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THE BIG IDEA

The New Corporate Garage

**Where today's most innovative—and
world-changing—thinking is taking place**
by Scott D. Anthony

The Big Idea

OTTAWA'S TECHNOLOGY COMMUNITY



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THE NEW CORPORATE GARAGE

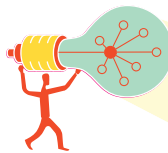
Where today's most innovative—and world-changing—thinking is taking place by Scott D. Anthony

QUICK: LIST THE BIG COMPANIES that have launched paradigm-shifting innovations in recent decades. There's Apple—and, well, Apple. The popular perception is that most corporations are just too big and deliberate to produce game-changing inventions. We look to hungry entrepreneurs—the Gateses, Zuckerbergs, Pages, and Brins—instead. The rise of fast, nimble, and passionate venture-capital-backed entrepreneurs seems to have made slow-paced big-company innovation obsolete, or at least to have consigned it to the world of incremental advances. But Apple's inventiveness is no anomaly; it indicates a dramatic shift in the world of innovation. The revolution spurred by venture capitalists decades ago has created the conditions in which scale enables big companies to stop shackling innovation and start unleashing it.

ILLUSTRATION: OTTO STEININGER



Three trends are behind this shift. First, the increasing ease and decreasing cost of innovation mean that start-ups now face the same short-term pressures that have constrained innovation at large companies; as soon as a young company gets a whiff of success, it has to race against dozens of copycats. Second, large companies, taking a page from start-up strategy, are embracing open innovation and less hierarchical management and are integrating entrepreneurial behaviors with their existing capabilities. And third, although innovation has historically been product- and service-oriented, it increasingly involves creating business models that tap big companies' unique strengths.

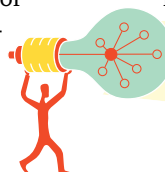


It's early days still, but the evidence is compelling that we are entering a new era of innovation, in which entrepreneurial individuals, or "catalysts," within big companies are using those companies' resources, scale, and growing agility to develop solutions to global challenges in ways that few others can. As the stories that follow show, these companies have pushed into territory that was once the province of entrepreneurs, NGOs, and governments—from delivering health care technology, clean water, and new agricultural capabilities in developing countries to managing energy, traffic, public transit, and crime in the world's major cities. Before looking at how catalysts drive such invention inside their companies, it's important to appreciate the three historical periods that brought us to the present age—the fourth era of innovation.

A Brief History of Innovation

The first era of innovation—that of the lone inventor—encompassed much of human history. Innovators occasionally formed or latched on to companies to exploit the full potential of their ideas, but most seminal innovations developed before about 1915 are closely associated with the individuals behind them: Gutenberg's press. Whitney's cotton gin. Edison's lightbulb. The Wright brothers' plane. Ford's assembly line (actually as much a business model as a technology).

With the perfection of the assembly line, a century ago, the increasing complexity and cost of innovation pushed it out of individuals' reach, driving more company-led efforts. A combination of longer-term perspectives and less stifling corporate bureaucracies meant that many organizations would happily tolerate experimental efforts. Thus the heroes of this second era



worked in corporate labs, and corporations evolved from innovation exploiters into innovation creators. Many of the notable commercial inventions of the next 60 years came from these labs: DuPont's miracle molecules (including nylon); Procter & Gamble's Crest, Pampers, and Tide brands; the U-2 spy plane and SR-71 Blackbird fighter jet from Lockheed Martin's famed Skunk Works.

The seeds of the third era were planted in the late 1950s and the 1960s, as companies started to become too big and bureaucratic to handle at-the-fringes exploration. The restless individualism of baby boomers clashed with increasingly hierarchical organizations. Innovators began to leave companies, band with like-minded "rebels," and form new companies. Given the scale required to innovate, however, these rebels needed new forms of funding. Hence the emergence of the VC-backed start-up. The first publicly owned venture capital organization was General Georges Doriot's American Research and Development Corporation, whose \$70,000 investment in Digital Equipment Corporation in 1957 was worth \$355 million when DEC went public in 1968. The third era came into its own in the 1970s, with the establishment of Kleiner Perkins Caufield & Byers and Sequoia Capital. These and similar institutions helped to support the formation of Apple, Microsoft, Cisco Systems, Amazon, Facebook, and Google. Life became even harder for innovators in big companies as the capital markets' expectations for short-term performance grew.

The technologies birthed during this era and the globalization of world markets have dramatically accelerated the pace of change. Over the past 50 years corporate life spans by some measures have decreased by close to 50%. Back in 2000, Microsoft was an unstoppable monopoly, Apple was playing at the fringes of the computer market, Facebook founder Mark Zuckerberg was a student at Phillips Exeter Academy, and Google was a technology in search of a business model.

This breathless pace, and the conditions and tools that enable it, bring us to the fourth era—when corporate catalysts can have a transformational impact. Whereas the inventions that characterized the first three eras were typically (but not always) technological breakthroughs, fourth-era innovations are likely to involve business models.

One analysis shows that from 1997 to 2007 more than half of the companies that made it onto the *Fortune* 500 before their

Idea in Brief

This is innovation's fourth era, when the scale of a big company can unleash innovation rather than shackle it.

Key to this shift is the emergence of passionate, entrepreneurial “catalysts” who use corporations’ global infrastructure, brand reputation, partner relationships, process excellence, and other capabilities to develop solutions to global challenges in ways that few others can.

Examples include Medtronic’s Healthy Heart for All, which

provides pacemakers and associated financing to rural Indians; Unilever’s Pureit, a portable, affordable water purification technology for household use in developing countries; Syngenta’s Uwezo initiative, which scales crop-protection systems for use by smallholders in Africa; and IBM’s Smarter Cities, which bundles technological infrastructure and related

services to help cities manage energy, water, public transit, and other resources.

To encourage catalysts, companies must embrace open and systematic innovation, simplify and decentralize decision making, be learning-focused and failure-tolerant, and, above all, make innovation purpose-driven.

25th birthdays—including Amazon, Starbucks, and AutoNation—were business model innovators.

Today it’s easier than ever to innovate, which may suggest that it’s an ideal time to start a business. After all, a wealth of low- or no-cost online tools, coupled with hyperconnected markets, put innovation capabilities into the hands of the masses and allow ideas to rapidly spread. For many start-ups, \$25,000 is sufficient to launch a fully formed business, as the incubator Y Combinator and its numerous copycats show. These early-stage funders have helped launch promising new companies such as Dropbox, Airbnb, Xobni, Scribd, Hipmunk, and many more.

But surprisingly, the ease and pace of innovation that now aid entrepreneurs can also work against them. In the past, although growth markets attracted multiple entrants (by one count, Google was the 18th significant contender in the search-engine space), competition was less frenzied, giving start-ups time—often years—to develop difficult-to-replicate assets. And companies that clearly weren’t going to make it promptly folded, releasing top talent into the market. Today young companies have what feels like milliseconds to enjoy an early success before they need to start outspending imitators and fighting for talent. Consider the “daily deal” space. By some accounts, Groupon reached \$1 billion in revenue faster than any other company in history. But dozens of instant copycats put it on the defensive—and lower fixed costs today mean those contenders can linger far longer. Groupon may succeed in spending its challengers into retreat, but hypercompetition, coupled

with shortening development cycles, makes it harder than ever for start-ups to create enduring competitive advantage. In other words, they are increasingly vulnerable to the same capital-market pressures that plague big companies—but before they’ve developed lasting corporate assets.

Medtronic’s Healthy Heart

In contrast to this fearsome position, consider the enabling environment Medtronic encountered in an innovative effort called Healthy Heart for All. Medtronic is as far from a start-up as one can imagine: Founded in the late 1940s, it is today the world’s largest stand-alone medical device manufacturer, with \$16 billion in revenue, and is best known for its implantable pacemakers and defibrillators. The Healthy Heart program seeks to bring pacemaker technology to hundreds of thousands of Indians who desperately need it.

In late 2010 I visited The Mission Hospital (TMH) in Durgapur, a modest town by Indian standards (population about 1 million), nestled in India’s northeast corner, near Bangladesh. During my visit I saw a pilot of Medtronic’s innovative business model in action. The company had drawn on pioneering Indian health care models, such as Aravind Eye Care System’s affordable cataract care, to help TMH design new ways to serve low-income patients. Heart disease is prevalent in India but diagnosis is not, so Medtronic created diagnostic camps to identify potential patients. I saw one camp in a rural village where technicians used low-cost electro-

The increasing ease and decreasing cost of innovation mean that as soon as a young company gets a whiff of success, it has to race against dozens of copycats.

WHAT GIVES BIG COMPANIES AN ADVANTAGE?

Giants like Medtronic, Unilever, Syngenta, and IBM have advantages that start-ups would find hard to replicate. They include:

Global infrastructure

Whereas internet-based offerings are easy to distribute, physical products and face-to-face services require infrastructure (particularly “last mile” distribution channels). Big companies use theirs to establish footholds and expand distribution quickly.

Strong brand reputation

The gatekeepers between an idea and an end user—in Medtronic’s case, hospital purchasing agents, government regulators, and influential doctors—often feel hesitant about products and services offered by new companies. A strong brand helps a large company sail past those gatekeepers.

Partner relationships

Large companies can easily acquire best-of-breed partners to support an idea.

Scientific knowledge

Dedicated teams of experts inside corporations produce difficult-to-replicate knowledge that is often protected by patents.

Experience with regulators

Increased government intervention in markets presents roadblocks to start-ups that haven’t had to deal with officials in a number of sectors.

Process excellence

As their operations grow, start-ups hit predictable speed bumps that big companies can avoid.

cardiogram machines to screen dozens of people in an afternoon and wirelessly send their ECGs to be read by doctors hundreds of miles away. Insurance is still rare in India, so Medtronic had to make its pacemaker more affordable. It worked with a local partner to create India’s first financing plan for medical devices.

No new technology was involved here—and that’s the point. Medtronic used business model innovation to enter markets formerly out of its reach. It follows in the footsteps of Vodafone (M-Pesa mobile payment service in Africa), Dow Corning (Xiameter online channel), and Hilti (tool fleet management services) as a market leader using a new model to power growth.

Healthy Heart’s first implant occurred in September 2010. Over the subsequent 18 months, pilot programs in a handful of hospitals screened thousands of patients who previously would not have been diagnosed, let alone treated, and provided vital in-market learning. Though the total number of implants is still relatively small—approximately 50 to date—the pilots have demonstrated the model’s promise. On the basis of this early success, the company plans to scale up the program across India and then in other emerging markets. The effort also positions Medtronic to dramatically expand in those markets as it develops new technologies that lower costs. (CEO Omar Ishrak has announced a goal of radically reducing the cost of a simple pacemaker.)

Think about the challenges that would face a start-up seeking to compete with Medtronic. It could mimic pieces of Medtronic’s approach, such as the diagnostic camps and a financing plan. But it would have to either build a new pacemaker and seek regulatory approval (which would take years, if not decades) or partner with an established pacemaker manufacturer. It would struggle to get meetings with local doctors with whom Medtronic already has deep relationships. And, of course, it would have to learn how to operate in India, a notoriously complex market. Medtronic simply has capabilities, experience, relationships, expertise, and resources that entrepreneurs don’t.

This is a fourth-era-innovation story. Medtronic mixed the entrepreneurial approach of a third-era VC-backed start-up with the unique capabilities once housed in second-era corporate labs. It’s easy to bemoan the stifling bureaucracies that characterize some large companies. But giants like Medtronic have hard-to-replicate advantages over start-ups.

(See the sidebar “What Gives Big Companies an Advantage?”)

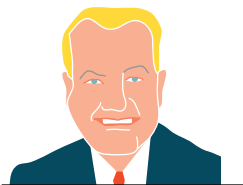
Once you recognize the fourth-era pattern, you see examples everywhere. Imagine going back to 2007 and asking your friends to guess who would become the leader in the exploding e-reader market. Chances are they wouldn’t guess Amazon (Kindle) or Barnes & Noble (Nook), because neither company had device expertise. But both had unique distribution channels. The ready access to outside innovation that now enables entrepreneurs likewise allowed these big companies to develop devices in less than 24 months. The resulting business has been a boon for both of them. Google Android, Cisco TelePresence, Nestlé Nespresso, Tide Dry Cleaners, Microsoft Kinect, and many others fit this pattern.

The Role of the Corporate Catalyst

As companies have decentralized strategic and innovation activities, promoting agility, they have become increasingly hospitable to catalysts—those mission-driven leaders who corral corporate resources that are outside their traditional span of control to address sprawling challenges. They form networks or coalitions within and outside the company and are motivated by the desire to solve big—often global—problems.

Healthy Heart, for example, could not exist without the Medtronic catalyst Keyne Monson. In 2008 the head of the company’s international arm asked Monson to devise a business model that would increase its presence in India. Monson launched the effort without a single direct report. He found advocates within Medtronic’s Indian organization and worked with external enablers including David Green, of Ashoka (which backs social entrepreneurs), to develop a case for broader investment. He drew in outside partners early in the process, and he engaged leadership by highlighting stories about individual patients whom Medtronic could help. (Mission-driven by nature, Monson was inspired by his work in India to set up a separate nonprofit company called Elevita, through which developed-economy consumers can buy goods made by developing-country artisans.) Monson’s early efforts earned him the support of regional leaders—notably Milind Shah, Medtronic’s India country head, and Shamik Dasgupta, the regional head of Medtronic’s pacemaker and defibrillator business, both of whom played critical roles in designing, staffing, and executing the pilot and expanding the program.

FOUR INNOVATION CATALYSTS



KEYNE MONSON
MEDTRONIC

Healthy Heart for All provides cardiac diagnostic services and financing to bring pacemakers to people who previously could not access them.

Thousands have been screened in pilots, and dozens of pacemakers have been implanted. Plans involve scaling up across India and other emerging markets.



YURI JAIN
UNILEVER

Pureit, a portable water purification system, provides safe water at half a cent per liter.

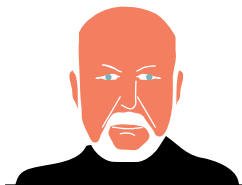
Millions of units have been sold throughout India. The goal is to provide clean water to 500 million people.



NICK MUSYOKA
SYNGENTA

Uwezo crop-protection chemicals and seeds use the sachet distribution model plus supportive education and training to drive adoption by smallholders.

Sales in Kenya are forecast at \$6.5 million for 2012. Plans are under way to expand to other countries in Africa and Asia.



COLIN HARRISON
IBM

Smarter Cities bundles technology and related services to help cities efficiently manage energy, water, traffic, parking, public transit, and crime.

A Stockholm project reduced carbon emissions by 17% and traffic delays by 50%. Projects have been completed in at least seven other cities.

Medtronic's effort, like those of many other fourth-era innovators, illustrates how big companies are powerfully and uniquely suited to tackling large-scale social problems such as hunger, health care, sustainability, and education. These aren't stand-alone corporate social responsibility efforts—they are strategic initiatives to create profitable businesses that improve the world.

Unilever's Water Purification

Unilever, which has operations in more than 100 countries and sales in 190, has increasingly intertwined its social and corporate goals. In 2010 it launched the Unilever Sustainable Living Plan, which aims to halve the greenhouse gas impact of the company's products, source 100% of agricultural raw materials sustainably, and help more than a billion people improve their health and well-being.

One effort that supports this plan is the Pureit water filtration business, overseen by Yuri Jain, a vice president who leads the company's global water initiatives. People in most parts of the world—especially developing countries—lack reliable access to safe drinking water. Studies show that low-cost interventions to purify water can have a big impact, reducing the risk of potentially lethal diarrheal diseases by 50%. However, many consumers in, for instance, Bangladesh and India have no choice but to

boil water to purify it, which is expensive, takes time, leaves the water vulnerable to recontamination, and consumes precious fossil fuels.

Jain traces his involvement in the Pureit project back to the "creation of the first PowerPoint slide" on the business more than a decade ago. "Having lived in India, we all know that drinking water is a problem," he recalls. "As we looked around, governments had tried, and NGOs had tried, but no one had figured out a scalable solution." So Jain and a small team set out to find one. Things looked grim a few years into the project, when the team found an approach that would work—but at a prohibitive cost. Rather than pursue a lower-quality, cheaper solution, the team and other stakeholders pushed to both retain quality and lower cost. Ultimately, a group of 100 Unilever scientists around the globe cracked the problem. "I think only a corporation could pull this off," Jain says.

Pureit combines a dirt-removing mesh, a carbon filter, a processor that kills germs, and a "polisher" that removes residuals. It produces safe water at a cost of just half a cent per liter. Pureit doesn't need electric power (an important feature given the frequency of power outages in emerging markets) or running tap water. It's portable and can easily fit in small kitchens, and it switches off automatically when the replaceable processor is depleted, prevent-

ing consumers from using unsterilized water. Hindustan Unilever launched Pureit in Chennai in 2004, leveraging its supply chain expertise and retailer relationships to distribute the product throughout the country.

Like Monson at Medtronic, Jain enlisted a number of external parties to help bring the company's innovation to market—in this case by partnering with NGOs to make Pureit available to schools and consumers who would have difficulty affording the technology. "It really helps when you are a team of a few people with the disproportionately large mission of protecting 500 million lives," he says. "In this context, when you start from a blank slate and ask 'What is the best way to do it?' you are open to the idea that you have to partner and create an ecosystem." Unilever also works closely with the Integrated Village Development Project, which helps women access small loans supporting the purchase of productivity tools and hygiene products such as Pureit.

By early 2012 Unilever had sold millions of units. It estimates that 35 million people are drinking Pureit filtered water—a number the company hopes will increase well more than 10-fold by 2020, creating a multibillion-dollar business.

Syngenta's Productive Farming

In the 1980s the sachet packaging model, which provides affordable single doses of a product such as shampoo to poor consumers, was adopted by a few mass marketers (including Unilever). That model later inspired a catalyst at the agribusiness giant Syngenta to develop an innovative way of tackling hunger.

Formed in 2000 through a merger between Novartis Agribusiness and Zeneca Agrochemicals, Syngenta has played a key role in boosting the world's agricultural productivity. Although much of that work has focused on large farms, Syngenta recently introduced a range of efforts aimed at smallholding farmers. Improving the productivity of the 500 million small farms across the world, the company

realized, could pay enormous humanitarian and financial dividends. In Kenya alone, for example, 4 million smallholders grow more than 80% of local produce. Many of these farmers live hand-to-mouth.

The sheer numbers made this market an obvious target. In 2005 Syngenta lured Nick Musyoka away from the British consumer goods giant Reckitt Benckiser, where he had worked on the Mortein Doom pesticide, to lead a smallholding initiative. The opportunity to attack such an enormous challenge motivated Musyoka to become a catalyst in an unfamiliar industry.

Musyoka and his team devised a program dubbed Uwezo ("capability" in Swahili), which uses the sachet distribution model to provide smallholders with affordable, premeasured packages of crop-protection chemicals—the same products sold to large farms. Farmers could simply pour one packet into 20 liters of water in the backpacks they used to spray their fields, eliminating dosing problems and waste.

Musyoka quickly recognized that lowering prices was only part of the solution; education was needed, too. He and his team launched a multipronged information campaign that leveraged existing retailer relationships. Retailers serve as important advisers to farmers, so the team created a program to train retailers about productive farming practices. In addition, it commissioned 45 field agents to travel on motorcycles to farms, plant demonstration plots, and advocate responsible farming. Mass-market media—including programs that farmers could listen to on their mobile phones—broadened the program's reach.

Like Monson, Musyoka drew inspiration from outside his company's industry. He created a business model that combined the capabilities of a large company (agronomic knowledge, retailer relationships, brand recognition) with external enablers and a stand-alone field force, and it is working. Syngenta projects that sales of Uwezo packs in Kenya (which is home to less than 1% of the world's smallholders) will reach \$6.5 million in 2012. The company plans

Fourth-era innovations have huge growth potential in both emerging and developed markets.

to expand the program to other African and Asian countries. It recently committed to building a \$1 billion business—in which Uwezo and related programs will play a significant part—in Africa over the next 10 years and will invest more than \$500 million to support it. This will involve recruiting and training about 700 agronomic specialists and developing distribution networks, logistics, and local production facilities.

More broadly, over the past five years Syngenta's corporatewide focus on innovation has led to an explosion of offerings that have boosted land productivity and the personal productivity of farmers. From

2006 to 2011 its revenues increased by 65%—with new products contributing \$700 million—and net income more than doubled.

IBM's Smarter Cities

Fourth-era innovations in emerging markets have huge growth potential, as the Medtronic, Unilever, and Syngenta initiatives show. But fourth-era approaches apply equally in developed markets. In 2006 the IBM master inventor and catalyst Colin Harrison took part in InnovationJam, two 72-hour crowdsourcing sessions that involved 150,000 employees, family members, business partners, and

IBM THROUGH THE FOUR ERAS



FIRST ERA

LONE INVENTORS

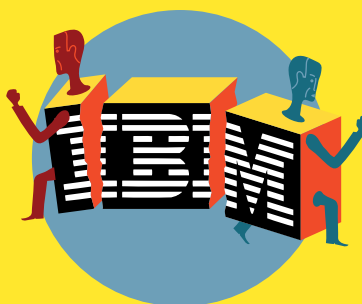
The company traces its roots back to the 1880s, when several men, working individually, patented breakthrough tabulating machines and time-punch clocks for business applications. The inventions were combined into one organization that became International Business Machines.



SECOND ERA

CORPORATE LABS

After World War II the company moved to systematize innovation by opening its legendary Watson Research Center. Pioneering not only computing but also basic research in telecommunications, physics, mathematics, and economics, Watson and other IBM labs around the globe spawned hundreds of new products (including the world-changing System 360), five Nobel Prizes, and—for 17 years in a row—more patents than were earned by any other company in the world.



THIRD ERA

VC-BACKED START-UPS

But IBM was disrupted in the third era, when the prototypical VC-backed start-ups Intel and Microsoft became partners in its IBM PC initiative. Within a decade each start-up had achieved a market value surpassing IBM's own, while Big Blue fell into a state of disrepair and became the subject of breakup rumors.



FOURTH ERA

CORPORATE CATALYSTS

Lou Gerstner took the helm in 1993 and started transforming the company from a hardware manufacturer into a provider of software and “solution services.” Over the past decade Sam Palmisano has accelerated the transformation, turning IBM's size from an anchor slowing innovation into an engine that corporate catalysts can use to accelerate it.

Daniel Pink argues that creative people are motivated by autonomy, opportunities to develop mastery, and a sense of purpose. That applies in spades to catalysts.

clients. Together they engaged in an online brainstorming exercise to conceive the next generation of growth businesses for IBM.

IBM committed \$100 million to 10 small-scale experiments that emerged from the jam in areas including water, energy, transportation systems, and health care. Harrison was selected to help simulate a venture environment on a new corporate strategy team located at company headquarters in Armonk, New York. The team presented its ideas directly to CEO Sam Palmisano.

IBM has a vast array of resources, from R&D to sales and marketing, that no VC-backed start-up could even dream of. But like many multinationals, the company struggled to marshal them during innovation's third era. (See the sidebar "IBM Through the Four Eras.") Harrison and fellow catalysts within the company helped to change this.

Like Monson, Jain, and Musyoka, Harrison activated resources beyond his traditional realm. "We started very small," he says. "I work with several hundred people, but no one reports to me. In a company of this size, if you are persistent enough, you can find people with all kinds of skills." Today the democratization of innovation means that catalysts can have a huge impact without deep budgets or legions of reports.

Harrison led one of the 10 prototype-development experiments, originally called Instrumented Planet. His team sought to answer this question: How could IBM combine its services acumen; the connectivity of the web; and physical sensors, actuators, and RFID chips to improve efficiency by monitoring the movement of people and vehicles and the activity of energy systems? Many of the building blocks were in place, but the company needed a unifying vision and a specific service offering.

In classic catalyst style, Harrison looked outside the organization for inspiration. In early 2008 he was visiting Masdar City, an urban-planning project in Abu Dhabi that seeks to create a carbon-neutral, zero-waste city of the future. He recalls, "I realized that this was the idea we were missing—that every-

thing we wanted to do could coexist in one place—and I suddenly had this view of an integrated operations center for a city."

Thus Instrumented Planet became Smarter Cities (part of IBM's Smarter Planet initiative), through which the company would offer a bundle of technological infrastructure and related services to help cities save money and improve lives by better managing energy, water, traffic, parking, public transit, and other resources. Consider IBM's project in Stockholm. The city planned to build a \$1 billion tunnel to help alleviate traffic congestion. In addition to being expensive, the tunnel's construction would consume enormous amounts of time and fuel and would disrupt the city for years. IBM proposed a different plan: monitor every car from an "intelligent operations center," using sensors, and offer financial incentives to drivers to take alternative routes or public transportation when appropriate. The Smarter Cities plan was enacted at a 10th of the cost of the tunnel in a 10th of the time, and it reduced greenhouse gas emissions by 17% and traffic delays by more than 50%.

IBM went on to complete Smarter Cities projects in Rio de Janeiro, Berlin, Beijing, Dublin, Singapore, and New York. In Chicago its network enabled another company to build an app that monitors all the city's snowplows during a storm and tells drivers which streets are clear at any moment. Smarter Cities showcases how a company catalyst can harness innovation tools to solve big problems while simultaneously accelerating revenue and profit growth. (Smarter Planet as a whole is well on its way to contributing \$10 billion in revenues by 2015.)

Are You Ready?

In an earlier era, Monson, Jain, Musyoka, and Harrison might have done their work in a not-for-profit or a VC-backed start-up. Indeed, they empathize with the stereotypical garage-based entrepreneur. Their garage just happens to be stocked with amazing tools.

Unfortunately, not all corporate environments are conducive to fourth-era innovation. For cata-

lysts to flourish, companies need to embrace open innovation, approach innovation systematically, simplify and decentralize decision-making mechanisms, and be learning-focused and failure-tolerant. Beyond that, they need to make the pursuit of transformative innovation a purpose-driven activity. Many corporate leaders fret about how to provide sufficient economic incentives to attract high-quality innovators. It is hard for them to offer the potential for wealth that a stand-alone entrepreneur might realize. But, as Daniel Pink discusses in his 2009 book *Drive*, additional financial incentives can actually decrease performance on creative tasks. Pink argues that the way to motivate creative people is to give them autonomy, provide opportunities to develop mastery, and instill a sense of purpose in their work. That applies in spades to catalyts.

The fourth era is already shifting the roles that innovation players have traditionally held and creating new ones:

Venture capitalists, who were the enablers of the third era, must consider how their model has to change if they are to remain relevant.

Young innovators set on improving the world should recognize that working for a large company isn't "selling out"—it can maximize their impact.

Corporate leaders must critically examine the degree to which their companies' environments are hospitable to the work of catalyts.

Employees who find their innovation environment inhospitable should consider whether another company would provide more-fertile ground for catalytic work.

Catalyts who have just started their efforts should grit their teeth, because the work will not be easy. Asked to give advice to fellow catalyts, Unilever's Yuri Jain advises having purpose and persistence. "It is a daily struggle," he says. "If you don't believe in the project, the barriers are going to be enormous."

Entrepreneurs will continue to give birth to great businesses, and nonprofits will continue striving to build a better society. But the people changing the world today are as likely to be in corporate cubicles and conference rooms as in Silicon Valley or at social-impact conferences. Welcome to innovation's new era. ♥

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