Two

The Ultimate Advantage

WHY SHOULD YOU AND YOUR COLLEAGUES TAKE ON THE challenge of reinventing management? Because, to put it bluntly, management innovation pays. When compared with other sorts of innovation, it has an unmatched power to create dramatic and enduring shifts in competitive advantage. Before we review the evidence for this claim, let's get our definitions straight. What exactly *is* management innovation? And how is it different from other sorts of innovation?

Management Innovation Defined

For our purposes, management innovation is anything that *substantially alters the way in which the work of management is carried out, or significantly modifies customary organizational forms, and, by so doing, advances organizational goals*. Put simply, management innovation changes the way managers do what they do, and does so in a way that enhances organizational performance.

So what is it that managers do? Over the last hundred years, business scholars have pretty much agreed on what constitutes the *work of management*. In 1917, Henri Fayol, an early management theorist, described the work of management as planning, organizing, commanding, coordinating, and controlling[1]—a definition that would provoke little argument from modern-day executives. My own synthesis of a century's worth of management theory suggests that the *practice* of management entails:

- Setting and programming *objective*
- Motivating and aligning *effort*
- Coordinating and controlling *activities*
- Developing and assigning *talent*
- Accumulating and applying *knowledge*
- Amassing and allocating *resources*
- Building and nurturing *relationships*
- Balancing and meeting *stakeholder demands*

These tasks are central to the accomplishment of human purpose, be it mounting a mission to Mars, running a middle school, producing a Hollywood blockbuster, or organizing a church bake sale. Anything that dramatically changes how this work gets done can be labeled as management innovation.

Management innovation also encompasses value-creating changes to organizational structures and roles. Companies consist of business units, departments, work groups, communities of practice, and alliances with suppliers, partners, and lead customers. A new way of connecting these entities can constitute a management innovation. For example, InnoCentive, a spin-off from Eli Lilly and Company, has created a global market for scientific expertise that allows "seeker" companies to bid out tough technical challenges to a network of more than 70,000 scientists around the world. In the three years following its launch,

InnoCentive channeled more than $1 million in "bounty" payments to its community of "solvers," who often succeeded in cracking problems that had stumped internal R&D teams. While the goal of InnoCentive is scientific innovation, the processes and structures that support its global network of seekers and solvers is a first-rate example of management innovation, in that it involves new ways of aligning effort, coordinating activities, and applying knowledge—all components of managerial work.

While operational innovation focuses on a company's *business* processes (procurement, manufacturing, marketing, order fulfillment, customer service, etc.), management innovation targets a company's *management* processes—the recipes and routines that determine how the work of management gets carried out on a day-to-day basis. Typical processes include:

- Strategic planning
- Capital budgeting
- Project management
- Hiring and promotion
- Training and development
- Internal communications
- Knowledge management
- Periodic business reviews
- Employee assessment and compensation

These processes establish standard protocols for common management tasks such as evaluating an employee or reviewing a budget request. They propagate best practice by translating successful techniques into tools and methods that can be broadly applied. They also shape management values by reinforcing certain behaviors and not others.

Put simply, management processes are the "gears" that turn management principles into everyday practice. In even a medium-sized organization, it's impossible to change the *what* and *how* of managing without changing the processes that govern that work.

The Power of Management Innovation

Over the past few years, I, along with two of my colleagues at the London Business School,* have been examining the history of management innovation. To date, we have studied more than 100 management breakthroughs, stretching across two centuries. One inescapable conclusion: major advances in management practice often lead to significant shifts in competitive position, and often confer long-lasting advantages on pioneering firms.

Consider, for example, a few of the 20th century's most consistently successful companies: General Electric, DuPont, Procter & Gamble, Toyota, and Visa. What is it that propelled these companies to positions of global leadership? Of course, the usual suspects—great products, disciplined execution, and farsighted leaders—played a role. But if you dig deeper, you discover that it was management innovation, first and foremost, that set them on the course to greatness:

- *Managing science.* In the early 1900s, General Electric perfected Thomas Edison's most notable invention, the industrial research laboratory. GE's success in bringing management discipline to the chaotic process of scientific discovery allowed Edison to claim that his labs were capable of producing a minor invention every

*Professor Julian Birkinshaw and Dr. Michael Mol.

10 days and a major breakthrough every six months. This was no idle boast. Over the first half of the 20th century, GE won more patents than any other company in America.

- *Allocating capital.* DuPont played a pioneering role in the development of capital-budgeting techniques when it initiated the use of return on investment calculations in 1903. A few years later, the company also developed a standardized way of comparing the performance of its numerous product departments. These advances addressed a pressing problem: How to allocate capital rationally when confronted with a bewildering array of potentially attractive projects? DuPont's new decision tools would help it to become one of America's industrial giants.

- *Managing intangible assets.* Procter & Gamble's preeminence in the packaged goods industry has its roots in the early 1930s, when the company began to formalize its approach to brand management. At the time, the idea of creating value out of intangible assets was a novel idea. In the decades since, P&G has steadily built upon its early lead in building and managing great brands. In 2007, P&G's business portfolio included 16 brands that were delivering more than $1 billion in annual sales.[2]

- *Capturing the wisdom of every employee.* Toyota is the world's most profitable carmaker—by a long margin. Much of its success rests on an unmatched ability to enroll employees in the relentless pursuit of efficiency and quality. For more than 40 years, Toyota's capacity for continuous improvement has been powered by a belief in the ability of "ordinary" employees to solve complex problems. Indeed, people inside Toyota sometimes refer to the Toyota Production System as the "Thinking People System." In 2005, the company received more than 540,000 improvement ideas from its Japanese employees.[3]

- *Building a global consortium.* Visa, the world's first "virtual" company, owes its success to organizational innovation. When Visa's founding banks formed a consortium in the United States in the early 1970s, they laid the groundwork for what would become one of the world's most ubiquitous brands. The key management challenge: building an organization that would allow banks to compete for customers while collaborating around infrastructure, standards, and brand-building. Today, Visa is a gossamer web that links more than 21,000 financial institutions and 1.3 billion cardholders. The Visa network processes more than $2 trillion of purchases every year—about 60 percent of all credit card transactions.

These cases (as well as more recent ones, which we will explore in subsequent chapters) highlight the decisive role that management innovation often plays in helping companies build durable advantages. Indeed, no other factor seems to have been similarly instrumental in underwriting long-term competitive success.

This assertion, bold as it may seem, is buttressed by the findings of military theorists who've explored the origins of sustained superiority in war making. Here, too, management innovation seems to be key. In battle, as in business, most victories are pyrrhic and temporary. Yet here and there, in the bloody pages of history, one observes a military regime that has consistently bested its enemies, often despite a deficit of men and matériel. As you might imagine, these cases are of great interest to military scholars who, like business school professors, have an interest in uncovering the deep roots of competitive advantage. Why is it, these analysts ask, that some armies and navies have enjoyed prolonged periods of military supremacy?

When confronted with this question, a layperson is likely to credit superior weaponry. Prime exhibits might include:

- The deadly and much-feared yew-wood longbow, which, in the 14th century, allowed the archers of King Edward III to deal out a series of crushing blows to England's enemies

- The agile and speedy three-masted caravel, a product of 15th-century Iberian ingenuity, which gave European powers a sizable advantage in building their globe-spanning empires
- The breech-loading needle gun, perfected in the mid-19th century, which gave Prussian infantrymen a considerable firepower advantage over their European adversaries
- The laser- and satellite-guided missiles that enabled coalition forces to surgically destroy Saddam Hussein's military installations in both the first and second Gulf Wars

Yet a careful reading of military history, like that offered by MacGregor Knox and Williamson Murray in *The Dynamics of Military Revolution*,[4] suggests that most technology advantages have been short-lived. In battle, one side captures the other's weapons or, better yet, those who manufactured the armaments. Bribes get paid and craftsmen defect. Foreign spies lay their hands on blueprints, or weapons get sold to allies who later become adversaries. Tactical and strategic advantages—the product of inspired wartime leadership—are only slightly less fleeting. Successful battlefield maneuvers and new force formations are usually quickly copied and neutralized. While superior technology, tactical genius, or any of a dozen other factors may explain the outcome of a single battle, they can't account for repeated military success—the ability to emerge triumphant from the chaos of war again and again.

What, then, accounts for *long-term* military advantage—if not advanced armaments and brilliant commanders? Knox and Murray contend that long-lasting leadership is most often the product of fundamental advances in military doctrine and organization.[5] History's most consistently victorious armies and navies have been those that were able to break with the past and imagine new ways of motivating, staffing, training, and deploying warriors. They have been management innovators.

Three short examples will help to underscore this crucial point.

The British army's success in India, from the mid-18th century to its withdrawal from the subcontinent two hundred years later,

owed little to superior firepower. Indian armaments were at least the equal of English weaponry. Indeed, the Duke of Wellington, while serving in India in 1800, was so impressed by the quality of locally made cannon that he incorporated them into his artillery train.[6] Instead, England's conquest of Southeast Asia relied largely upon the relative advantages of the regimental structure—an organizational innovation. According to Professor John Lynn:

> The regiment provided the foundation for a permanent British/sepoy military establishment in India that defeated the great native state of Mysore, the Maratha warrior confederacy, and ultimately even the tenacious Sikhs. The regiment turned into a highly effective repository for indigenous cultural values that tapped native codes of personal and community honor in ways that temporary or irregular military units could not.[7]

With the king or queen thousands of miles away, the regiment was a near-at-hand focal point for a soldier's filial loyalty. Moreover, as a semipermanent organization, the regiment was an ideal mechanism for transferring hard-won knowledge from one campaign to another—knowledge that in earlier times had often been lost when military units were disbanded upon the cessation of hostilities.

Napoleon, whose campaigns are still analyzed in war academies around the world, owed much of his success to an innovation in military doctrine. Prior to the French revolution, France's armies had fought for the monarch—a distant and often uninspiring figure. But in post-revolutionary France, Napoleon succeeded in fanning the red-hot embers of nationalism into a firestorm of military zeal. *Citizens*, it seemed, could be roused to fight for *la gloire de la France* with a degree of ferocity that no feudal system could hope to match. The result: a fighting force that Carl von Clausewitz termed a "juggernaut of war, based on the strength of an entire people."[8]

Having been trounced by Napoleon's forces in 1806, the Prussian army embraced a series of organizational innovations that would

ultimately be imitated by every large-scale military force in the world. In a wrenching departure from centuries of tradition, the army adopted a rigorously meritocratic approach to the commissioning of officers—no longer would they be promoted on the basis of their aristocratic pedigrees. Another key innovation was the development of the general staff system. Gerhard von Scharnhorst, the Prussian army's great reformer, believed it was dangerous for an army to rely overmuch on the brilliance of one or two generals. What was needed instead was a cadre of technically trained and exceptionally talented junior officers who could provide independent advice to their commanders. Thus was born the concept of line and staff,[9] an organizational principle that has been implemented in virtually every modern company.

Whether one studies industrial history or military history, the lesson is the same: management innovation matters, a lot. But how, exactly, does management innovation create competitive advantage? And what sorts of management innovation are likely to be the most defensible?

From Innovation to Advantage

Management innovation tends to yield a competitive advantage when one or more of three conditions are met: the innovation is based on a *novel management principle* that challenges some long-standing orthodoxy; the innovation is *systemic*, encompassing a range of processes and methods; and/or the innovation is part of an *ongoing program* of rapid-fire invention where progress compounds over time. Let me briefly elaborate on each of these three critical conditions.

Consider first the auto industry. Why, after decades of trying, have America's indigenous automakers so far failed to duplicate Toyota's hyperefficient manufacturing system? This was the question I put to a senior executive group in one of America's big car companies a few

years back. We had just finished a sumptuous dinner at an elegant hotel when, over coffee, one of the carmaker's top finance executives mentioned that the company had just completed its 20th annual benchmarking study of Toyota. What, I wondered aloud, had the company learned in year 20 that it hadn't learned in years 19, 18, 17, and so on? The blunt subtext to my question hung in the air like acrid cigar smoke: Why are you still playing catch-up? After a moment of embarrassed silence, a senior staffer spoke up, and offered an explanation that went something like this:

> Twenty years ago we started sending our young people to Japan to study Toyota. They'd come back and tell us how good Toyota was and we simply didn't believe them. We figured they'd dropped a zero somewhere—no one could produce cars with so few defects per vehicle, or with so few labor hours. It was five years before we acknowledged that Toyota really was beating us in a bunch of critical areas. Over the next five years, we told ourselves that Toyota's advantages were all cultural. It was all about *wa* and *nemawashi*—the uniquely Japanese spirit of cooperation and consultation that Toyota had cultivated with its employees. We were sure that American workers would never put up with these paternalistic practices. Then, of course, Toyota started building plants in the United States, and they got the same results here they got in Japan—so our cultural excuse went out the window. For the next five years, we focused on Toyota's manufacturing processes. We studied their use of factory automation, their supplier relationships, just-in-time systems, everything. But despite all our benchmarking, we could never seem to get the same results in our own factories. It's only in the last five years that we've finally admitted to ourselves that Toyota's success is based on a wholly different set of principles—about the capabilities of its employees and the responsibilities of its leaders.[10]

Amazingly, it took nearly 20 years for America's carmakers to decipher Toyota's advantage. Unlike its Western rivals, Toyota believed that first-line employees could be more than cogs in a soulless manufacturing machine. If given the right tools and training, they could be problem solvers, innovators, and change agents. Toyota saw within its workforce the necessary genius for never-ending, fast-paced operational improvement. In contrast, U.S. car companies tended to discount the contributions that could be made by first-line employees, and relied instead on staff experts for improvements in quality and efficiency. Such was the disdain for the intelligence of frontline workers that Henry Ford once wondered querulously, "Why is it that whenever I ask for a pair of hands, a brain comes attached?"

Over the past 40 years, Toyota has gotten more out of its people, day by day and year by year, than its competitors have gotten out of theirs—an advantage that has been reflected in Toyota's ever-rising market share and market value. While U.S. carmakers are now working hard to more fully utilize the brainpower of their employees, they have paid dearly for a management system that was rooted in intellectual feudalism.

As this example illustrates, management dogmas are often so deeply ingrained as to be nearly invisible, and so devoutly held as to be virtually unassailable. When it comes to management innovation, the more unconventional the underlying principle, the longer it will take for competitors to respond. In some cases, the head-scratching can go on for decades.

It's also tough for rivals to replicate advantages that are *systemic*, that encompass a web of individual innovations spanning multiple management processes. In 1999, Dave Whitwam, then chairman of Whirlpool, challenged his colleagues to make innovation a deeply embedded core competence. From the outset, Whitwam made it clear that he didn't want a one-off program, a corporate incubator, or a new ventures division. He wanted something deeper and more systemic. As a first step, he appointed Nancy Snyder, a well-respected corporate vice president,

as Whirlpool's innovation czar. Snyder's job: to rally her colleagues around what would become a five-year quest to reinvent the company's management processes. Aided by Strategos, a Chicago-based consulting company, Snyder and her compatriots worked to turn each of Whirlpool's core management processes into a catalyst for innovation. Key changes included:

- Making innovation a central topic in Whirlpool's leadership development programs
- Setting aside a substantial share of capital spending every year for projects that were truly innovative
- Requiring every product-development plan to contain a sizable component of new-to-market innovation
- Training more than 600 innovation mentors charged with supporting innovation throughout the company
- Enrolling every salaried employee in an online course on business innovation
- Establishing innovation as a large component of top management's long-term bonus plan
- Setting aside time in quarterly business review meetings for an in-depth discussion of each unit's innovation performance
- Creating an Innovation Board to review and fast-track the company's most promising ideas
- Building an innovation portal to give employees access to a compendium of innovation tools, data on the company's global innovation pipeline, and the chance to input their ideas
- Developing a set of metrics to track innovation inputs, throughputs, and outputs

These changes were not the product of some highly detailed master plan. Instead, they emerged over the course of Whirlpool's innovation

"journey," often in response to roadblocks that would have been difficult to anticipate at the outset.[11]

The payoff? In 2005 Whirlpool derived $760 million of its $14.3 billion in revenues from products that met the company's tough new innovation standards, up from $10 million in 2001. In addition, it had 568 innovation projects under way, 195 of which were being readied for launch. Jeff Fettig, Whirlpool's current chairman, reckoned that those new initiatives would ultimately add as much as $3 billion annually to the company's top line.[12]

While Whirlpool's innovation efforts have been widely reported, a competitor would find it hard to duplicate what is now a deeply engrained innovation system—for the same reasons it would be difficult to pick apart Toyota's multifaceted management advantage. A few, fractured insights into a competitor's distinctive management practices are of limited value when one is attempting to replicate the totality of a distinctive management *system*. For an analogy, imagine trying to reconstruct a Persian carpet from a few strands of silk.

Finally, a company can sometimes create a management advantage simply by being persistent. There is perhaps no company in the world that is better at developing great leaders than General Electric. While many elements of GE's executive development system have been imitated—such as its training facility in Crotonville, New York, its 360-degree evaluation process, the way it encourages managers to collaborate, and its tough and unsentimental culling of underperformers—few companies would claim to have matched GE's capacity for growing superlative leaders. GE's prowess is less the product of a single breakthrough than of a long-running and unflagging commitment to improving the quality of its management stock—a commitment that has spawned repeated management breakthroughs. In 2006, for example, GE announced yet another leadership initiative, this time focused on developing executives who could help the company raise its organic growth rate. Any company hoping to match GE's leadership advantage soon learns that it's not easy to keep a fast-moving quarry in your sights.

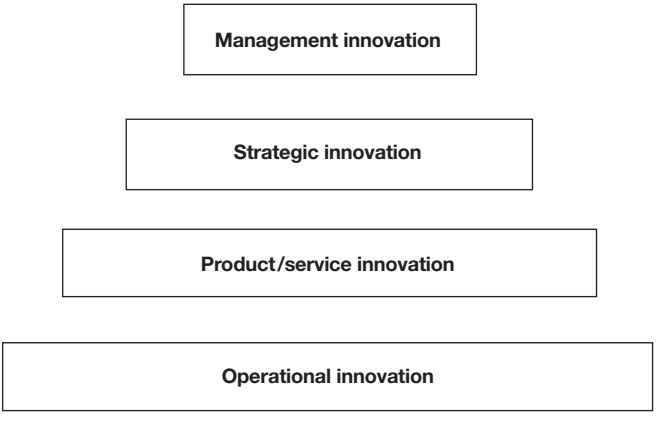
Management Innovation in Context

Innovation comes in many flavors: operational innovation, product innovation, strategy innovation, and, of course, management innovation. Each genre makes its own contribution to success, but if we were to array these various forms of innovation in a hierarchy, where higher tiers denote higher levels of value creation and competitive defensibility, management innovation would come out on top (figure 2-1). Understanding why this is so is an important step in building your company's commitment to management innovation, so let's work our way up from the bottom.

At the base of the pyramid is operational innovation. In a world of hypercompetition, operational excellence is essential, but in the absence of some Toyota-like management innovation or Ikea-style business model breakthrough, operational innovation seldom delivers a decisive, long-term advantage. This is true for several reasons. First, operational preeminence often depends heavily on the quality of a company's IT

FIGURE 2-1

The innovation stack



infrastructure. Unfortunately, advances in hardware and software tend to diffuse rapidly, making IT-based advantages notoriously difficult to defend.[13] Secondly, many companies today outsource a wide range of business activities to third parties—vendors who often serve several companies within a single industry, and who typically lack the incentives to help a single customer build a standout advantage. While outsourcing and offshoring can help a company stay even with the competition, they seldom yield a significant proprietary advantage. Finally, there is a growing swarm of consultants who work long days transferring best practices from exceptional companies to mediocre ones. This, too, tends to level out operational advantages.

Next up the food chain is *product innovation*. There's no doubt that an iconic product can lift a company from obscurity to cult status in short order (think, for example, of Dyson's bagless vacuum cleaners). Yet in the absence of enforceable patent protection, most products are quickly knocked off. In addition, an ever-accelerating pace of technological progress often gives upstarts the opportunity to leapfrog yesterday's pioneers. As a result, breakthrough products seldom grant a company long-lasting industry leadership. For example, it only took a few years for Samsung to improve upon Nokia's superslick mobile phone designs, for other golf club makers to match the playability advantages of Callaway's Big Bertha irons, or for Hoover to come up with its own "Cyclonic" vacuum cleaner.

Further up the stack is *strategy innovation*—bold new business models that put incumbents on the defensive. Standout examples include Ryanair, Europe's leading low-cost airline, Apple's iTunes music store, and Zara's chic but cheap couture. A killer business model can generate billions of dollars in market value for the innovator—but on average, a distinctive business model is more easily decoded and counteracted than a heretical management system. Wal-Mart's supposedly invincible lead in discount retailing hasn't prevented other retailers, like Costco and Target, from flourishing. America's crop of low-cost airlines, including Frontier, JetBlue, AirTran, and America West (recently merged with

US Airways), have purloined entire chapters from Southwest Airlines' once-unique playbook. And although India's outsourcing pioneers—companies such as Infosys and Wipro—have become industry giants, they must still scramble every day to defend their lead from a horde of envious and determined wannabes who are equally eager to exploit India's wage advantage.

The point is, not all types of innovation are created equal. When focused on big, chunky problems, management innovation possesses a unique capacity to create difficult-to-duplicate advantages. Why? Become some heresies are more heretical than others. You, for example, would probably find it easier to adjust your fashion preferences than to transpose your religious beliefs. Similarly, most executives find it easier to acknowledge the merits of a disruptive business model than to abandon the core tenets of their bedrock management beliefs.

Caveats

Not every management innovation creates a competitive advantage. Some are incremental. Some are wrongheaded. And many never pay off. Of course, the same can be said for other sorts of innovation. Like its cousins, management innovation follows a power law: for every truly radical idea that forever changes the practice of management there are dozens of others that are less valuable and less influential. But that's no excuse not to innovate. Innovation is always a numbers game: the more of it you do, the better your chances of reaping a fat payoff.

Additionally, no single management breakthrough, no matter how bold or well-executed, will pay competitive dividends forever. In the annals of management innovation, there are many companies that upended conventional thinking once, but never repeated the feat. Though their stars have been waning for decades, Ford and General Motors were once blue-ribbon management innovators. Ford's early leadership was based not only on its development of the moving assembly line, but also on innovation in the management methods needed to run

what was, at the time, the world's largest, most vertically integrated firm. And GM, as mentioned earlier, invented the divisionalized organization model. But today, their management models are as undistinguished as their vehicles. It has been nearly a century since either company led a bona fide management revolution.

Management Myopia

Given the power of management innovation to deliver peer-beating performance, it is odd that so few companies possess a well-honed process for continuous management innovation. A stroll through the pages of the world's leading business magazines confirms the steerage-class status of management innovation. Over the last 70 years, the terms "technology innovation" and "technical innovation" have appeared in the title or abstract of more than 52,000 articles. More than 3,000 articles have focused on "product innovation." The comparatively new topic of "strategic innovation" (which includes terms like "business innovation" and "business model innovation") has been covered in more than 600 articles. Yet taken together, articles on "management innovation," "managerial innovation," "organizational innovation," and "administrative innovation" number less than 300, and nearly all of these focus on the *diffusion*, rather than the *invention*, of new management practices—a bias that's understandable only if you believe it's better to follow than to lead.

Today, every CEO claims to be a champion of innovation—so why the barn-sized blind spot when it comes to *management* innovation? I believe there are three likely explanations. First, most managers don't see themselves as inventors. Unlike technologists, marketers, and, more recently, strategists, innovation isn't central to the average manager's role definition. In most companies, managers are selected, trained, and rewarded for their capacity to deliver more of the same, more efficiently. No one *expects* managers to be innovators. Rather, they are expected to turn *other* people's ideas into growth and profits.

Second, many executives doubt that bold management innovation is actually possible. R&D staffers and product-development specialists are sustained by the belief that the next big thing is just around the corner. How many executives, by contrast, are buoyed up by the hope that they might get the chance to lead the next great management revolution? Strangely, managers are unsurprised when science advances by leaps and bounds, yet seem unperturbed when the practice of management fails to do the same.

When confronted with this discrepancy, many executives claim that the immutable laws of human nature constrain the range of feasible options for mobilizing and organizing human effort. There are limits, they argue, to the number of people that one person can effectively supervise, to the degree to which accountability can be distributed, to the extent to which employees can be trusted, to the willingness of individuals to subordinate their self-interests to the interests of the corporation as a whole. Whether these limits are real or imagined (mostly the latter, I will argue), they offer managers a soothing alternative to the premise that it is a lack of imagination that constrains management innovation.

Most managers see themselves as pragmatic doers, not starry-eyed dreamers. In their experience, management progress is accretive rather than revolutionary—and they have little reason to believe it could ever be otherwise. But as we'll see, it *can* be otherwise, and it *must* be—the future demands it.