota leader will strive whenever possible to eschew simple command in favor of leading by being knowledgeable, fact-based, and strong-willed yet flexible; in other words, by being a true *leader*.

But, just as this leader eschews command and control, he also embraces a style and process that contrasts equally with the laissez-faire, hands-off approach of the supposedly enlightened modern manager. This is a stark contrast to the results-only-oriented, management-by-numbers approach—often couched in the misleading terms of “management by objectives”—that is employed by many conventional managers. As H. Thomas Johnson noted,<sup>1</sup> whereas the traditional manager tries to manage by manipulating results—something akin to driving while looking in the rearview mirror—Toyota managers manage the means, the process itself that actually leads to results.

As a result, Toyota management can best be understood as neither “top-down” nor “bottom-up.” The A3 process clarifies responsibility by placing ownership squarely on the shoulders of the author-owner of the A3, the individual whose initials appear in the upper right-hand corner of the paper. This person may not have direct authority over every aspect of the proposal. Yet this owner is clearly identified as the person who has taken or accepted responsibility *to get decisions made and implemented*.

While it would be an overstatement to say that the entire Toyota management system boils down to this one method (not every Toyota manager exhibits all these characteristics all the time), it’s fair to say that effective use of the A3 can embody the extraordinary management thinking that has made Toyota what it is.

At Toyota, there was never a stated goal to “implement the A3 process.” Rather, the A3 emerged as the method through which it could yoke two important work management processes: hoshin kanri (strategy management) and problem-solving. At the macro enterprise level, hoshin kanri aligns organizational goals and objectives with operations and activities, while at the micro, or individual level, formalized problem-solving creates operational learning. The A3 process combines and embodies both. As a result, companies that seek a disciplined hoshin kanri process and an effective problem-solving process will find tremendous challenge and opportunity in embracing the A3 process.

1. H. Thomas Johnson, *Lean Dilemma: Choose System Principles or Management Accounting Controls, Not Both*, self-published paper and a winner of the 2007 Shingo Research Award, Sept. 26, 2006.

At companies on a lean journey, individuals at every level can use A3s as a way to propose projects, take initiative, show ownership, sell ideas, gain agreement, and learn. Managers can use A3 thinking to coach and teach; to assign clear responsibility, ownership, and accountability; to get good plans from subordinates; and to mentor employees. And organizations can use A3 thinking to get decisions made, to achieve objectives and get things done, to align people and teams along common goals, and, above all, to learn for effectiveness, efficiency, and improvement. A3 works as both a problem-solving tool and as a structured process for creating problem-solvers. The A3 helps spread a scientific method that forces individuals to observe reality, present data, propose a working countermeasure designed to achieve the stated goal, and follow up with a process of checking and adjusting for actual results.

## **This Book**

You're holding a book within a book: one to share the fundamentals of the tool, and a second to share the underlying learning process.

The core story shares how young manager Desi Porter, who is versed in lean basics, discovers the content and meaning of the A3 process. As he learns, you will become familiar with some typical formal elements of an A3 proposal and its applications. Porter's story appears on the left side of each page in black text. The story of Porter's A3 education is deeply informed by its counterpart, which reveals the thinking behind the actions and insights of his supervisor, Ken Sanderson, as he mentors our protagonist through the learning process. Sanderson's story appears in blue text on the right side of the page.

Mentor Sanderson seeks to apply this broader approach to his own set of problems and decisions. He understands that the A3 process illustrates the means to build robust, sensible systems and processes that cascade responsibility throughout the organization. The intent is to embed organizational habits, practices, and mindsets that enable, encourage, and teach people to think and to take initiative. The system is based on building structured opportunities for people to learn in the manner that comes most naturally to them: through experience, learning from mistakes, and plan-based trial and error.

So the goals for this book are both modest and ambitious.

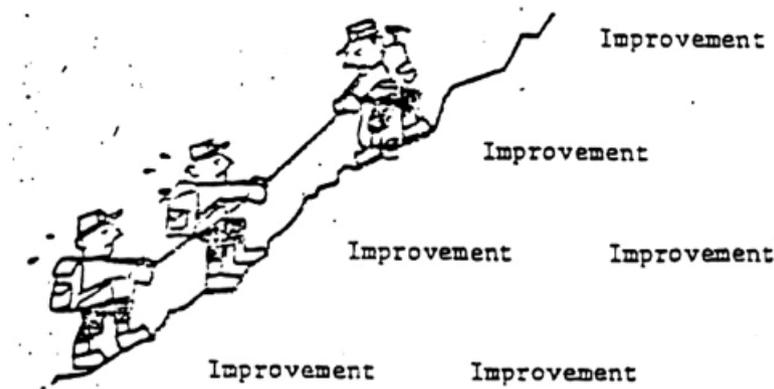
In this book, you will learn how to write an A3 proposal. Writing an A3 is the first step toward learning to use the A3 process, toward *learning to learn*. Some benefits in improved problem-solving, decision-making, and communications ability can be expected when individual A3 authors adopt this approach. But unless the broader

organization embraces the broader process, the much greater benefit will be unrealized. The entire effort may degenerate into a “check-the-box” exercise, as A3s will join unused SPC charts, ignored standardized work forms, and disregarded value-stream maps as corporate wallpaper.

Every organization I know struggles to incorporate and sustain successful operations along these principles. The A3 is but a tool in a broader system. My hope is that by applying the practices of both the core story and its management perspectives that managers and supervisors can improve their lean learning and leadership. The real questions that should precede your reading of this book are, “How do you want to manage? How do you want to lead?”

If you want to manage and lead in ways that build robust systems and processes that cascade responsibility and learning throughout the organization, then the A3 management style and process—not just the A3 piece of paper—will help you do so.

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The lean leader’s job is to develop people. If the worker hasn’t learned, the teacher hasn’t taught.<sup>2</sup>

2. *Training Within Industry Report* (Washington, DC: War Manpower Commission, Bureau of Training, 1945).