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The Most Innovative Companies 2013

LESSONS FROM LEADERS

BCG

The Boston Consulting Group

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September 2013 | The Boston Consulting Group

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INTRODUCTION

"Innovate or die," goes the oft-cited corporate cry, and according to The Boston Consulting Group's most recent survey of innovation and new-product development, companies across all industries and regions have taken the admonition to heart. Respondents ranked the importance of innovation higher than ever, building on a trend of the last five years.

BCG has explored the state of innovation with eight surveys since 2005. The data collected from more than 1,500 senior executives each year allow for comparisons over time as well as across regions and industries. The findings capture executives' views of their own innovation plans, as well as their opinions of other companies' innovation track records. As in past surveys, the 2013 results reveal the 50 companies that executives rank as the most innovative, weighted to incorporate relative three-year shareholder returns, revenue growth, and margin growth. The list has its share, as always, of well-known technology innovators (especially among the top ten), but automakers also show a strong surge, a trend that began last year and gathered strength in the current results. This time, we also asked respondents to identify up-and-coming companies at which innovation is driving rapid growth.

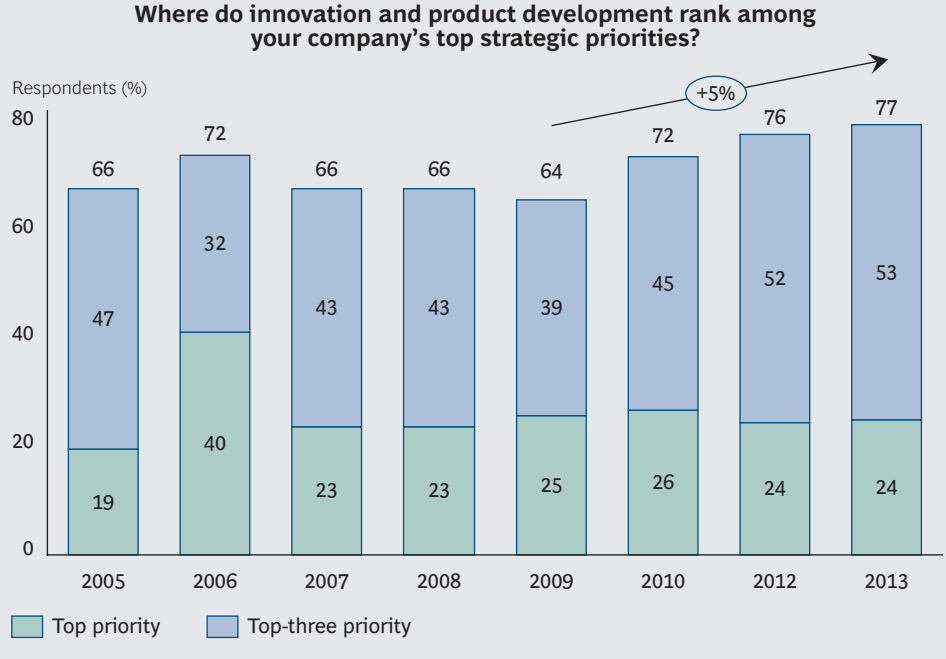
The 2013 report examines companies and innovation through the lens of what gives successful innovators their edge. For the first time, we asked respondents to rate their companies' innovation performance relative to their peers in the marketplace. Approximately one-fifth rated their own performance as strong, another fifth assessed their performance as weak, and about 60 percent said it was neutral or average. In addition to comparing the practices of stronger and weaker innovators, we explore five factors that lead to strength in innovation: the commitment of senior management, the ability to leverage intellectual property (IP), a customer focus, strong management of the innovation portfolio, and well-defined and governed processes.

INNOVATION IN 2013

Most companies continue to rank innovation as a top strategic priority. More than three-quarters of respondents placed it as either number one or among the top three, continuing a trend of the last several years. Even during the depths of the recession, two-thirds or more of companies placed innovation among their most important priorities. (See Exhibit 1.) More than 80 percent of respondents who put their companies in the top quintile of innovators assigned innovation a top-priority ranking for their organizations, while only 63 percent of those in the bottom quintile did so.

These attitudes are backed up by investment, which has been rising significantly in recent years. In 2013, 85 percent of strong innovators

Exhibit 1 | The Importance of Innovation Continues to Increase



Sources: 2005–2012 BCG/*Businessweek* Senior Executive Innovation Survey; 2013 BCG Global Innovators Survey; BCG analysis.

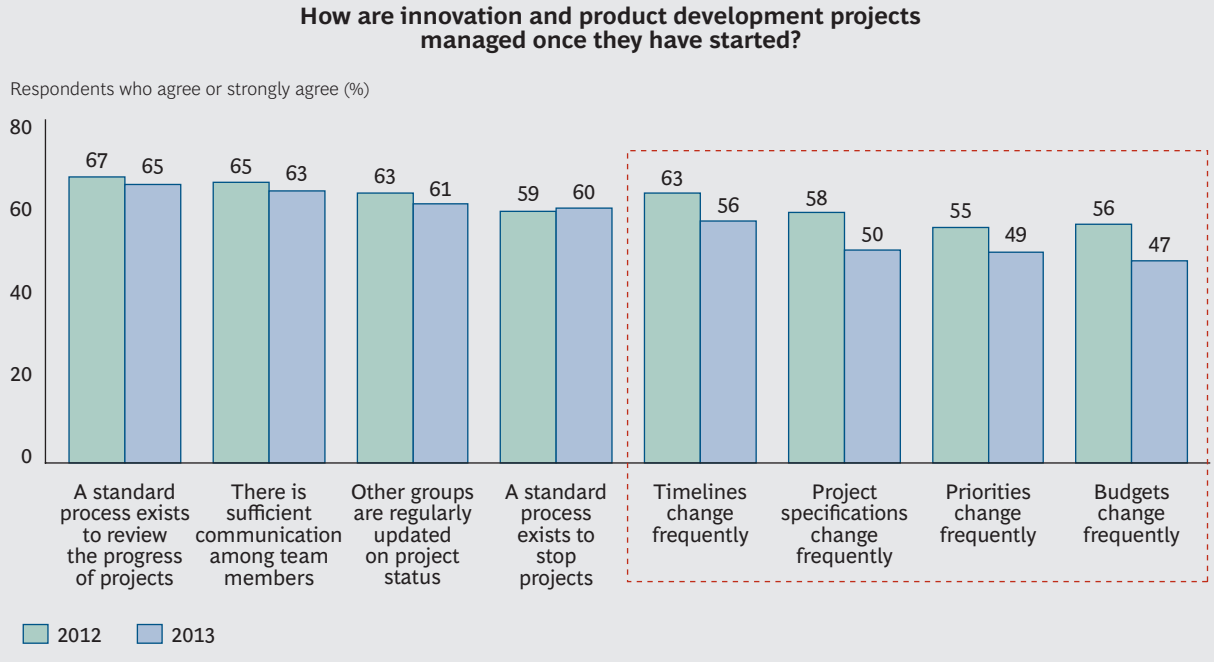
said they expect to spend more on innovation and new-product development than they did last year, compared with only 39 percent of weak innovators. Overall, 64 percent said they plan to increase spending, a 4 percentage point decline from last year. We believe this drop is partly due to companies' increased focus and smarter spending. Significantly fewer respondents reported projects changing direction once they started. (See Exhibit 2.) Respondents also said that that their companies are doing better than they did last year at the various components of innovation and new-product development. They said that they have the pieces of the innovation puzzle, from infrastructure to people to IP, mostly in place. (See Exhibit 3.)

Many of the companies—especially the technology companies—that have long occupied the top slots on the list of the 50 most innovative companies continue to do so. (See Exhibit 4.) Despite its recent stock-market travails, Apple retains the number-one ranking for the ninth consecutive year. Samsung pushed past Google for the number-two position, and Microsoft remains at number four. Joining Toyota in the top ten are two additional automakers—Ford and BMW. The auto industry makes an exceedingly strong showing overall—3 companies in the top 10 and 9 in the top 20. Four car makers are new to the list, and Volkswagen and General Motors are two of the biggest gainers, moving up 31 and 16 places, respectively. For the first time since we began this survey, there are more auto companies than consumer companies in the top 50 and more automakers than technology companies in the top 20. (For the full rankings from 2005 to 2013, see the interactive at mic.bcgpersepctives.com.)

For the first time, there are more automakers than tech companies in the top 20.

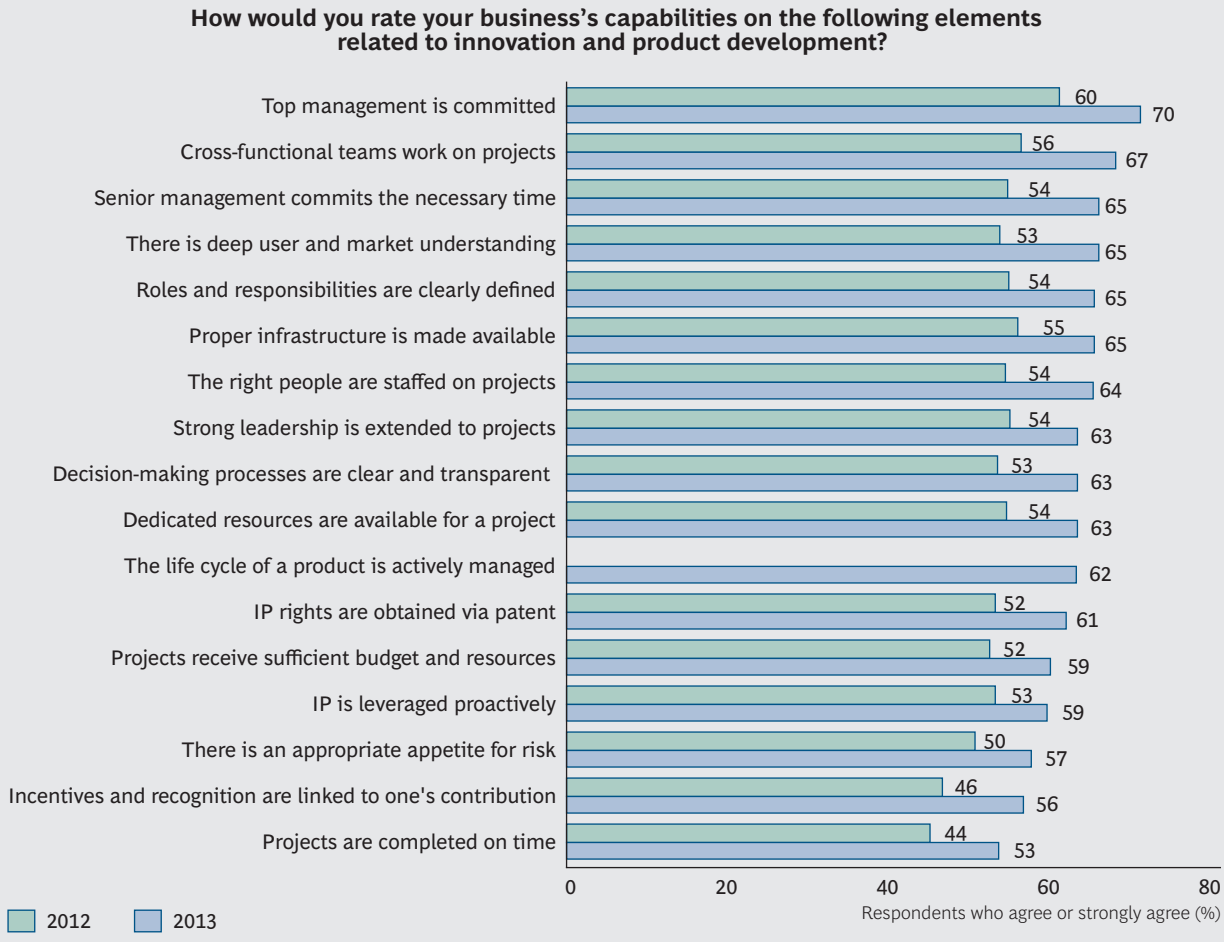
Companies in the automotive and technology sectors lead those in other industries in how important they perceive innovation and investment to be. Almost 85 percent of respondents in both sectors rated innovation as a top priority. (See Exhibit 5.) One-quarter of respondents at auto companies rated their companies as strong innovators, compared

EXHIBIT 2 | Companies Are Staying Closer to Original Project Plans Than They Did in 2012



Source: 2012–2013 BCG Global Innovators surveys.

Exhibit 3 | Respondents Believe They Have Significantly Improved Their Innovation Process



Source: 2012–2013 BCG Global Innovators surveys.
Note: The question about whether the life cycle of a product is actively managed was not asked in 2012.

with an average of one-fifth overall. Approximately 70 percent of respondents from auto and tech companies said they plan to increase investment in innovation in the coming year.

The increasing acknowledgment of innovation in the auto industry continues a prominent trend from last year. Several factors are behind the current wave of automotive advancement. Manufacturers are racing to meet higher fuel-efficiency standards, which mandate an average fuel economy of 54.5 miles per gallon (mpg) in the U.S. for the 2025 model year. (The EU is targeting 64.8 mpg and China 50.1 mpg by 2020.) Automakers have stepped up both the development of electric and hybrid vehicles and their efforts to improve the mileage of mass-market models through such advancements as more efficient power trains and lighter car bodies. At the same time, vehicle safety standards continue to rise, and automakers are pursuing advanced safety innovations such as self-braking systems and vehicle-to-vehicle communications. The pervasive popularity of mobile devices has led consumers to expect advanced electronic and entertainment systems in cars that integrate seamlessly with their devices.

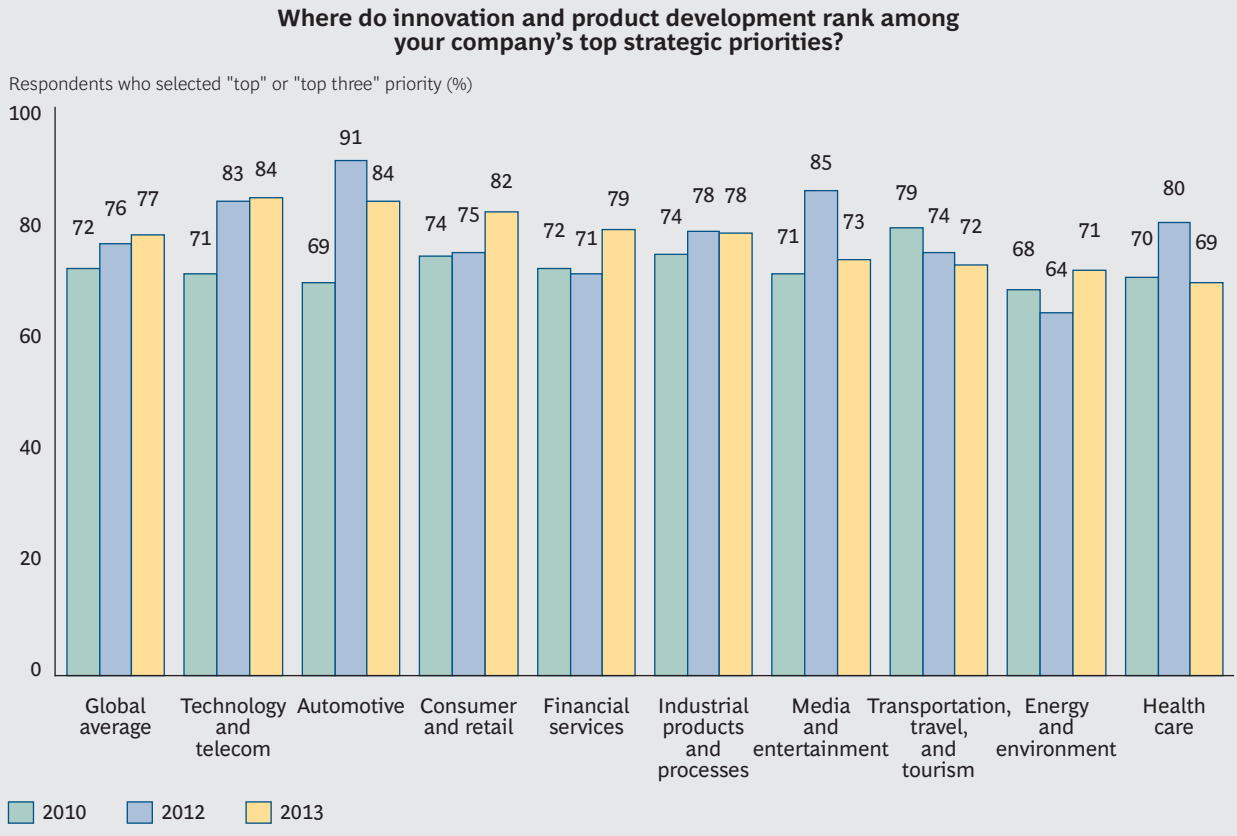
Respondents at media and entertainment companies had the highest opinion of themselves regarding innovation. In that group, 37 percent rated their companies as strong innovators (12 percentage points more than respondents from the second-place automotive industry), although only a below-average 73 percent said they view innovation as a top priority. A survey-trailing 69 percent of re-

EXHIBIT 4 | The Most Innovative Companies in 2013

	Company	Change from 2012	Industry		Company	Change from 2012	Industry
1	Apple	NC	Technology and telecom	26	Shell	↑ 9	Energy and environment
2	Samsung	↑ 1	Technology and telecom	27	SoftBank	↑ 4	Technology and telecom
3	Google	↓ 1	Technology and telecom	28	BASF	↓ 5	Industrial products and processes
4	Microsoft	NC	Technology and telecom	29	Nokia	R	Technology and telecom
5	Toyota	↑ 6	Automotive	30	Intel	↓ 11	Technology and telecom
6	IBM	NC	Technology and telecom	31	Dell	↓ 13	Technology and telecom
7	Amazon	↑ 2	Consumer and retail	32	Boeing	↑ 6	Industrial products and processes
8	Ford	↑ 4	Automotive	33	Fast Retailing	↓ 1	Consumer and retail
9	BMW	↑ 5	Automotive	34	Unilever	E	Consumer and retail
10	General Electric	↑ 6	Industrial products and processes	35	Tencent	E	Technology and telecom
11	Sony	↓ 4	Technology and telecom	36	Kia	↓ 23	Automotive
12	Facebook	↓ 7	Technology and telecom	37	Nike	↑ 2	Consumer and retail
13	General Motors	↑ 16	Automotive	38	Nissan	↓ 16	Automotive
14	Volkswagen	↑ 31	Automotive	39	Siemens	↓ 13	Industrial products and processes
15	Coca-Cola	↑ 2	Consumer and retail	40	ExxonMobil	R	Energy and environment
16	Hewlett-Packard	↓ 1	Technology and telecom	41	Tesla	E	Automotive
17	Hyundai	↑ 7	Automotive	42	Virgin	↓ 5	Consumer and retail
18	Honda	R	Automotive	43	Fiat	R	Automotive
19	Audi	↑ 6	Automotive	44	BP	R	Energy and environment
20	Daimler	R	Automotive	45	Dow Chemical	E	Industrial products and processes
21	Wal-Mart	↓ 1	Consumer and retail	46	Cisco	R	Technology and telecom
22	Lenovo	↑ 5	Technology and telecom	47	Target	R	Consumer and retail
23	Procter & Gamble	↑ 26	Consumer and retail	48	Renault	↓ 14	Automotive
24	Bayer	E	Health care	49	Philips	↓ 16	Industrial products and processes
25	LG Electronics	R	Technology and telecom	50	Nestlé	R	Consumer and retail

Sources: 2013 BCG Global Innovators Survey; BCG analysis.
Note: NC = no change; E = entered list; R = returned to list. The change from 2012 is the number of places that a company moved up or down.

Exhibit 5 | Automotive and Technology Companies Rank Innovation as a Top Priority



Sources: 2010–2012 BCG/*Businessweek* Senior Executive Innovation Survey; 2013 BCG Global Innovators Survey; BCG analysis.

spondents from health care companies said they see innovation as a top priority, but only 10 percent of health care respondents view their companies as weak innovators (one-half the average).

The judgment of senior management is the method cited by the most respondents (two-thirds overall) for determining which ideas move into product development. Similarly high percentages of respondents said that strategic and financial criteria play a key role as well. The role of senior management is particularly pronounced at strong innovators, where 83 percent said it is often or very often a driving force, compared with only 55 percent of companies in the bottom quintile.

Strong innovators listen to customers. The views of key customers play a significant role in the innovation and new-product programs of 73 percent of strong innovators, compared with only 42 percent of weaker companies and 56 percent overall.

Managing IP and using it as a competitive advantage are growing in importance. Almost 70 percent of respondents said that IP is increasingly important in their industry, and a similar percentage said that owning IP is crucial to achieving a return on innovation. More than half (53 percent) said that their companies use IP to exclude others. Strong innovators are particularly aggressive in their protection and use of IP.

We added a new category to our survey this year: up-and-coming companies. These are companies that are still relatively young or have yet to reach the scale of the top 50 global giants but are nonetheless making themselves known for innovation. (See Exhibit 6.) Their innovations are related, not surprisingly, to the latest technologies—social media, mobile applications, and cloud-based services—and almost all are making use of mobile platforms. (See the sidebar "Innovation Systems: Aligning the Incentives.")

EXHIBIT 6 | The Up-and-Coming Companies in 2013

Alibaba	Family of e-commerce platforms
Groupon	Local "daily deal" offers
Line (NHN Corporation)	Free mobile-telephony and messaging platform
Netflix	Internet subscription service for movies and TV shows
Pinterest	Social-networking platform
Rakuten	Internet retailer
Spotify	Streaming-music services
Square	Mobile payments platform
WhatsApp	Free messaging platform
Xiaomi Technology	Smartphones and consumer electronics

Sources: 2013 BCG Global Innovators Survey; BCG analysis.

INNOVATION SYSTEMS: ALIGNING THE INCENTIVES

One of the most striking elements of this year's list of up-and-coming innovators is the number of companies that depend—in whole or in part—on platforms and standards created by two longstanding most-innovative companies: Apple (number one) and Google (number three). WhatsApp and Line are both messaging apps, and Pinterest, Square, Netflix, and Spotify all leverage Apple's iOS and Google's Android platforms to bring a mobile dimension to their products.

These interrelationships highlight the role that system architecture increasingly plays in innovation. For an innovation system to work, it needs to be more than the sum of its parts. In the mobile world, for example, the iOS and Android platforms radically simplify the technical and marketing challenges for app makers, lowering the cost of innovation. And by enabling the app makers, Apple and Google help shape the relative competitive advantage of iOS versus Android—and the device and advertising revenues they drive. Everybody wins because standards allow different parts of the overall system to evolve independently. The system enjoys the benefits of a portfolio of independent bets; in a world of open recombination, anyone can try his or her hand, and no innovator has to ask permission.

The plain fact, as we all know, is that no company can be good at everything. The old AT&T, for example, was brilliant at fundamental innovation (seven Nobel prizes!), but it plodded when it came to making a new handset. (The Trimline took 13 years to bring to market.) Toyota, by contrast, excels at "dimension of merit" innovations—that is, the aggregation of thousands of small improvements in cost or weight or efficiency. Silicon Valley, for all its self-referential mystique, is most talented at recombining existing technologies in order to address unmet user needs.

There's a good reason for this. Different kinds of innovation require their own institutional arrangements and capabilities: different talents, cultures, operating scales, funding methods, incentives, time horizons, and appetites for risk. A smartphone, for example, combines fundamental innovations that originated in universities and the labs of Bell or IBM; components are the product of sustained dimension-of-merit improvements by the likes of Corning, Qualcomm, and Nvidia; and the coolest apps typically come from young outfits such as WhatsApp or Groupon—

INNOVATION SYSTEMS: ALIGNING THE INCENTIVES (continued)

companies that bet big on a hypothesis about what will be fun or useful for users.

Making all these different pieces work together requires legal interfaces, such as patent licensing, and technical interfaces, such as application programming interfaces. These interfaces are the architecture of an innovation system, often dominated by a single orchestrator such as Apple or Google.

The best architecture—and not the best product—wins in the long run. But architecture is a two-edged sword: it can also constrict innovation. Architecture creates boundaries—and while it liberates innovation within those boundaries, it also inhibits innovation across them. Whether this is a gain or a loss depends on the product and where it stands in its life cycle. When the product is young and performance-constrained, architectural flexibility is typically worth more; as the product matures, the locus of innovation shifts from performance to cost and customization, so modular interoperability tends to gain ground.

In designing or trying to shape an innovation system, the key is to focus on how to create the technical, economic, and legal conditions that will enable the system to flourish symbiotically by aligning the incentives of diverse participants. Ultimately, it is the end-user experience that matters, and just as in a repertory theater, that depends not on the stars but on the performance of the ensemble.

—Philip Evans

Philip Evans is a senior partner and managing director in the Boston office of The Boston Consulting Group and a BCG Fellow whose research focuses on the strategic implications of the changing economics of information.

FIVE SOURCES OF INNOVATION STRENGTH

From Lockheed's legendary Skunk Works to the garages of Silicon Valley to far more structured corporate programs and processes, innovation takes many forms and follows myriad paths. There's no one right way to "do innovation," of course, but based on our 50 years of working with all manner of clients, and our surveys of companies in more than 15 sectors and more than 20 countries conducted over nearly a decade, we have identified five key attributes that separate strong innovators from their weaker counterparts:

- Their top management is committed to innovation as a competitive advantage.
- They leverage their IP.
- They manage a portfolio of innovative initiatives.
- They have a strong customer focus.
- They insist on strong processes, which lead to strong performance.

These are not individual drivers of success; they are interconnected and reciprocally reinforcing. Strong companies often possess all five.

Leadership Commitment

As is the case with so many other aspects of corporate performance, the commitment of top management has a lot to do with a company's innovation track record. Nine out of ten respondents identifying their companies as strong innovators reported that top management is committed to innovation, compared with less than half as many at weak innovators. Almost half of respondents at strong innovators cited the chairman or CEO as the driving force behind the company's innovative efforts. Four out of five ranked innovation higher than other strategic priorities.

The commitment of top management has a lot to do with innovation success.

The role of leadership at Samsung under Chairman Kun-Hee Lee has long been legendary in its home market. This reputation has become global in recent years as the company has moved from innovative success to success—in flat-screen technology, smart devices, and, most recently, health care. Samsung has vaulted up the rankings in our survey, from number 26 in 2008 to second place this year.

Samsung thrives on innovation, and top management is responsible for the philosophy behind a culture and approach that nurture bold ideas and executes big technological advanc-

es. Perhaps the best-known example is the company's "new management initiative," declared in 1993, which became the catalyst for Samsung's explosive growth as a leading global innovator in electronics and information technology. The initiative brought about fundamental changes in corporate culture, systems, and practices—shifting the focus from quantity and cost-driven goals to product quality, design, and R&D. Under the battle cry "Change everything except your wife and children," it called for extensive investment in research, the nurturing of globally minded talent, and the introduction of an efficient, global management system. These programs led to product innovations inspired by both technology leadership and global perspectives from Samsung's global networks.

Smart companies are increasingly using IP as a means of establishing competitive advantage.

One of the fundamental drivers of Samsung's innovation efforts is its leadership's relentless pursuit of change and new growth opportunities. Management instills a culture of not accepting the status quo and not being afraid to change. Samsung's leadership is known for recognizing products that can drive the creation of whole new markets—flat screens and smartphones are two examples—and investing heavily in their development. Samsung's popular Galaxy Note mobile device came into being as the company sought to combine the portability of a mobile phone with the broader usability of a tablet. This led to the creation of a new mobile-device product category dubbed "phablet," and it helped Samsung become the number-one maker of mobile phones globally.

Under its Vision 2020 initiative, which was announced in 2009, the company is now building on its established strength in technology and investing in "life care" businesses—such as medical devices and energy-saving LED technology—that focus on health and the environment. At the same time, it is continuing innovations in other advanced-technology areas, such as "green memory" solutions that seek to increase computing performance while reducing power consumption.

Leveraging IP

The recent avalanche of high-profile patent cases, mainly in the technology and telecommunications sector, has made it clear that innovation depends, in part, on owning the idea. Protecting IP rights—that is, maintaining exclusive ownership of a product or process—has long been a defensive strategy, but smart companies are increasingly using IP as a means of establishing competitive advantage in the marketplace. Some companies have built substantial businesses on the basis of licensing their IP to others. (See the sidebar "Six Habits of IP Winners.")

IBM is a notable example. The 102-year-old technology company has been a constant presence among the ten most innovative companies in every BCG survey going back to 2005. The company reports that it has topped the ranks of U.S. patent recipients for 20 years straight, with 6,478 in 2012 and nearly 67,000 in the past decade. IBM actively manages (and prunes) its portfolio as the value of individual patents fluctuates over time. According to one study, by 2012, the company had abandoned nearly 40 percent of the patents it received in 2007.

In IBM's view, innovation, growth, and valuable patents are intertwined. The importance of IP to its business comes from the top. Many of the patent lawyers in its extensive global network have technical, as well as legal, backgrounds. They are involved in R&D projects from the beginning, which means that IP considerations are reflected throughout. The company has built an IP organization with key functions embedded at both the center and in individual businesses to ensure that strategy and priorities are aligned across the organization.

One result of this focus on and commitment to IP is a substantial and growing revenue stream from selling and licensing IP. Revenues, which have been increasing at about 6 percent per year, reached $575 million in

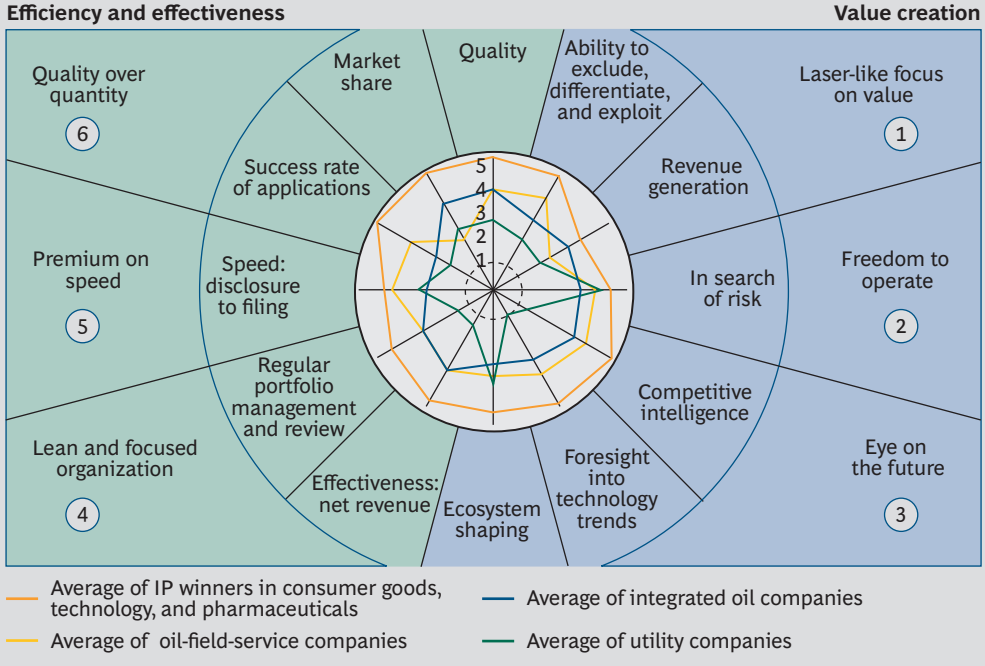
SIX HABITS OF IP WINNERS

Innovation both depends on and generates intellectual property. And it's not just a tech thing. Smart companies across all industries increasingly use IP as both an offensive and a defensive competitive weapon. Hundreds of millions—if not billions—of dollars can be at stake; organizations need to up their IP game to protect that investment. In our experience, IP winners take a strategic and proactive approach that embraces six broad practices, and each practice, in turn, is associated with critical subcapabilities. These practices and capabilities come together in a framework we call the "IP wheel." (See the exhibit below.) In general, to ensure the smoothest and swiftest ride into the future, organizations should aspire to be well-rounded in all six practices.

- *Laser-Like Focus on Value.* IP winners put a price on the value generated by their innovations. They quantify all aspects of their IP—licensing revenues, the premiums that innovations build into products, and the competitive advantages those innovations provide in the market, including the ability to exclude others. Many IP leaders build dedicated businesses around licensing. They also actively seek out third-party assets that will strengthen and round out licensing portfolios.

- *Freedom to Operate.* In an increasingly complex world, innovative new products, designs, and technologies often require access to a range of IP. Few if any companies own all the IP they need in order to innovate and grow. Strong IP companies constantly analyze their own IP, as well as the portfolios of competitors and patent-assertion entities (often referred to as "patent trolls"), with the aim of ensuring affordable access to the IP they need now and in the future. They protect their freedom to operate by managing their own portfolios

Measuring Performance: The Six Habits of IP Winners



Sources: BCG IP benchmarking; Compustat; Thomson Innovation; BCG analysis.

SIX HABITS OF IP WINNERS (continued)

strategically. They buy important IP assets in the market and enter into partnerships that provide access to essential technologies. They also amass their own IP arsenals, signaling to competitors a willingness to act aggressively to protect their IP turf.

- *Eye on the Future.* IP winners follow the moves of competitors and anticipate the direction of technological and innovation trends. Their analyses feed their corporate innovation agenda, and they make sure that their IP strategies and portfolios are designed to support that agenda.

- *Lean and Focused Organization.* Top IP players organize their IP-related functions to generate value. They understand the capabilities that they need, and they build lean, expert teams that can cover their costs many times over through licensing, risk mitigation, price premiums, and other yardsticks. The IP function is viewed as a strategic partner of the business units, not of an administrative or staff unit. Senior management is engaged and pays attention to the right issues. Top executives actively participate in IP and innovation reviews to ensure that innovation activities are aligned with strategy.

- *Premium on Speed.* IP winners are quick to file patent applications when they have inventions worth protecting. They often file applications in multiple nations in order to achieve coverage in key markets. The emphasis on speed has become especially important in the U.S., where, starting in March 2013, patents are being awarded on the basis of first-to-file rather than first-to-invent, harmonizing U.S. patent policy with that of the rest of the world. IP leaders also actively shepherd their patents through the application process.

- *Quality over Quantity.* Companies that manage their IP assets effectively are more successful than their competitors at winning approval for their applications, securing patents more than 60 percent of the time. They control a disproportionate share of the IP within their industries, measured not necessarily by raw numbers of applications and claims but by breadth and depth of coverage. A recent trend among IP leaders appears to be reducing the number of patent applications and focusing instead on the more important ones, emphasizing quality over quantity.

—Wendi Backler

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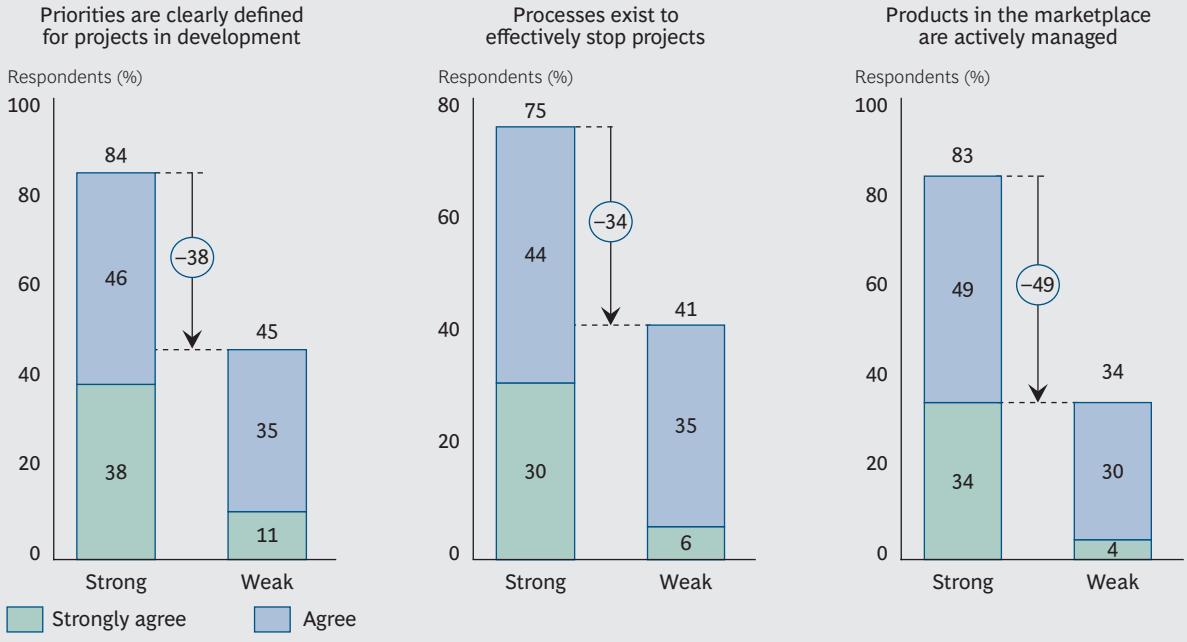
2012, not counting an additional $500 million in income from custom development.

It's not surprising that strong innovators such as IBM are more than twice as likely as their weaker counterparts to consider IP criteria when deciding which new product ideas to push forward. They also believe, likewise by margins of two to one, that their companies are effective at developing, protecting, and leveraging IP, and they are more likely to use IP as a source of competitive advantage.

Managing the Portfolio

In a world of limited resources, effective innovators learn how to devote resources, cut losses, and keep a pipeline of high-potential ideas moving forward. Strong performers are distinctly better at managing portfolios of projects in development and products in the marketplace. (See Exhibit 7.) They define clear priorities, and they have processes in place to stop projects when their promise wanes. These companies are also focused on the future; long-term advantage is a primary

EXHIBIT 7 | Strong Performers Actively Manage Their Innovation Portfolios



Source: 2013 BCG Global Innovators Survey.

goal of innovation for them. They actively manage the mix of incremental innovations and more radical, "new to the world" products, platforms, technologies, and services.

Strong innovators are focused on the future; long-term advantage is a primary goal of innovation for them.

BMW, which moved up five places to number nine in the 2013 survey, has long followed a sophisticated strategy of portfolio management and innovation. A Munich-based team manages the innovation portfolio, tracking each idea from generation through completed project and monitoring the results. With three distinctive brands in its stable—Rolls Royce, Mini, and the namesake BMW, plus multiple individual models (3 Series, 5 Series, and so on)—the company plans years ahead to keep each of its various marques on the cutting edge.

BMW uses its portfolio lens to apply ideas and insights in ways that are consistent with each brand's positioning and customer appeal, and it employs new technologies to substantiate brand promise and ensure differentiation. The company also follows a strategy of keeping its products in the introduction and growth stages by bringing out new models in each product line before the cars currently in the market reach the point of maturity or decline.

In the past few years, BMW has been adding sustainability as a core element, with the goal of establishing the BMW brand as the "ultimate driving machine" among environmentally friendly vehicles. True to its portfolio-strategy approach, the company has embarked on a multiyear campaign that includes, among other things, new mobility concepts and the use of technologies to emphasize strategic differentiation—ensuring, for example, that BMW vehicles have the lowest carbon dioxide footprint among premium competitors. Innovations such as brake energy recuperation by the alternator and a fuel-saving automatic stop-start function further underscore commitment to the concept. BMW developed a comprehensive, from-the-ground-up concept for the new i3—the first car in its electric "i" line—that is fully dedicated to the needs of an electric

vehicle. The new design includes a carbon fiber body structure, with the battery positioned beneath the driver and passengers, and it uses a host of sustainable materials in the interior to give the car a completely different feel from the company's other models.

Focusing on the Customer

For Procter & Gamble, the customer is the consumer. P&G, which jumped 26 places to number 23 in the 2013 survey, invests heavily in foundational consumer research, conducting some 20,000 studies involving more than 5 million consumers in nearly 100 countries. The company believes that innovation requires both creativity and collaboration. It has built innovation centers that provide simulated in-home and in-store environments. At these centers, P&G teams can interact with consumers and retail customers for days or even weeks at a time.

The same is true in other industries: innovation should not take place in a vacuum. Strong innovators involve customers in their idea-development processes and decisions, a method that has at least three big benefits. It helps ensure demand for the company's innovations when they hit the market. It keeps them close to their customers. And it helps avoid the costly overspecifying or overengineering of products beyond what customers need and are willing to pay. More than 70 percent of strong innovators say that key customer views play a critical role in selecting ideas for development, compared with only 42 percent of weaker performers. Almost 60 percent use customer satisfaction to measure innovation success, compared with 41 percent of weaker innovators.

Customer feedback is part of new-product development at more than three-quarters of strong innovators but at only about one-third of weaker performers. Smart innovators seek customer input at key points in the product development process; they also steer clear of open-ended feedback, locking in the product specs at a designated point and moving forward with the development process. (See the sidebar "Integrating Customer Input in New-Product Design.")

Strong Processes, Strong Performance

Strong performers define governance and decision-making processes, which leads to the on-time completion of projects. (See Exhibit 8.) They are far more likely than weak innovators to follow standardized processes in reviewing the progress of projects in development, adhere to decision-making criteria that are clear and transparent, and complete projects on time. They differentiate clearly among governance, portfolio management, and project management, and they recognize that a strong process requires being effective at all three. They also emphasize teamwork, ensuring sufficient communication among team members and representation on development teams from all relevant functions. (See the sidebar "Breaking Through: Proven Idea-Generation Practices.")

Successful innovation means involving customers in idea-development processes and decisions.

P&G, which seeks to make innovation systemic, replicable, reliable, and integral to its business, has a rigorous four-stage process for idea development, selection, design, and launch. When the company launches a new product, it is striving to create the next billion-dollar brand.

In the "search and discover" phase, the company seeks ideas from everywhere—consumers, retail customers, suppliers, and other partners. It invests small amounts of capital to test the viability of new concepts as they take shape. The second phase, "select and resource," involves making harder choices and allocating human and financial resources to ideas that have the most promise. It combines some ideas into bigger opportunities. It kills the ones that don't make the cut, terminating far more projects than it moves forward.

In phase three, "design and qualify," multidisciplinary teams from product research,

INTEGRATING CUSTOMER INPUT IN NEW-PRODUCT DESIGN

Good ideas do not grow on trees. Neither does the money it takes to design and produce the products or services based on those good ideas and to bring them to market.

One proven way to focus the design and development effort—and increase the odds for success—is to involve the customer in the earliest stages of the product development process. The impact of an effective customer-driven design program can be especially strong as companies pursue new product introductions in rapidly developing economies such as the BRICI nations (Brazil, Russia, China, India, and Indonesia). In these regions, demand runs high, the sheer number of potential new customers is enormous, and the historical, social, and cultural traditions are very different from those of the developed economies of the West.

One of the first customer-driven design processes was Yoji Akao's "quality function deployment" (QFD) method, which he introduced in Japan in 1966. The goal was to transform customer needs into engineering characteristics for a product or service.

There have been many QFD-type advances in the last half-century that seek to hone the ability of companies to design products that meet customer needs. Today's customer seeks differentiation. The ability to make the right tradeoffs during the initial product definition—shifting costs to support differentiating features—has become an increasingly important competitive capability. We know that differentiating 15 to 20 percent of the attributes of any given product is sufficient to make the overall product different in the eyes of the customer. There is no need to invest scarce resources in the remaining attributes. Identifying in advance where to invest in order to differentiate saves money and improves the product's profitability. At BCG, we follow a four-step process that has helped numerous companies improve product design through more effective customer input.

Customer-driven design can have an especially strong impact in rapidly developing economies.

The first step is to define a coherent and consistent set of features that will determine the product's performance and that can be compared with similar products already in the marketplace and evaluated in terms of the needs and wants of customers. This will include a coherent and shared vocabulary for these features that is understandable by all functions in the company and seeks to bridge gaps between customer desires and the company's ability to deliver the requisite quality, manufacturability, and serviceability.

Step two involves assembling these features into a concept and analyzing that concept and comparing it with others. In order to assist with this phase, we use a matrix that aligns product functionality with the attributes that customers value. It is fairly common to observe up to a 30 percent improvement in customer value when realigning product features with customer needs. In our experience, this adaptation also leads to a reduction of the product cost by 10 percent and an increase in sales of 25 percent.

The results of the second step inform the third—making the difficult decisions about how to differentiate by comparing the defined concepts with competitive products, customer value, and product cost to evaluate the attractiveness of the concept in the targeted market. The last step, of

INTEGRATING CUSTOMER INPUT IN NEW-PRODUCT DESIGN (continued)

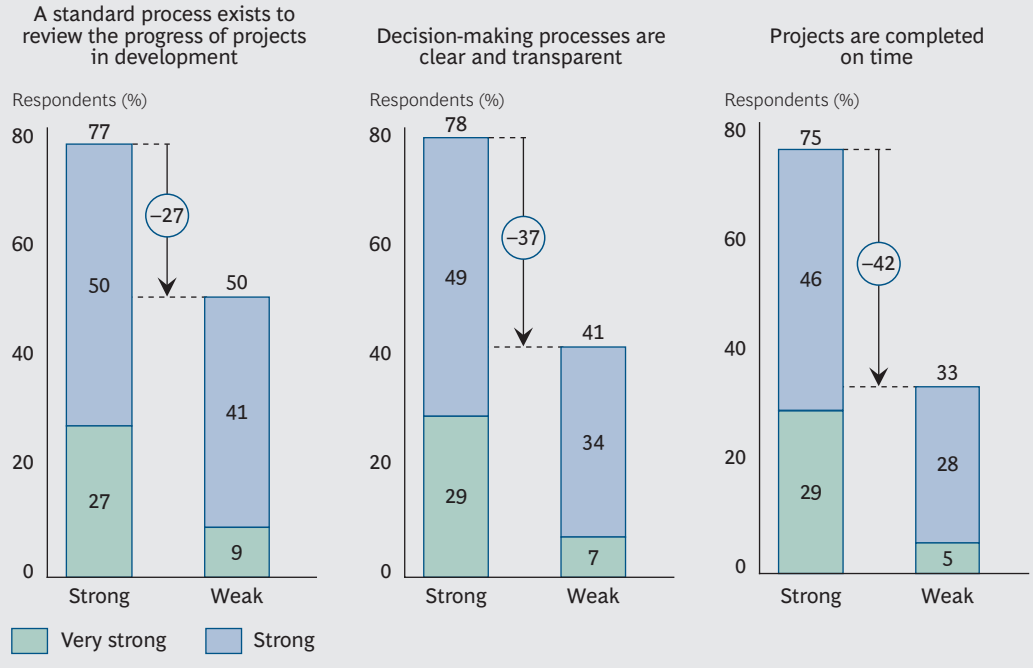
course, is taking the full package back to the customer and getting validation that the right decisions have been made.

In our experience, successful products result from the integration of brand attributes, customer needs, and manufacturing and regulatory requirements into a series of differentiating product features. If the customer's voice is present from the outset, and development resources are allocated to designing the differentiating features that the customer wants, the chances for success are high. If, however, a company does a poor job in this critical initial phase, the resulting problems will persist throughout the remainder of the product life cycle and likely include bad design, value mismatch, overengineering or underengineering, and weak sales.

marketing, manufacturing, engineering, finance, design, and other functions develop comprehensive plans to meet demanding success criteria. These plans are qualified through a combination of virtual and physical tests. The surviving innovations move into the product launch pipeline, the final "launch and leverage" phase, which involves working out the in-market details: retail distribution, pricing, consumer trial, repeat purchase, and, ultimately, sales and profit.

Year in and year out, P&G innovations regularly lead to some of the top product introductions. Three P&G products were among the ten most successful product introductions in 2012, according to research firm SymphonyIRI.

EXHIBIT 8 | Strong Innovators Rely on Well-Defined Processes



Source: 2013 BCG Global Innovators Survey.

BREAKING THROUGH: PROVEN IDEA-GENERATION PRACTICES

As the two-time Nobel laureate Linus Pauling observed, the best way to have a good idea is to have a lot of ideas. Many executives are rightly skeptical of unconstrained creativity or brainstorming sessions. In our experience as well, this type of blue-sky, "every idea is a good idea" exercise rarely leads to anything useful. Nonetheless, we are big believers in "ideation" done right. This requires investing significant time in preparation, as well as in developing a thoughtful selection process to sort through the ideas that emerge. On the basis of our work with numerous companies throughout multiple industries, we have developed the following suggestions for running an ideation process effectively:

- *Challenge existing ideas.* Don't start by looking for new ideas; first, identify the lenses you currently look through or the "boxes" you are frequently told to think outside of. Ask yourself, Who do we define as customers and competitors? What are the assumptions inherent in the way we do things around here? Then think about how some of these "truths" might be challenged. How might you redefine what your company actually does?

- *Create new boxes.* The reason that thinking out of the box often doesn't work is that to focus, our brains need boxes—frameworks or mental models. The key to fostering practical creativity is to shape the idea generation effort by creating new boxes that your team can explore. Twenty-five years ago, for example, Philips Electronics undertook a new-box exercise and realized that another world was possible for the company, one that used its existing capabilities to go down an entirely different road of products and profit. Today, some 40 percent of Philips' business involves health care devices such as blood pressure and heart monitors. A successful brainstorm isn't necessarily a meeting at which a new concept suddenly arises. It can be a meeting at which an existing concept suddenly makes a lot of sense to a lot of people.

- *Pursue a range of inputs.* Defining new boxes requires a mixture of analysis and art. Boxes need to be grounded in fact. Different sectors will call for different inputs. Some, such as megatrends and customer research, are relevant for nearly all situations. Others—IP or network analytics, for example—tend to be deployed more narrowly.

  The classic approach to examining trends (such as demographic, technological, and market-based trends) is to start with a long list and narrow it down using criteria such as preparedness and level of impact. Consider another method: pick a single trend that could have a massive impact on the business in the next five years. What are the different ways this could happen? Or how might two trends combine? What would happen if a low-impact trend was analyzed incorrectly and ended up having a huge bearing on the organization in 2020? In each of these scenarios, what new products, services, markets, and channels could emerge? Take this trend analysis further and develop a set of possible outlooks using scenario planning.

  IP and network analysis is another useful tool. Tracking competitors' innovations in products, processes, and marketing, for example, can lead to new ideas. Mapping opinion-leading experts and influential third parties, especially in technical fields, can point to unthought-of directions. In each case, it's a question of using all the types of analysis available to help expand your field of vision.

BREAKING THROUGH: PROVEN IDEA-GENERATION PRACTICES
(continued)

- *Frame the question effectively.* Having the right new boxes is a great start, but you also need to shape the questions that your team should address within those boxes. Good questions—the kind that lead to results—tend to be narrow and specific. A question such as How can we sell more widgets? typically results in incremental solutions. Asking a question in ways that challenge existing perspectives can lead to more transformational possibilities. Should we really be a widget company? What problems are our customers using widgets to address? If you are a pen manufacturer today, is the more attractive future in writing instruments or in inexpensive, disposable plastic products?

  Low-cost airlines such as Ryanair, Southwest Airlines, and JetBlue have reimagined—and thoroughly disrupted—the airline industry. But think about how they built their low-cost models. A broad shift in approach was the consequence of many smaller adjustments and adaptations, such as moving from diverse fleets to flying one type of aircraft, abandoning main airports for secondary facilities, giving up marketing through travel agents in favor of selling directly, and replacing all-inclusive ticket prices with unbundled pricing. Other companies can benefit from asking what kinds of analogous before-after shifts might apply to their businesses.

- *Outline binding constraints and criteria for success.* Constraints can help creativity by keeping attention focused on productive directions. Similarly, they help everyone understand the criteria that will define success. We have seen many companies invest time, money, and other resources in developing a broad range of ideas only to select those that represent small tweaks to the status quo. Identifying specific criteria in advance—including feasibility, potential financial impact, and risk—puts powerful parameters around any idea-generating exercise.

- *Allow sufficient time to select ideas.* Planning and preparation are crucial, but once a broad set of ideas are in place, it takes time to narrow and focus them. Some high-level prioritization can often be done immediately—for example, moving from hundreds of ideas to dozens—but the remaining ideas will probably need additional research or business-case development before a top few can be selected for further development.

  With one client, we spent several weeks examining the strengths and opportunities for each of its business units. We used client and other stakeholder interviews, research among more than 500 employees, and other tools to develop more than 2,500 ideas for improvement—before starting a brainstorming and creativity workshop. We took time to prioritize the top 1 percent, and those 25 alternatives were analyzed in detail. The company conducted even deeper evaluation for a still smaller number before any implementation began.

—Luc de Brabandere and Alan Iny

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Luc and Alan are the coauthors of the book Thinking in New Boxes: A New Paradigm for Business Creativity, *published by Random House in September 2013.*

INSTITUTIONALIZING INNOVATION

Businesses are usually born of an idea. The rapid growth of the companies on our 2013 up-and-comers list demonstrates the speed with which a single insight or innovation today can spark an explosion of value. Corporate history is also cluttered with companies that were once renowned for their inventiveness but could not maintain their ability to innovate: the storied names of Studebaker, Atari, Wang Laboratories, and Kodak are but a few.

Companies that continually create value over the long term—meaning decades or more—learn how to ingrain the ability into their corporate makeup; it becomes part of their culture and DNA. They refuse to rest on their successes. They celebrate their past accomplishments but only as they use those achievements as springboards into the future.

More than half of the most innovative companies on the 2013 list are more than 50 years old. A dozen can trace their roots to the nineteenth century. They owe their longevity to a variety of factors—sound strategies, foresighted management, and strong execution key among them. But perhaps more than anything else, they have continued to create value, jobs, and growth because of their ability to institutionalize innovation. It's a lesson all companies would do well to emulate.

APPENDIX

SURVEY METHODOLOGY

The 2013 survey respondents were senior executives representing a wide variety of industries in every region. (See the exhibit below.) The mix of respondents is very close to that of last year's survey in terms of level, function, and location.

Before 2008, our rankings of the most innovative companies were based on a single criterion—respondents' picks. In 2008, in an effort to make the results more robust and truly reflective of the actual top innovators, we supplemented those choices with three financial measures: three-year total shareholder return (TSR), three-year revenue growth, and three-year margin growth. We have used that methodology ever since. Respondents' votes count for 80 percent of the ranking, three-year TSR for 10 percent, and revenue and margin growth for 5 percent each. (Note that BCG did not publish a survey in 2011.)

2013 Survey Respondent Demographics

Industry	
Industrial products and processes	405
Technology and telecommunications	226
Financial services	215
Consumer and retail	195
Energy and environment	115
Health care	94
Automotive	55
Transportation, travel, and tourism	47
Public sector	45
Media and entertainment	41
Professional services	38
Other	27
Total	**1,503**

Position	
Chief information officer	173
Chief technology officer	122
Chief operating officer	80
Chief financial officer	95
Chief executive officer	77
Chairperson	22
President	48
Chief innovation officer	33
Chief strategy officer	16
Vice president	80
Director	143
Manager	378
Other	236
Total	**1,503**

Country or region	
United States	363
China	151
Japan	136
Other Asian country	117
Germany	87
France	74
Other European country	71
South America	53
United Kingdom	65
Italy	54
Africa	41
India	39
Russia	45
Canada	40
Spain	38
Australia	34
Mexico	27
Other	68
Total	**1,503**

Source: 2013 BCG Global Innovators Survey.

NOTE TO THE READER

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