Innovation:
The Classic Traps

by Rosabeth Moss Kanter

INNOVATION IS BACK AT the top of the corporate agenda. Never a fad, but always in or out of fashion, innovation gets rediscovered as a growth enabler every half-dozen years (about the length of a managerial generation). Too often, however, grand declarations about innovation are followed by mediocre execution that produces anemic results, and innovation groups are quietly disbanded in cost-cutting drives. Each generation embarks on the same enthusiastic quest for the next new thing and faces the same challenge of overcoming innovation stiflers. Over the past 25 years, I have conducted research and advised companies during at least four major waves of competitive challenges that led to widespread enthusiasm for innovation.

The first was the dawn of the global information age in the late 1970s and early 1980s, an era that introduced new industries and threatened to topple old ones. Entrepreneurs and foreign competitors imperiled established companies on their own turf. Information technology was beginning to evolve from the clunky mainframe to a consumer and desktop product, and companies such as Apple Computer made Silicon Valley garages the new base for product innovation in the United States. IBM emulated Apple's model by developing its PC in dingy surroundings in Boca Raton, Florida, freed from many corporate constraints. High-quality Japanese products, such as the Sony Walkman and Toyota cars, reflected not just good product design but also innovations in manufacturing processes that forced American

giants to create their own programs to generate new ideas faster. "Total quality management" became a passion.

The second wave was the pressure to restructure during the takeover scare of the late 1980s. Buyout groups were attacking traditional companies, seeking to unlock the value of underutilized assets; "shareholder value" became a rallying cry. In Europe, restructuring was associated with the privatization of state-owned enterprises now exposed to the pressures of capital markets. Software was emerging as a major force behind innovation, and the strategic value of IT was touted, with American Airlines' Sabre reservations system widely cited as an example of a process innovation that succeeded as a separate business. Companies created new-venture departments to make sure they captured the value of their own ideas and inventions, rather than allowing a behemoth like Microsoft to arise outside the firm. Financial innovations were the rage: leveraged and management buyouts, derivatives and other forms of financial engineering, or financial supermarkets combining banks and nearly everything else. The restructuring era also favored products that could be instantly global: After defeating a hostile takeover bid in the late 1980s, Gillette boldly and successfully launched Sensor Excel shaving systems in the early 1990s, in identical form worldwide, with a single advertising message.

Third was the digital mania of the 1990s. The promise (and threat) of the World Wide Web drove many established companies to seek radical new business models. Brick-and-mortar companies were at risk for extinction; many rushed to create stand-alone Web ventures, often unconnected to the core business and sometimes in conflict with it. Eyes were on the capital markets rather than on customers, and companies got rich without profits or revenues. AOL bought Time Warner, put its name first, and proceeded to destroy value rather than create innovation.

The current wave of innovation began in a more sober mood, following the dot-com crash and belt-tightening of the global recession. Having recognized the limits of acquisitions and become skeptical about technology hype, companies refocused on organic growth. Surviving giants such as General Electric and IBM have

Idea in Brief

Most companies fuel growth by creating new products and services. Yet too many firms repeat the same growth-sapping mistakes in their efforts to innovate.

For example, some companies adopt the wrong strategy: investing only in ideas they think will become blockbusters. Result? Small ideas that could have generated big profits get rejected. For years, Time, Inc. didn't develop new publications: managers wanted any start-up to succeed on the same scale as the enormously popular *People* magazine. Only after Time decided to gamble on a large number of new publications did revenues rise.

Other companies err on the side of process-strangling innovations by subjecting them to the strict performance criteria their existing businesses must follow. At AlliedSignal, new Internet-based products and services had to satisfy the same financial metrics as established businesses. Budgets contained no funds for investment—so managers working on innovations had to find their own funding. The consequences? Retrofitted versions of old ideas.

To avoid such traps, Kanter advocates applying lessons from past failures to your innovation efforts. For instance, augment potential "big bets" with promising midrange ideas and incremental innovations. And add flexibility to your innovation planning, budgeting, and reviews.

Your reward? Better odds that the new ideas percolating in your company today will score profitable successes in the market tomorrow.

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adopted innovation as a corporate theme. GE, for instance, is committed to double-digit growth from within. For its part, IBM is seeking innovation by tackling difficult social problems that require—and showcase—its technology solutions. A good example is World Community Grid, a nonprofit IBM created that aggregates unused computer power from numerous partners to give AIDS researchers and other scientists the ability to work with unusually large data sets. This wave's central focus is on new products designed to offer users new features and functionality to meet emerging needs. Customers and consumer markets have returned to center stage, after having been temporarily crowded out by other obsessions. Companies are seeking new categories to enrich their existing businesses rather than grand new ventures that will take

Idea in Practice

To innovate successfully, replace common mistakes with potent remedies.

Strategy Mistakes

- Rejecting opportunities that at first glance appear too small.

- Assuming that only new products count—not new services or improved processes.

- Launching too many minor product extensions that confuse customers and increase internal complexity.

Remedy: Widen your search and broaden your scope. Support a few big bets at the top that represent clear directions for the future and receive the lion's share of investment. Also create a portfolio of promising midrange ideas. And fund a broad base of early stage ideas or incremental innovations.

Process Mistakes

- Strangling innovation with the same tight planning, budgeting, and reviews applied to existing businesses.

- Rewarding managers for doing only what they committed to do—and discouraging them from making changes as circumstances warrant.

Remedy: Add flexibility to planning and control systems. For instance, reserve special funds for unexpected opportunities.

Example: After executives at the struggling UK television network BBC set aside funds in a corporate account to support innovation proposals, a new recruit used money originally allocated for a new BBC training film to make a pilot for *The Office*. The show became the BBC's biggest hit comedy in decades.

Structure Mistakes

- Isolating fledgling and established enterprises in separate silos.

them into totally different realms. Signature innovations in this era include Apple's iPod and Procter & Gamble's Swiffer.

Each wave brought new concepts. For example, the rise of biotechnology, characterized by complicated licensing arrangements, helped legitimize the idea that established firms could outsource R&D and learn from entrepreneurial partners or that consumer products companies could turn to external idea shops, as well as their own labs, to invent new products. Approaches to

- Creating two classes of corporate citizens—those who have all the fun (innovators) and those who must make the money (mainstream business managers).

Remedy: Tighten the human connections between innovators and others throughout your organization. Convene frequent conversations between innovators and mainstream business managers to promote mutual learning and integration of new businesses into the organization. Create overlapping relationships—by having representatives from mainstream businesses rotate through innovation groups or innovation advisory boards. Identify people who lead informal networks that span innovation and mainstream groups, and encourage them to strengthen those connections.

Skills Mistakes

- Allowing innovators to rotate out of teams so quickly that team chemistry can't gel.

- Assuming that innovation teams should be led by the best technical people.

Remedy: Select innovation leaders with strong interpersonal skills. They'll keep the innovation team intact, help innovation teams embrace collective goals, leverage one another's different strengths, and share hard-to-document knowledge while innovations are under development.

> *Example:* When Williams-Sonoma launched its ultimately successful e-commerce group, it put a manager in charge who wasn't a technology expert but who could assemble the right team. He chose a mixture of employees from other units who could be ambassadors to their former groups and new hires that brought diverse skills.

innovation also reflected changing economic conditions and geopolitical events. And, of course, innovation has covered a wide spectrum, including technologies, products, processes, and complete business ventures, each with its own requirements.

Still, despite changes to the environment and differences among types of innovation, each wave of enthusiasm has encountered similar dilemmas. Most of these stem from the tensions between protecting revenue streams from existing businesses critical to current

success and supporting new concepts that may be crucial to future success. These tensions are exacerbated by the long-known phenomenon that important innovations often arise from outside an industry and beyond the established players, creating extra pressure for companies to find the next big concept quickly. Consequently, a large body of knowledge about innovation dilemmas has arisen.

Books such as Tom Peters and Bob Waterman's *In Search of Excellence,* my own *The Change Masters,* and Gifford Pinchot's *Intrapreneuring* supported the 1980s innovation wave by pointing to the importance of relieving potential innovators of bureaucratic constraints so they could run with their ideas. This was followed by a body of work documenting the difficulty of exploring the new while exploiting the old, reflected in Michael Tushman and Charles O'Reilly's call for more ambidextrous organizations in *Winning Through Innovation;* my work on managing the tensions between the powerful organizational mainstream and fragile new streams produced by innovation groups in *When Giants Learn to Dance;* and Clayton Christensen's more recent finding, in *The Innovator's Dilemma,* that listening to current customers can inhibit breakthrough innovation.

Yet despite all the research and literature, I still observe executives exhibiting the same lack of courage or knowledge that undercut previous waves of innovation. They declare that they want more innovation but then ask, "Who else is doing it?" They claim to seek new ideas but shoot down every one brought to them. And, repeatedly, companies make the same mistakes as their predecessors. For example, a 1983 HBR article by Harvard Business School professor Malcolm Salter, et al., "When Corporate Venture Capital Doesn't Work," provided warnings that companies failed to heed about exactly the same dilemmas they face today: With a few notable exceptions, such as Intel and Reuters, companies' venture-capital departments rarely create significant value for the core business.

It's inevitable that historical memory will fade—but not inevitable that we lose the lessons. Here's a chance to collect some of what is known about innovation traps and how to avoid them.

Strategy Mistakes: Hurdles Too High, Scope Too Narrow

The potential for premium prices and high margins lures executives to seek blockbuster innovations—the next iPod, Viagra, or Toyota Production System. Along the way, they expend enormous resources, though big hits are rare and unpredictable. Meanwhile, in seeking the killer app, managers may reject opportunities that at first glance appear too small, and people who aren't involved in the big projects may feel marginalized.

For years, large consumer products companies typically screened out ideas that couldn't result in revenues of several hundred million dollars within two years. This screen discouraged investments in ideas that couldn't be tested and measured using conventional market research, or that weren't grounded in experience, in favor of ideas that were close to current practice and hardly innovative. In the 1980s and 1990s, Pillsbury, Quaker Oats, and even Procter & Gamble (an innovation powerhouse today) were vulnerable to smaller companies that could quickly roll out new products, thus eroding the giants' market share. P&G, for example, lamented not having introduced a new toilet bowl cleaner before a competitor did, despite P&G labs' having developed similar technology. The rival, of course, gained dominant market share by being a first mover. Likewise, Pillsbury and Quaker lagged the competition in bringing new concepts to market and, as underperformers, were eventually acquired.

Time Incorporated, the magazine wing of Time Warner, for a long time was slow to develop new publications because managers wanted any start-up to have the potential to grow into another *People* or *Sports Illustrated,* two of the company's legendary successes. During the period before Don Logan took the helm in 1992, almost no new magazines were launched. After Logan brought a different innovation strategy to the magazine group, Time developed (or bought) about 100 magazines, which dramatically increased the company's revenues, cash flow, and profits. Not every offering was a blockbuster, but Time had learned what successful innovators know: To get more successes, you have to be willing to risk more failures.

The Lessons of Innovation

INNOVATION GOES IN OR OUT of fashion as a strategic driver of corporate growth, but with every wave of enthusiasm, executives make the same mistakes. Most of the time, they stumble in their R&D efforts because they are engaged in a difficult balancing act: They need to protect existing revenue streams while coaxing along new ones. But "corporate entrepreneurship" doesn't have to be an oxymoron. Innovation can flourish if executives heed business lessons from the past.

Strategy Lessons

- Not every innovation idea has to be a blockbuster. Sufficient numbers of small or incremental innovations can lead to big profits.

- Don't just focus on new product development: Transformative ideas can come from any function—for instance, marketing, production, finance, or distribution.

- Successful innovators use an "innovation pyramid," with several big bets at the top that get most of the investment; a portfolio of promising midrange ideas in test stage; and a broad base of early stage ideas or incremental innovations. Ideas and influence can flow up or down the pyramid.

Process Lessons

- Tight controls strangle innovation. The planning, budgeting, and reviews applied to existing businesses will squeeze the life out of an innovation effort.

A related mistake is to act as if only products count, even though transformative new ideas can come from a range of functions, such as production and marketing. For instance, a fabric company that made complicated woven materials had a long-standing problem: yarn breakage during production, which was reflected in the cost of the company's products and represented a competitive disadvantage. But the top team at the fabric maker continued to talk about the company's search for really big product innovations, such as totally new materials. A new executive, who believed in opening the search for innovation to all employees, joined the company. After a meeting discussing the need for change, a veteran factory worker, who had joined as a young immigrant and still spoke with a heavy

- Companies should expect deviations from plan: If employees are rewarded simply for doing what they committed to do, rather than acting as circumstances would suggest, their employers will stifle and drive out innovation.

Structure Lessons

- While loosening formal controls, companies should tighten interpersonal connections between innovation efforts and the rest of the business.

- Game-changing innovations often cut across established channels or combine elements of existing capacity in new ways.

- If companies create two classes of corporate citizens—supplying the innovators with more perks, privileges, and prestige—those in the existing business will make every effort to crush the innovation.

Skills Lessons

- Even the most technical of innovations requires strong leaders with great relationship and communication skills.

- Members of successful innovation teams stick together through the development of an idea, even if the company's approach to career timing requires faster job rotation.

- Because innovations need connectors—people who know how to find partners in the mainstream business or outside world—they flourish in cultures that encourage collaboration.

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accent, tentatively approached the new executive with an idea for ending the breakage. The company tried it, and it worked. When asked how long he had had that idea, the worker replied, "Thirty-two years."

Similarly, because managers at Quaker Oats in the 1990s were too busy tweaking product formulas in minor ways, the company missed numerous opportunities in other arenas, such as distribution—for instance, taking advantage of the smaller, health-oriented outlets used by its Snapple beverage acquisition. And in a packaging coup, Ocean Spray, the cranberry juice company, stole a march on America's largest juice purveyors (then including P&G and Coca-Cola) by getting an 18-month exclusive license for the introduction of Tetra Pak's paper bottles to the U.S. market. Ocean Spray boasted a more eclectic

innovation strategy than that of its rivals, including idea forums to explore innovations in any domain and open to any employee. Paper bottles were an instant hit with children (and parents packing their lunches), and Ocean Spray's market share shot way up.

Early in its history, the U.S. auto industry gained a breakthrough innovation from its financial function: Consumer financing opened mass markets for products that previously only the affluent could afford. One Intel breakthrough was in marketing: It treated computer chips like potato chips. As a technology company, Intel could have left innovation to its R&D folks. But by marketing a component directly to consumers, Intel gained enormous power with computer manufacturers, which had little choice but to put an Intel Inside label on every machine.

Similarly, Cemex, the global cement company based in Mexico, has used widespread brainstorming to generate innovations that create other sources of value for a product that could easily become a commodity. Those innovations include branded, bagged cement and technology-enabled delivery methods to get cement to customers as fast as if it were a pizza. And while P&G is getting attention for its product innovations, such as the Swiffer and Crest Whitestrips, its innovations in new media, such as interactive Web sites for the soap operas it sponsors, may prove even more valuable for the company's future.

When a company is both too product centric and too revenue impatient, an additional problem can arise. The organization's innovation energy can dissipate across a raft of tiny me-too projects chasing immediate revenue. Perversely, such projects may raise costs in the long run. While a failure to encourage small wins can mean missed opportunities, too many trivial projects are like seeds sown on stony ground—they might sprout, but they do not take root and grow into anything useful. If new ideas take the form not of distinctive innovations but of modest product variations, the resulting proliferation can dilute the brand, confuse customers, and increase internal complexity—such as offering a dozen sizes and flavors of crackers rather than a new and different snack food, a problem Kraft currently faces.

Process Mistakes: Controls Too Tight

A second set of classic mistakes lies in process; specifically, the impulse to strangle innovation with tight controls—the same planning, budgeting, and reviews applied to existing businesses. The inherent uncertainty of the innovation process makes sidetracks or unexpected turns inevitable. The reason upstart Ocean Spray could grab the paper-bottle opportunity from large U.S. juice makers is that the big companies' funds had already been allocated for the year, and they wanted committees to study the packaging option before making commitments that would deviate from their plans.

AlliedSignal (now Honeywell) in 2000 sought new Internet-based products and services using established strategic-planning and budgeting processes through existing business units. The CEO asked the divisions to bring their best ideas for Internet-related innovations to the quarterly budget reviews. Although designated as a priority, these innovation projects were subjected to the same financial metrics the established businesses were. Budgets contained no additional funds for investment; managers working on innovations had to find their own sources of funding through savings or internal transfers. What emerged were often retrofitted versions of ideas that had been in the pipeline anyway.

Performance reviews, and their associated metrics, are another danger zone for innovations. Established companies don't just want plans; they want managers to stick to those plans. They often reward people for doing what they committed to do and discourage them from making changes as circumstances warrant. At a large defense contractor, for instance, people got low marks for not delivering exactly what they had promised, even if they delivered something better—which led people to underpromise, eventually reducing employees' aspirations and driving out innovation.

In the early 1990s, Bank of Boston (now part of Bank of America) set up an innovative unit called First Community Bank (FCB), the first comprehensive banking initiative to focus on inner-city markets. FCB struggled to convince mainstream managers in Bank of Boston's retail-banking group that the usual performance metrics, such as

transaction time and profitability per customer, were not appropriate for this market—which required customer education, among other things—or for a new venture that still needed investment. Mainstream managers argued that "underperforming" branches should be closed. In order to save the innovation, FCB leaders had to invent their own metrics, based on customer satisfaction and loyalty, and find creative ways to show results by clusters of branches. The venture later proved both profitable and important to the parent bank as it embarked on a series of acquisitions.

Structure Mistakes: Connections Too Loose, Separations Too Sharp

While holding fledgling enterprises to the same processes as established businesses is dangerous, companies must be careful how they structure the two entities, to avoid a clash of cultures or conflicting agendas.

The more dramatic approach is to create a unit apart from the mainstream business, which must still serve its embedded base. This was the logic behind the launch of Saturn as an autonomous subsidiary of General Motors. GM's rules were suspended, and the Saturn team was encouraged to innovate in every aspect of vehicle design, production, marketing, sales, and customer service. The hope was that the best ideas would be incorporated back at the parent company, but instead, after a successful launch, Saturn was reintegrated into GM, and many of its innovations disappeared.

In the time it took for Saturn to hit its stride, Toyota—which favored continuous improvement over blockbusters or greenfield initiatives like Saturn—was still ahead of GM in quality, customer satisfaction, and market share growth. Similarly, U.S. charter schools were freed from the rules of public school systems so they could innovate and thus serve as models for improved education. They've employed many innovative practices, including longer school days and focused curricula, but there is little evidence that charter schools have influenced changes in the rest of their school districts.

The problem in both cases can be attributed to poor connections between the greenfield and the mainstream. Indeed, when people operate in silos, companies may miss innovation opportunities altogether. Game-changing innovations often cut across established channels or combine elements of existing capacity in new ways. CBS was once the world's largest broadcaster and owned the world's largest record company, yet it failed to invent music video, losing this opportunity to MTV. In the late 1990s, Gillette had a toothbrush unit (Oral B), an appliance unit (Braun), and a battery unit (Duracell), but lagged in introducing a battery-powered toothbrush.

The likelihood that companies will miss or stifle innovations increases when the potential innovations involve expertise from different industries or knowledge of different technologies. Managers at established organizations may both fail to understand the nature of a new idea and feel threatened by it.

AT&T Worldnet, the Internet access venture of the venerable long-distance telephone company, faced this lethal mix in the mid-1990s. Managers in the traditional consumer services and business services units participated in a series of debates over whether to manage Worldnet as a distinct business unit, with its own P&L, or to include it in the existing business units focused primarily on the consumer sector. While consumer services managers were reluctant to let go of anything, they eventually agreed to a carve-out intended to protect the embryonic venture from being crushed by the bureaucracy and to keep it from being measured against more-mature businesses that were generating significant cash flow rather than requiring investment. They weren't all that concerned, because they believed an Internet service provider would never generate significant revenue and profitability.

But as Worldnet gained momentum, it attracted more attention. The people in consumer services began to view the innovation's possible expansion to provide voice over Internet protocol (VoIP) services as a threat that could cannibalize existing business. Consumer services managers grabbed control of Worldnet and proceeded to starve it. They used it as a platform to sell core land-based long-distance services and started applying the same metrics

to the Internet business that were used for consumer long-distance. Pricing was an immediate problem. Worldnet's services had been priced low to fuel growth, to get the scale and network effects of a large group of subscribers, but the mainstream unit did not want to incur losses on any line of business. So it raised prices, and Worldnet's growth stalled. Consumer services managers could then treat Worldnet as a trivial, slow-growing business, not worthy of large investment. They did not allocate sufficient resources to develop Internet access and VoIP technology, restraining important telecom innovations in which AT&T could have been the pioneer.

Cultural clashes exacerbated tensions at AT&T. Mainstream managers had long tenures in the Bell system. The Internet group, however, hired external tech professionals who spoke the language of computers, not telephony.

Even when a new venture is launched within an existing business, culture clashes become class warfare if there are two classes of corporate citizens—those who have all the fun and those who make all the money. The designated innovators, whether an R&D group or a new-venture unit, are identified as creators of the future. They are free of rules or revenue demands and are allowed to play with ideas that don't yet work. Their colleagues are expected to follow rules, meet demands, and make money while feeling like grinds and sometimes being told they are dinosaurs whose business models will soon be obsolete.

In the early 2000s, Arrow Electronics' attempt at an Internet venture, Arrow.com, was given space in the same facility as the traditional sales force. The similarities stopped there. The Internet group was composed of new hires, often young, from a different background, who dressed in a completely different style. It spent money on cushy furniture, including a big expenditure on a new kitchen—justified, it was said, because the Arrow.com team worked 24/7. The traditional sales force, already anxious about the threat Internet-enabled sales posed to its commissions and now aware of its dingier offices, became overtly angry. Relations between the groups grew so acrimonious that a brick wall was erected to separate the two sides of the building. Both teams wasted time battling, endangering customer relationships when

the two groups fought over the same customers—after all, Arrow.com was just another distribution channel. The CEO had to intervene and find structures to connect them.

Skills Mistakes: Leadership Too Weak, Communication Too Poor

Undervaluing and underinvesting in the human side of innovation is another common mistake. Top managers frequently put the best technical people in charge, not the best leaders. These technically oriented managers, in turn, mistakenly assume that ideas will speak for themselves if they are any good, so they neglect external communication. Or they emphasize tasks over relationships, missing opportunities to enhance the team chemistry necessary to turn undeveloped concepts into useful innovations.

Groups that are convened without attention to interpersonal skills find it difficult to embrace collective goals, take advantage of the different strengths various members bring, or communicate well enough to share the tacit knowledge that is still unformed and hard to document while an innovation is under development. It takes time to build the trust and interplay among team members that will spark great ideas. MIT researchers have found that for R&D team members to be truly productive, they have to have been on board for at least two years. At one point, Pillsbury realized that the average length of time the company took to go from new product idea to successful commercialization was 24 to 26 months, but the average length of time people spent on product teams was 18 months. No wonder the company was falling behind in innovation.

Changes in team composition that result from companies' preferences for the frequency with which individuals make career moves can make it hard for new ventures to deal with difficult challenges, prompting them to settle for quick, easy, conventional solutions. At Honeywell in the 1980s, leaders of new-venture teams were often promoted out of them before the work had been completed. Because promotions were take-it-or-leave-it offers and pay was tied to size of assets controlled (small by definition in new ventures)

rather than difficulty of task, even dedicated innovators saw the virtues of leaving their projects midstream. Honeywell was undermining its own innovation efforts. An executive review of why new ventures failed uncovered this problem, but a technology bias made it hard for old-school managers of that era to increase their appreciation for the value of team bonding and continuity.

Innovation efforts also bog down when communication and relationship building outside the team are neglected. When Gap Incorporated was struggling in the late 1990s, the company mounted several cross-unit projects to find innovations in products, retail concepts, and operations. Some of the project teams quickly became closed environments, and members cut themselves off from their former peers. By failing to tap others' ideas, they produced lackluster recommendations; and by failing to keep peers informed, they missed getting buy-in for even their weak proposals.

Innovators cannot work in isolation if they want their concepts to catch on. They must build coalitions of supporters who will provide air cover for the project, speak up for them in meetings they don't attend, or sponsor the embryonic innovation as it moves into the next stages of diffusion and use. To establish the foundation for successful reception of an innovation, groups must be able to present the radical so it can be understood in familiar terms and to cushion disruptive innovations with assurances that the disruption will be manageable. When technical experts mystify their audiences rather than enlighten them, they lose support—and "no" is always an easier answer than "yes." Groups that work in secret and then present their ideas full-blown at the end face unexpected objections that sometimes kill the project.

Such inattention to relationships and communication with mainstream business managers doomed the launch of Timberland's promising TravelGear line. Developed by an R&D group called the Invention Factory, which was independent of the company's mainstream businesses, TravelGear allowed a user to travel with a single pair of shoes, adding or subtracting components suitable for a range of outdoor activities. The concept won a design award from *Business-Week* in 2005. But some existing business teams had not been included

in the Invention Factory's developments, and the traditional sales force refused to sell TravelGear products.

By contrast, Dr. Craig Feied's success in developing a state-of-the-art digital network for Washington Hospital Center and its parent, MedStar Health, was a testimony to investment in the human dimension. A small group of programmers designed a user-friendly information system in the emergency department, not the IT department, so they were already close to users. Dr. Feied and his partner, Dr. Mark Smith, made a point of sitting on numerous hospital committees so they would have a wide base of relationships. Their investment in people and their contributions toward shared hospital goals had a positive effect: Feied and Smith's actions helped create good word of mouth and support among other departments for their information system (now called Azyxxi), which resulted in saved time and lives.

The climate for relationships within an innovation group is shaped by the climate outside it. Having a negative instead of a positive culture can cost a company real money. During Seagate Technology's troubled period in the mid-to-late 1990s, the company, a large manufacturer of disk drives for personal computers, had seven different design centers working on innovation, yet it had the lowest R&D productivity in the industry because the centers competed rather than cooperated. Attempts to bring them together merely led people to advocate for their own groups rather than find common ground. Not only did Seagate's engineers and managers lack positive norms for group interaction, but they had the opposite in place: People who yelled in executive meetings received "Dog's Head" awards for the worst conduct. Lack of product and process innovation was reflected in loss of market share, disgruntled customers, and declining sales. Seagate, with its dwindling PC sales and fading customer base, was threatening to become a commodity producer in a changing technology environment.

Under a new CEO and COO, Steve Luczo and Bill Watkins, who operated as partners, Seagate developed new norms for how people should treat one another, starting with the executive group. Their raised consciousness led to a systemic process for forming and running

"core teams" (cross-functional innovation groups), and Seagate employees were trained in common methodologies for team building, both in conventional training programs and through participation in difficult outdoor activities in New Zealand and other remote locations. To lead core teams, Seagate promoted people who were known for strong relationship skills above others with greater technical skills. Unlike the antagonistic committees convened during the years of decline, the core teams created dramatic process and product innovations that brought the company back to market leadership. The new Seagate was able to create innovations embedded in a wide range of new electronic devices, such as iPods and cell phones.

Innovation Remedies

The quest for breakthrough ideas, products, and services can get derailed in any or all of the ways described earlier. Fortunately, however, history also shows how innovation succeeds. "Corporate entrepreneurship" need not be an oxymoron. Here are four ways to win.

Strategy remedy: Widen the search, broaden the scope

Companies can develop an innovation strategy that works at the three levels of what I call the "innovation pyramid": a few big bets at the top that represent clear directions for the future and receive the lion's share of investment; a portfolio of promising midrange ideas pursued by designated teams that develop and test them; and a broad base of early stage ideas or incremental innovations permitting continuous improvement. Influence flows down the pyramid, as the big bets encourage small wins heading in the same direction, but it also can flow up, because big innovations sometimes begin life as small bits of tinkering—as in the famously accidental development of 3M's Post-it Notes.

Thinking of innovation in terms of this pyramid gives senior managers a tool for assessing current efforts, making adjustments as ideas prove their value and require further support, and ensuring that there is activity at all levels. A culture of innovation grows because everyone can play. While dedicated groups pursue the big

projects and temporary teams develop midrange ideas, everyone else in the company can be invited to contribute ideas. Every employee can be a potential idea scout and project initiator, as IBM is demonstrating. This past July, the company held a three-day InnovationJam on the Web, during which about 140,000 employees and clients—representing 104 countries—contributed about 37,000 ideas and ranked them, giving the company an enormous pool of raw ideas, some of them big, most of them small. Indeed, an organization is more likely to get bigger ideas if it has a wide funnel into which numerous small ideas can be poured. One of the secrets of success for companies that demonstrate high rates of innovation is that they simply try more things.

Gillette adopted the pyramid model as part of its push to accelerate innovation in 2003 and 2004. The result was a stream of innovations in every function and business unit that raised revenues and profits. They included new products such as a battery-powered toothbrush; new concepts in the R&D pipeline, such as the 2006 five-blade, battery-powered Fusion shaving system; innovative marketing campaigns that neutralized the competition, such as the campaign for the Mach3Turbo, which outshone Schick's introduction of its Quattro razor; and new technology in HR. At the first Gillette innovation fair in March 2004, every unit showcased its best ideas of the year in a creative way. The legal department promoted its novel online ethics course with a joke: distributing "get out of jail free" cards like those in *Monopoly*. Having the legal department embrace innovation was a plus for a company in which innovators needed speedy service to file patent applications or help to clear regulatory hurdles.

An innovation strategy that includes incremental innovations and continuous improvement can help to liberate minds throughout the company, making people more receptive to change when big breakthroughs occur.

Process remedy: Add flexibility to planning and control systems
One way to encourage innovation to flourish outside the normal planning cycles is to reserve pools of special funds for unexpected

opportunities. That way, promising ideas do not have to wait for the next budget cycle, and innovators do not have to beg for funds from mainstream managers who are measured on current revenues and profits. In the mid-to-late 1990s, autocratic management and rigid controls caused the BBC to slip in program innovation and, consequently, audience share. Budgets were tight, and, once they were set, expenditures were confined to predetermined categories. In 2000, a new CEO and his CFO relaxed the rules and began setting aside funds in a corporate account to support proposals for innovation, making it clear that bureaucratic rules should not stand in the way of creative ideas. The BBC's biggest hit comedy in decades, *The Office,* was an accident, made possible when a new recruit took the initiative to use money originally allocated for a BBC training film to make the pilot.

IBM is building such flexibility directly into its infrastructure. The company established a $100 million innovation fund to support the best ideas arising from its InnovationJam, independent of the normal planning and budgeting processes, to allow bottom-up ideas to flourish. "No one has ever before brought together such a global and diverse set of business thought leaders on this scale to discuss the most pressing issues and opportunities of our age," says Nick Donofrio, IBM's executive vice president of innovation and technology. "We have companies literally knocking at the door and saying, 'Give us your best and brightest ideas, and let's work together to make them a reality.' It's a golden opportunity to create entirely new markets and partnerships."

Besides needing different funding models and development partnerships, the innovation process requires exemption from some corporate requirements; after all, there are numerous differences between established businesses and new ventures. For example, the knowledge that innovations could move forward through rapid prototyping—learning from a series of fast trials—might mean that certain milestones triggering review and additional funding would occur faster than they would for established businesses, following the rhythm of the project rather than a fixed quarterly or annual calendar. For other kinds of projects, greater patience might be required— for instance, when an innovation group encounters unexpected

obstacles and needs to rethink its model. The key is flexible, customized treatment.

Structure remedy: Facilitate close connections between innovators and mainstream businesses

While loosening the formal controls that would otherwise stifle innovations, companies should tighten the human connections between those pursuing innovation efforts and others throughout the rest of the business. Productive conversations should take place regularly between innovators and mainstream business managers. Innovation teams should be charged with external communication as part of their responsibility, but senior leaders should also convene discussions to encourage mutual respect rather than tensions and antagonism. Such conversations should be aimed at mutual learning, to minimize cannibalization and to maximize effective reintegration of innovations that become new businesses. In addition to formal meetings, companies can facilitate informal conversations—as Steelcase did by building a design center that would force people to bump into one another—or identify the people who lead informal cross-unit networks and encourage their efforts at making connections.

Innovation groups can be told at the outset that they have a responsibility to serve the mainstream while also seeking bigger innovations to start new businesses. This can be built into their charters and reinforced by overlapping relationships—whether it involves representatives from mainstream businesses rotating through innovation groups or advisory boards overseeing innovation efforts. After its first great idea flopped, Timberland's Invention Factory learned to work closely with mainstream teams to meet their needs for immediate innovations, such as recreational shoes lined with SmartWool, and to seek game-changing breakthroughs. Turner Broadcasting's new-products group mixes project types: stand-alone developments, enhancements for current channels, external partnerships, and venture capital investments. PNC Financial Services Group recently established a new-products group to oversee mainstream developments, such as pricing and product

enhancements, as well as growth engines in new capabilities, such as technology-enabled services and back-office services for investment funds. The company's sales of emerging products were up 21% in 2005, accounting for 46% of all sales.

Flexible organizational structures, in which teams across functions or disciplines organize around solutions, can facilitate good connections. Media conglomerate Publicis has "holistic communication" teams, which combine people across its ad agencies (Saatchi & Saatchi, Leo Burnett, Publicis Worldwide, and so on) and technology groups to focus on customers and brands. Novartis has organized around diseases, with R&D more closely connected to markets and customers; this has helped the company introduce pathbreaking innovations faster, such as its cancer drug Gleevec. The success of Seagate's companywide Factory of the Future team at introducing seemingly miraculous process innovations led to widespread use of its core-teams model.

Would-be innovators at AlliedSignal discovered that tackling promising opportunities required outreach across silos. For example, the aerospace division was organized into groups that were dedicated to large commercial airlines, small commercial airlines, and general aviation (private and charter planes), but the best new idea involved differentiating customers by whether they performed their own maintenance or contracted it to others. The division needed to create new connections across previously divided territories in order to begin the innovation process.

The success of Williams-Sonoma as a multichannel retailer innovating in e-commerce can be attributed to the ways its Web pioneers connected their developments to the rest of the company. From the very beginning, CEO Howard Lester refused to consider Internet ventures that were independent of other company operations. The first main Web development was a bridal registry to create new functionality for the mainstream business. When this pilot project proved its value, an e-commerce department was launched and housed in its own building. But rather than standing apart and pursuing its own direction, that department sought to enhance existing channels, not compete with them. It measured its success not only

according to e-commerce sales but also according to incremental sales through other channels that the Web had facilitated. To further its close connections with the mainstream business, the department offered free training to the rest of the company.

Skills remedy: Select for leadership and interpersonal skills, and surround innovators with a supportive culture of collaboration
Companies that cultivate leadership skills are more likely to net successful innovations. One reason Williams-Sonoma could succeed in e-commerce quickly and profitably was its careful attention to the human dimension. Shelley Nandkeolyar, the first manager of Williams-Sonoma's e-commerce group, was not the most knowledgeable about the technology, but he was a leader who could assemble the right team. He valued relationships, so he chose a mixture of current employees from other units, who could be ambassadors to their former groups, and new hires that brought new skills. He added cross-company teams to advise and link to the e-commerce team. He invented an integrator role to better connect operations groups and chose Patricia Skerritt, known for being relationship oriented, to fill it.

Similarly, Gail Snowden was able to steer Bank of Boston's First Community Bank through the minefields of middle-manager antagonism toward a successful innovation that produced other innovations (new products and services) because of her leadership skills, not her banking skills. She built a close-knit team of talented people who bonded with one another and felt passion for the mission. Soon her group became one of the parent bank's most desirable places to work. She developed strong relationships with senior executives who helped her deal with tensions in the middle, and she communicated well and often about why her unit needed to be different. Her creativity, vision, teamwork, and persistence helped this group succeed and become a national role model, while other banks' efforts faltered.

IBM's big innovations, such as demonstrating grid computing through World Community Grid, are possible only because the company's culture encourages people to collaborate. CEO Sam

Palmisano has engaged hundreds of thousands of IBMers in a Web-based discussion of company values, and Nick Donofrio, IBM's executive vice president for innovation and technology, works to make 90,000 technical people around the world feel part of one innovation-seeking community. The corporate champion of World Community Grid, IBM vice president Stanley Litow, sought out partners in its business units and geographies to move the innovation forward.

Established companies can avoid falling into the classic traps that stifle innovation by widening the search for new ideas, loosening overly tight controls and rigid structures, forging better connections between innovators and mainstream operations, and cultivating communication and collaboration skills.

Innovation involves ideas that create the future. But the quest for innovation is doomed unless the managers who seek it take time to learn from the past. Getting the balance right between exploiting (getting the highest returns from current activities) and exploring (seeking the new) requires organizational flexibility and a great deal of attention to relationships. It always has, and it always will.

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