

RIC MERRIFIELD

A BUSINESS
MANIFESTO FOR CUTTING
COSTS AND BOOSTING
INNOVATION

what do you need to do today?

Contents

Introduction 1

ONE

How the “How” Trap Is Trapping You 7

The Cases of the ZIP Code Bandit and the Laggard Laptop 19

If Not Now, When? 21

TWO

The Thinking Behind Rethinking 27

Unit of Analysis: The Task 28

Unit of Analysis: The Worker 31

Unit of Analysis: The Department 32

Unit of Analysis: The Process 33

The New Unit of Analysis: The “What” 34

THREE

First—Identify the “Whats” That Are Truly Valuable 39

Newman’s Own, Where More Than Food Has Value 48

How to Rethink Your “Whats” 56

FOUR

- Second—Know What You Are (and Aren't) Good At** 61
- Target, Where the Supply Chain “Whats” Are King 64
- Burgerville, Where the Flavor Goes in
and the Garbage Stays Put 66
- An Electronics Giant That’s Got the Juice 71
- How to Rethink Your “Whats” 73

FIVE

- Third—Make (and Break) Connections** 77
- Merck: Beyond the Moat 82
- How to Rethink Your “Whats” 88

SIX

- Fourth—Understand What Can (and Can't) Be Predicted** 91
- JetBlue: Storm Warnings 99
- How to Rethink Your “Whats” 105

SEVEN

- Fifth—Unravel (and Follow) the Rules** 109
- Matching Laws and “Whats” 114

EIGHT

- Revolutionary Rethinking at ING DIRECT** 117
- ING DIRECT Did What? 131

NINE

- Rethinking at Eclipse** 133
- Eclipse Aviation Did What? 149

TEN**Rethinking at Cranium 151**

Cranium Did What? 167

ELEVEN**Morph Again and Again 169**

P&G Soars by Morphing Its Innovation “Whats” 186

Key Concepts 193

Conventional “How” Business Views 194

What Is, and Is Not, a “What” 199

Reading a Heat Map 201

Getting to the List of “Whats” 206

A Bit More About Level 1 Maps 209

Level 2 Maps 210

INDEX 213

Introduction

THIS BOOK HAD ITS genesis around the turn of the millennium. At the time, many large companies were adopting two kinds of software programs that transformed the way businesses were run. *Customer relationship management* (CRM) software measured and controlled contacts with customers from marketing, through sales, and into support and other services. *Enterprise resource planning* (ERP) software helped manage inventory, logistics, accounting, and virtually every other aspect of an organization.

We at Microsoft were aware that the CRM and ERP programs were coloring companies' decisions about which computer systems to buy—and there we were sitting on the sidelines. So we decided to create our own business application software. There was one small problem: We lacked in-depth knowledge of our potential customers' operations.

The team that was assembled to explore this *terra incognita* suggested the creation of a detailed map of a hypothetical company's essential business activities. It began with an outline of an archetypal business' five-top activities—or as we initially called them, “capabilities”—that included the following:

1. Create Products and Services
2. Generate Demand
3. Deliver Products and Services

4. Plan and Manage the Business
5. Manage Collaboration

The more the team examined these high-level capabilities, the more it saw them as overall categories encompassing hundreds of lesser, though still vital, capabilities that it set down in descending order. Under “generate demand,” for example, were listed several major capabilities, including “market products and services,” which, in turn, sat atop a group of capabilities that included “manage marketing”—and so it went.

Eventually, the team had a list of literally hundreds of universal capabilities that covered about 80 percent of all business activities and constituted an entire nomenclature for every company anywhere on earth. When presented in map form, the list filled a six-by-six-foot poster that, ironically, looked like a giant blowup of a computer chip. It described not just a company, but the workings of everything and everyone connected with the business.

The map served admirably as a means of orienting Microsoft salespeople to the complex operations of potential customers. But it also took on a life of its own.

It turned out that the map, tailored to take into account the differences between industries, gave the company leaders we called on a unique overview of their operations. Laying out their capabilities in

discrete, interconnected chunks—LEGO bricks, if you will—made it much simpler for them to spot and eliminate duplications and determine which elements of their operations to keep and which to outsource or automate.

In what proved to be a happy coincidence, the map emerged just as two major developments—Web 2.0 and service-oriented architecture (SOA) —were starting to revolutionize business management. The advent of Web 2.0 helped the Internet evolve from a mere collection of Web sites to a complete computing platform. Now, we could create Web-based software applications and operate them for our customers. Companies communicated and shifted work as never before. At the same time, SOA was beginning to gain momentum, making it possible to see the relationships between and among the hundreds of capabilities within a company—and with its suppliers and customers as well. Suddenly, business leaders could automate, share, outsource, even sell one or another element of their operations without going through the messy analytics of interfaces and integration.

The power of the map, the third piece of the puzzle, was now even more of a boon to business performance. It provided the words to cut through the proprietary languages that are so pervasive at many companies (ours included), and it served to fully unlock the potential of SOA and the Internet.

Since its first appearance, the map has grown and evolved. The master list of typical capabilities, for example, has been substantially expanded. Beyond that, the basic concept of a capability has been enlarged and made part of the overarching new approach to management that is the topic of this book. These ideas received their first public airing in a June 2008 *Harvard Business Review* article written by the author of this book together with Jack Calhoun of Accelare and Dennis Stevens of Synaptus.

And as the approach has evolved, the term “capability” has been more precisely refined. Now the focus is on the desired outcomes of an activity—*what* it does as opposed to *how* it is done. So instead of speaking of capabilities in the pages ahead, they are referred to as “whats.” The distinction is important, particularly because management theory in recent decades has focused so strongly on such how-oriented programs as reengineering and Six Sigma. It has also helped make the approach basic enough to be understood and applied by employees at every level of a company.

Microsoft’s product philosophy has undergone a major evolution as well. Today, we view the future of our corporate customers as being tied to the interaction of local software and Internet services; the architectural-design power of SOA is wedded to the managerial power of Web-based *software-as-a-service* (SaaS). We call the combination Software Plus Services, or S+S.

Information technology, per se, does not receive a great deal of attention in this book. That's because IT is a means to an end rather than an end in and of itself—a “how” rather than a “what”—and this book is essentially about helping leaders to better comprehend and manage their “whats.” From a Microsoft point of view, that is a devoutly wished-for consummation, because if our customers don't know what their companies require, we have a hard time helping them decide how best to get there.

As these words are being written, the economic climate in the United States has taken a distinctly worrisome turn. A recession represents yet another challenge for business leaders already facing cruel competition, globalization, and the vagaries of ever more fickle and demanding customers. This book offers a new, yet proven, approach that has enabled many companies to achieve vastly greater efficiency and flexibility. May it do the same for you, too.

Ron Markezich, Corporate Vice President,
Microsoft Online Services

ONE

*How the “How” Trap
Is Trapping You*

*“It is not the strongest of the species
that survive,
or the most intelligent, but the ones
most responsive to change.”*

–Charles Darwin

THE HOME-IMPROVEMENT colossus had been the fastest-growing retailer in U.S. history, its revenues doubling every two or three years for more than a decade. But by 2000, Home Depot was showing signs of wear. So the board of directors filled the top job with a high-powered fixer-upper, Robert L. Nardelli, who had proven his mettle as a senior executive at General Electric.

The new chairman and CEO thought he knew just what Home Depot needed, a jolt of newfound efficiency. He simplified processes, slashed costs, and invested \$1 billion in new technology while doubling the number of stores. He promised investors that the company would reach new heights of sales and profitability, and he delivered: Between 2000 and his departure in 2006, annual revenues soared from \$45 billion to nearly \$80 billion, and profits doubled. But amid that success, Nardelli also came close to destroying the single, most-important advantage the company possessed.

Since its founding in 1978, Home Depot had triumphed over its competitors because of the friendly, helpful environment in its stores. Salespeople, backed by innovative, hands-off managers, eagerly answered customers' questions and shared their home-improvement knowledge and experience. As a result, weekend novices learned a new vocabulary (a Phillips screwdriver, for example, is not a cocktail) and became skilled do-it-yourselfers and steadfast Home Depot customers.

In pursuit of savings, Nardelli slashed employees' hours to the point that many seasoned people quit; they were replaced by less-knowledgeable and less-committed part-timers. He also stripped store managers of their traditional autonomy. Before long, Home Depot had devolved into a generic big-box outlet run by nervous functionaries micromanaging unhelpful, uninterested salespeople. Meanwhile, Home Depot's chief rival, Lowe's, was staffing its stores with just the kind of outgoing, caring men and women who had originally given Home Depot its edge.

In 2001, Home Depot and Lowe's held identical rankings among specialty retailers on the University of Michigan's American Customer Satisfaction Index (ACSI). By 2005, Lowe's was second only to Costco, and Home Depot was at the bottom of the list. Although revenues increased during Nardelli's reign (largely because of store expansion), customer satisfaction took a nosedive. From 2000 to 2006, Home Depot's ACSI score was a mere 1.7 out of a possible 100. Meanwhile, Lowe's same-store sales growth averaged nearly three times that of Home Depot, and investors paid heed: Home Depot's stock price was flat between 2000 and 2007, while Lowe's shares jumped more than 200 percent.

In January 2007, the board of directors handed Nardelli his walking papers. By conventional standards, he had done everything right—cutting costs,

improving processes, and increasing efficiency and productivity. His mistake? Falling victim to the “how” trap. Nardelli had focused almost entirely on improving the efficiency (read: cost) of the work being done rather than on the purpose of that work. In other words, he trained his sights on the “how” of any given activity rather than on the “what,” the outcome it sought to achieve. In Home Depot’s case, the crucial “what” was helping customers to find the right product, that being the capability that drove sales.

Nardelli’s error is all too common. Leaders tend to devote their energies to thinking about the details, thereby missing the big picture. We invest our time in improving job efficiency without stopping to rethink the value of the job itself. And that means we fail to ask, and answer, some essential questions: How important is a particular activity to the company’s goals? How well is it performing in that context? Should it be given greater attention and resources? Should it be automated? Outsourced? Or completely eliminated because its work is being duplicated elsewhere in the organization?

Our mistakes accumulate—and not without good reason. For one thing, we spend our days in the office coping with immediate concerns. In today’s perilous economic environment, there’s precious little time for anything else. Moreover, management theory in recent years has pointed us toward a focus on

process, on how efficiently a job is done as opposed to what the job is supposed to accomplish.

Yet most of us haven't rethought which of our activities are most important to our companies, which are succeeding, which are borderline or even redundant. Indeed, until now, there has been no way to accurately and efficiently rethink and measure all these “whats” because we have been caught in the “how” trap, a pervasive and perverse human condition that allows us to sidestep blame for failing to reach our organization's potential.

Consider this mundane but illuminating example: Back in the summer of 2008, with the price of gasoline soaring to obscene heights, a friend of mine had a kind of epiphany. Once each day, she drove to her favorite park to walk her golden retriever. She never really thought about the route she was taking; it was just how she got to the park. Then one August day, after an eye-popping visit to a gas station, she decided it was time to cut back on her driving. It had become just too expensive.

The daily trip to the park was her first target. She spent an hour or two poring over a map looking for a better route, and, eventually, she found one. It was shorter, skirted traffic, and was burdened by only a few lights. My friend tried the new route over the next week, and it did save her a few minutes of driving and a few cents worth of gasoline. Nevertheless, she was disappointed with the results.

Then she had a brainstorm. Instead of struggling to improve the “how” of getting to her favorite park, she drastically rethought the situation at hand—the “what” that she hoped to accomplish. She spread out her map and began looking for other suitable parks much closer to her house. Sure enough, she found one. Her new destination wasn’t as big or as woodsy as her favorite, but the dog was happy—and over a week’s time, she could calculate her fuel savings in dollars.

A particularly memorable example of someone putting on his rethinking cap to escape the “how” trap was Oregon high-jumper Dick Fosbury. Until Fosbury came along, athletes attempted to clear the high bar by running face forward toward it and using an open scissor-style jumping motion, a technique not unlike the way hurdlers run and jump over their barriers. Faced with the “what” of **Jump-Over-the-Bar** and needing to achieve the best possible height to win, Fosbury introduced a method that was almost the opposite of the then-standard technique: He would run toward the bar at great speed and then, just prior to jumping, he would twist his body to put his back to the bar so he could “flop” over head first. By rethinking his approach, Fosbury won a gold medal in the 1968 Summer Olympics in Mexico City, setting a new standard “how” for accomplishing the “what” of **Jump-Over-the-Bar**.

My work has shown that our world is a treasure trove of Fosbury Flops waiting to be discovered, and the only thing holding people back is the rethinking required to get out of the “how” trap.

Business leaders’ final destinations may differ, but all face similar problems on the road to finding a better way of accomplishing a task. And if they seek advice from the people who actually do the work of their companies, the answers will tend to be more confusing than helpful. That’s because employees and managers typically respond as my dog-walking friend did at first; they think of their jobs in terms of how they do them rather than what they are intended to accomplish. So they may recount the work-flow process steps and any technology used, relying on descriptions that are chock full of company-specific terminology and that vary according to the person being asked. Ask five different people, and you’ll get five different explanations—all accurate in their way but a product of the subjective, limited views of each spokesperson.

Where, then, do managers or leaders turn if they want to intelligently and efficiently boost productivity? They have a raft of subjective perspectives about the work but lack the clear and stable view of their organizations that they need to accurately assess the cost, value, risk, or impact of acting (or not acting) on a problem or opportunity. And with multiple perspectives to sort through, they

inevitably find themselves stuck in a long, arduous, and argumentative process before they can arrive at organizational consensus on priorities and actions that might or might not be the best answer.

The approach presented in these pages enables business leaders to rethink—rise above that clutter of “hows” and consider the “whats,” the desired outcomes of an organization’s thousands of activities. The key is to just stop wasting time and effort thinking about the “hows.” After all, as we know, they are subjective, unreliable, and diversionary—they blind you to big-picture realities. And when you ditch the “hows” to concentrate on the “whats,” you are rethinking, and rethinking is what can allow you to reach precise, reasoned decisions about the resources you should invest in any given aspect of your operations.

Some people believe that the practice of business is a blend of art and science, and that any attempt to deconstruct a company into its elemental constituents is misguided if not impossible. My research has led me to a different conclusion: The activities of every business can and should be reduced to a fundamental, objective view of the totality of the work the company does. And in my research, I have identified the “whats” that comprise 80 percent of every company’s outcomes, no matter the industry.

When you rethink—forgetting about the “hows” to concentrate on the “whats”—you are creating an

easily understood table of your company’s essential components. And when you see them laid out in their logical sequence, you can determine the organizational value of each “what.”

The process and its outcome reminds me of a problem I run into when I go trout fishing under a bright, azure sky. The sun’s reflections make it almost impossible to see the fish swimming below the surface. When I put on polarized sunglasses, though, I can look deeper into the water, spotting what I hope to catch.

Just so, your rethought list of “whats” opens your eyes to the deep-down workings of your company presented in orderly fashion. It makes you indifferent to how these elements have been traditionally arranged within the organization, freeing you to concentrate on what really matters—outcomes. After your “whats” have been defined, you can step back and determine whether and to what degree each of them contributes to your enterprise’s success. Then, depending upon your findings, you can eliminate some, outsource others, and reorder the ones that remain, just like those plug-and-play monitors and printers that arrive ready to use. You have escaped from the “how” trap. That’s the beauty of rethinking.

Consider what happens when an insurance agent phones headquarters to assess a new customer’s

policy application and get a premium quote. A manager at the home office, using some sort of actuarial algorithm in a spreadsheet, comes up with a quote and sends it to the agent via e-mail. Ask that insurance agent “what” he does, and chances are he’ll say he makes a phone call, waits, and receives an e-mail. He’s caught in the “how” trap. But if that agent were to rethink and focus on his “whats,” he’d see that the transaction in question breaks down into these desired outcomes:

- **Request-Customer-Premium**
- **Calculate-Customer-Premium**
- **Prepare-Customer-Quote**
- **Customer-Quote-Communication**

If the insurance firm’s rivals are stealing market share, and if its managers cannot rethink what they do—that is, if they are caught in the “how” trap—they typically search for an explanation and a solution in such minutiae as the length of time an agent spends calling the home office or the efficiency of the company’s e-mail system. Their tunnel vision can lead their organization to undertake expensive, disruptive process “improvements”—changing telephone providers, let’s say, or implementing new e-mail systems—that might or might not succeed.

If, however, the company’s leaders can rethink and examine the “whats,” they can have the advantage

of seeing the operation in its entirety, thus illuminating a pathway for getting to the root issues. They might ask: Should the agent be empowered to come up with the premium quote himself? Or should the task be turned over to a vendor?

Here’s another example that points up the value of rethinking. Remember what it used to be like to check in for a flight? You had to wait in long lines, inching your way toward a counter where a harried airline employee presided. He was responsible for a host of steps; among them

- Examining identifications
- Checking reservations
- Processing payments
- Assigning seats
- Issuing boarding passes
- Issuing luggage tickets

That process might still be the norm today if someone hadn’t rethought check-in procedures. That sainted someone realized that flight check-in consists of just four distinct desired outcomes:

- A completed security check
- A confirmed reservation

- An issued boarding pass
- A completed luggage check-in

When the desired outcomes were understood, there was the realization that even though there was still a need for the original “how” (gate agent) because of some of the “what” exceptions, when it comes to the core “whats” it really doesn’t matter

- Who does the work (passenger, even)
- How many steps there are (about four in the case of the airport kiosk and roughly the same on the Web, but more when talking to the airline employee)
- What technology is used (Internet, kiosk, whatever is used by the airline employee)
- Even where it happens (hotel, airport kiosk, home, and so on)

Each of those is a “how” and checking in at the airport is a good example of how the airline industry got out of a “how” trap.

Technology has given business leaders new abilities and options, and it is at the heart of the approach set forth in this book. Rethinking and focusing on “whats” allows you to choose the most cost-effective ways to achieve core goals and increase efficiency and productivity, free of the “how” trap.

THE CASES OF THE ZIP CODE BANDIT AND THE LAGGARD LAPTOP

Not long ago, the chief information officer of a large, well-known manufacturing company asked my colleagues and me to help him with a problem. Having gone through scores of mergers and acquisitions, his company had piled redundancy upon redundancy over the years until some operations were nearly sclerotic—and this despite having been reengineered. Eager to save money, the CIO wanted to rethink his organization, so we started with the data system that enabled the company to verify its customers’ shipping and billing addresses using their ZIP Codes. He said he knew for a fact that two separate parts of the company were each paying the same supplier for the same ZIP Code information. Fired up by the prospect of saving \$2.5 million, he was eager to unplug the redundant ZIP Code data.

At our suggestion, the CIO sent out a mass e-mail to every corner of his company to see if there might be any other redundant ZIP Code purchases. Sure enough, one turned up, and the annual charge for the same data was almost identical to the other two. Quite a coincidence, we thought, if not suspiciously odd. So we asked to see the invoices. Guess what? The same provider had sold the same data to our client three times.

Now we were really curious, so we asked the CIO to find out how many of the company's various controllers had remitted payments to this particular provider of ZIP Code data. The answer that came back was 12.

The annual cost for each of these ranged from \$1.8 million to more than \$3 million—for the exact same data. By this time, of course, the CIO was furious with this unscrupulous supplier, but, as happens with many large organizations where “what” elements go undefined and their intersections remain unrecognized, our client had made it all too easy for his company to be taken advantage of. Minor variations in usage across different divisions were used to justify some of the purchases, creating classic “how” traps that often mask opportunities to leverage a best practice or consolidate people, process, and technology “hows.”

It took us nearly four months to eliminate the 11 redundant systems and get a new one up and running that met our specifications. When we were finished, the CIO found himself with an extra \$40 million, more than 15 times the savings he had initially been hoping for. It worked out to an average \$2.7 million for each redundant system, plus the capital expenditures for the no-longer-needed supporting hardware, and an estimated savings of \$100,000 a year for each of 63 technology staffers who could be otherwise deployed.

In another example, Toshiba’s customers were boiling about the pace of laptop repairs. It typically took two weeks from the time a customer dropped off a machine until it came back. By rethinking and focusing on the “whats,” the company discovered that the actual repair time averaged less than an hour; most of the remaining time was eaten up in transporting the computer from the store to the technician and back to the store. When Toshiba deconstructed the problem, which turned out to be external and logistical rather than internal and knowledge-based, it eliminated the Repair-Product “what” and turned it over to the logistics unit, because the majority of the “whats” were related to logistics anyway. Among those “whats” were the following:

- **Collect-Product**
- **Transport-Product-to-Warehouse**
- **Deliver-Parts-to-Warehouse**
- **Return-Product-to-Customer**

The result? Laptop repair time was shortened to a few days and customer satisfaction improved.

IF NOT NOW, WHEN?

Never has there been a more important time to continually improve your company’s efficiency and

productivity. The current economic downturn has forced us all to be more conscious of the need to husband our resources and leverage to our greatest advantage those in which we invest. For companies to survive in this harrowing new environment, they must, as noted earlier, be constantly improving their efficiency and productivity. And for that to happen, they are going to have to avoid the “how” trap, rethink and focus on their “whats,” and become a collection of plug-and-play operations. This book is a primer on that new and necessary strategy. Chapters 3 through 7, in particular, guide you in rethinking and managing your organization’s “whats” and reaching informed decisions about which of them should be enhanced and which should be eliminated.

- Chapter 2, “The Thinking Behind Rethinking”: The groundbreaking operational improvements of the last century have been driven by advances in process management and technology—and by historic changes in the unit of analysis. These changes, as this chapter describes, have paved the way for a revolutionary new operations design technique.
- Chapter 3, “First—Identify the ‘Whats’ That Are Truly Valuable”: Step one in rethinking is to identify and analyze

them to determine what contribution each makes to your company’s progress. The greatest value often comes from an unexpected quarter, and this chapter shows you how to spot it.

- Chapter 4, “Second—Know What You Are (and Aren’t) Good At”: After you identify your most valuable “whats,” you must determine how well they perform. Some useful and easily applied approaches to measuring performance are presented and amplified in this chapter, using company examples that include Target, Hon Hai, and Burgerville. I also get an assist from Michael Jordan.
- Chapter 5, “Third—Make (and Break) Connections”: After you identify the “whats” that generate value and how they perform, you need to pause. Before you can start rethinking and making changes to your “whats,” you need to understand how the “whats” relate to one another. Otherwise, you might jettison a nonperformer only to set off a destructive chain reaction among its high-performing but dependent neighbors. This chapter shows you how to make those decisions.

- Chapter 6, “Fourth—Understand What Can (and Can’t) Be Predicted”: When you identify the “whats” that create value, and determine their performance and interconnections, you need to figure out how your company and its customers, suppliers, and partners are likely to react to the plug-and-play changes you have in mind. This chapter gives you practical advice on mapping this territory.
- Chapter 7, “Fifth—Unravel (and Follow) The Rules”: You have reached the final level of decision making before you can begin plugging and playing. In this chapter, you learn how to align your key “whats” with the complex maze of federal, state, and even foreign regulations.
- In Chapters 8, “Revolutionary Rethinking at ING DIRECT,” 9, “Rethinking at Eclipse,” and 10, “Rethinking at Carnium,” I paint three full-scale portraits of plug-and-play management: ING DIRECT, Eclipse, and Cranium. Particularly in the current economic climate, the stories of ING DIRECT and Eclipse are vivid illustrations of organizations breaking free of traditional “how” traps and

successfully cutting costs, while, at the same time, introducing breakthrough innovations.

- Chapter 11, “Morph Again and Again”: Winning companies, this chapter argues, know how to rethink and reconfigure their “whats” to adapt to the unending changes of the marketplace. My exemplars are Amazon.com and Proctor & Gamble, two organizations that have plugged and played their way out of “how” traps through one dramatic change after another.
- Key Concepts: I’ve included this section as a useful quick reference to the basic ideas in this book to help you in your rethinking journey.

In the chapters ahead, you find familiar problems and unfamiliar, impressively successful solutions. They reflect a powerful new approach to the management of your enterprise—a way you can escape the “how” trap. The chapters are, in effect, a guide to an important, field-tested technique for achieving major improvements in your company’s efficiency and productivity. I think you will agree that my method is tailor-made for this age of escalating competition and extreme economic uncertainty.

TWO

The Thinking Behind Rethinking

*“If you don’t know where you are going,
you might wind up someplace else.”*

–Yogi Bera

WHEN BUSINESSPEOPLE talk about the extraordinary productivity gains of the last decade, the lion's share of credit typically goes to technology. I protest. Although it's true that major advances in the machines and software that gather, process, and distribute information have made possible whole new ways of organizing work in a company, business productivity owes just as much to operational design theory. In fact, innovative design concepts such as the time-and-motion studies of the early 1900s, the *total quality management* (TQM) programs of the '80s, and the reengineering initiatives of the '90s led to enormous gains in business efficiency.

Today, we're poised for another productivity breakthrough, but to take full advantage of it, we need a new and more powerful approach. This book offers precisely that, a groundbreaking way to lift productivity by maximizing the value of your company's "whats."

UNIT OF ANALYSIS: THE TASK

In his landmark 1776 book, *The Wealth of Nations*, Scottish philosopher and economist Adam Smith called attention to a revolutionary development in the nature of work in his day. Machines were just beginning to replace manual labor, and most goods were still made by hand, with each worker performing all the operations needed to make the final

product. Smith described a far more efficient procedure at a pin factory:

*One man draws out the wire,
another straightens it, a third cuts it,
a fourth points it, a fifth grinds it
at the top for receiving the head; to
make the head requires two or three
distinct operations; to put it on, is a
peculiar business, to whiten the pins
is another; it is even a trade by itself
to put them into the paper; and the
important business of making a pin
is, in this manner, divided into about
eighteen distinct operations....*

When one worker was responsible for all those tasks, Smith wrote, he could produce only 20 pins in a day. But if the 18 tasks were distributed among 10 people, they could turn out 48,000 pins a day.

Underlying Smith's epiphany about the division of labor was a concept that is central to an understanding of process improvement theory. Any research effort will necessarily require the researcher to focus on one or another element of the entity being studied. That element is known as the *unit of analysis*. For example, if you look at urban architecture, the unit of analysis might be an individual building, a city block, or a whole neighborhood. Choosing the unit of analysis is the student's critical decision,

whether the topic is a city's architecture or a factory floor. That one decision determines the nature and the scope of the results.

In the case of the pin factory, Adam Smith's unit of analysis was the worker's task. His choice led him to discover that productivity soared when a worker focused on just one task, because he could perform it faster and better than a worker who was creating a pin all by himself and trying to master many tasks at once.

In selecting a unit of analysis, you need to make sure it's homogeneous. That is, the activities included have to be closely related, either by physical proximity—people working side by side on an assembly line, let's say—or by the need to share information. If two activities can be coordinated better when information is communicated quickly from one to the other, those activities belong within the same unit of analysis. But at the pin factory, the only means of transferring information from worker to worker was by word of mouth or handwritten notes. Workers had little or no information about the status of the tasks that came before or after theirs, or what happened to the goods when they left the factory. There was no feedback of customer complaints, for example. Thus, the unit of analysis could not extend beyond the individual worker's task.

UNIT OF ANALYSIS: THE WORKER

A century after Adam Smith advocated breaking an individual's work into specific tasks, thereby turning generalists into specialists, a new business specialty, the operational improvement expert, was emerging. The most influential of these experts was a Germantown, Pennsylvania, mechanical engineer named Frederick Winslow Taylor.

In the 1890s, Taylor began advising manufacturers of steel and paper on how to improve factory output. Born into an affluent, educated, and progressive Quaker family, Taylor believed the key to productivity improvements was in rigorously studying every aspect of every worker's job. Accordingly, he timed workers' actions to the hundredth of a second, searching for wasted motion. He believed that there was only one "best way" to do any job and that managers (not workers) were the only ones who could determine what that was.

Taylor's time-and-motion studies made individuals the locus of operational improvement; his unit of analysis was not the task, but the worker. By 1911, when he published his path-breaking book, *The Principles of Scientific Management*, the technology for moving information from worker to worker in a factory had not improved much from Adam Smith's day. Word of mouth was still the preferred medium.

UNIT OF ANALYSIS: THE DEPARTMENT

By the mid-1960s, 50 years after Taylor's death, a revolution in information technology was ushering in a whole new approach to operations improvement. Giant computers began appearing in corporate offices, some of them requiring a whole room of their own. The flow of information among workers in the same department went from a word-of-mouth trickle to a torrent, with all the workers in a department viewing the same material simultaneously and acting upon technology in concert.

Now the unit of operational analysis shifted from the individual worker to the department, a collection of computer-connected employees focused on highly related tasks—the accounting department, for example, sent invoices and paid bills. Leading the charge were operations consultants such as John Diebold, author of the much-admired 1952 book, *Automation*. Diebold urged businesses to use computers to coordinate the work of people within the same department.

The Bowery Savings Bank of New York was among Diebold's adherents, eager for the process improvements brought by his consulting firm. For the first time, computer-linked tellers at all the branches could access the account information of every customer. Now customers could make deposits and withdrawals at any Bowery Savings branch, not just the one at which they opened their accounts.

Diebold also advised newspaper companies to replace their typewriters with computer terminals, allowing workers in the same department—newsroom reporters and editors, for instance—to improve the news production work flow. (The news business being traditionally hidebound, most newspapers ignored his advice until the 1980s.)

The high cost of transmitting computerized information through the telecommunications networks of the 1960s and '70s meant that most corporate computer networks remained local. Workers in a department such as accounting or customer service could be linked together by a computer and communications system if they were housed in the same building, or, as in the case of Bowery Savings, if they were in the same city. But connecting people across offices—especially those in different states or overseas—was economically prohibitive for all but the most critical business activities. As a result, the unit of operational analysis in the 1960s and '70s was largely a department within an organization.

UNIT OF ANALYSIS: THE PROCESS

The information technology revolution of the early 1990s dramatically lowered the cost of computers and communications, making the flow of voluminous information across departments economically feasible. Computing power that had cost millions of dollars in the 1960s—the “big iron” mainframes—

could be purchased for just thousands of dollars by the 1990s. Telecommunications prices fell dramatically as well, cutting the cost of connecting computers across long distances.

With these two advances, it became technologically and financially feasible for even far-flung workers in many departments of a company to work off the same information. Customer information possessed by the finance department in Chicago, for instance, was also accessible to a salesperson in New York.

Early in the decade, a new wave of operational improvement theorists such as James Champy and Michael Hammer realized that this new capability allowed work to be reorganized across departments or functions. Thus, the cross-functional process became the unit of analysis for operational improvement. Champy and Hammer called their operations-improvement method *reengineering*, and it sparked a revolution in productivity. Another revolution, this time in software known as *enterprise resource planning* (ERP), followed shortly thereafter.

THE NEW UNIT OF ANALYSIS: THE “WHAT”

Today, many companies continue to use reengineering to achieve productivity gains. But over the last decade, the confluence of three major advances

in information technology has set the stage for a new, more powerful unit of analysis—not the tasks performed by a worker or a department, the “hows,” but the desired outcome of those tasks. Today, the key to increased productivity is the rethinking of the “whats.” The approach to performance improvement espoused in this book has been successfully adopted by dozens of companies, some of which you will read about in the chapters ahead. It fits hand-in-glove with the new technologies that are so essential to the future of business.

The rapid rise of the World Wide Web in the second half of the 1990s, combined with the dot-com era’s proliferation of cheap bandwidth—powerful communications networks for transmitting a tidal wave of digital information around the world—has made it inexpensive for the departments of a global company to be plugged into the same information anywhere around the world. The high-cost private telecommunications companies that previously kept businesses digitally connected have been supplanted by a low-cost public computer network.

Yet another key technological advance has been the rapid growth in the number of business activities that are now software-based, particularly those aimed at gathering, manipulating, and processing information. Connecting telephone calls, for example, previously required thousands of telephone operators who diligently plugged their wires

into huge switchboards. A half-century later, that activity is totally automated by means of software. In a similar manner, payroll-processing software used by such companies as ADP and Paychex has replaced work that used to be performed by tens of thousands of payroll clerks.

Given these developments, achieving major productivity improvement now depends in part on reducing the cost of the new software and the computers that run it—a bill that reaches into the billions of dollars at some companies. The Internet offers a solution. It allows corporate divisions to share the same software inexpensively across great distances by using applications that reside on the Web—or to use a more current term, the cloud—and corporate networks rather than on individual computers. But for a sharing solution to work properly, the software must be based upon a common set of design principles, and those principles are still being developed using *service-oriented architecture* (SOA) and *software-as-a-service* (SaaS).

Still another requirement must be met for Web-based software sharing to achieve its potential: The various and varied operating divisions within a company need to define their business operations in a common way. If five divisions of a company are to plug into one accounts receivable software application on a corporate intranet, each division must define the work in the same way.

My approach to rethinking an organization and considering its “whats,” which this book lays out, fills that need. Now managers in each division of a company can agree on how to define the work of, say, collecting customers’ payments in terms of the outcome—the “what”—that the employees are trying to achieve rather than in terms of “how” they perform the tasks that produce that outcome.

In the following chapters, I show how companies large and small have adopted the rethought “what” approach not just as a way to adapt to the demands of Web-based sharing, but also to achieve greater productivity and efficiency. It succeeds because it gives company leaders a detailed, actionable view of the workings of their organizations—the activities that need to be streamlined, improved, outsourced, or dropped altogether.

By rethinking and adopting the “what” as a unit of analysis, organizations are presenting a challenge for leaders and managers, particularly those who have spent their careers on operational improvement. It is not at all easy for even the most operationally efficient among them to reorient their focus away from the “hows.” Nor, truth be told, will the increased transparency of your company make your job any easier. Distinguishing a single “what” from a series of “hows” is simple enough, but you still have to make tough decisions about where to put your resources. The following chapters take you through

the steps involved in adopting the “what” approach and rethinking your business to make it work in a plug-and-play world. Just ahead you encounter the first crucial step—determining which “whats” are contributing value and which are not.

Let’s get to it.