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Think Big, Start Small and Learn Fast: 8 Rules for Corporate Innovation

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The chief innovation officer of a Fortune 500 company recently relocated to a Silicon Valley outpost far from her corporate headquarters. She now spends most of her time holding court with venture capitalists and entrepreneurs about stakes in hot start-ups. Her goal is not to invest in startups in order to generate returns—even a 500 percent return on her investments would not be material to her corporation's financials. Instead, she is essentially outsourcing her company's innovation strategy to start-ups.

Like many of her peers, this corporate veteran is responding to her organization's historical inability to innovate. She has bought into the conventional wisdom that has taken root in recent decades: that small and agile start-ups are destined to out-innovate big and slow established businesses.

Based on research into thousands of large company innovation success and failures, and personal experience with hundreds more, we have found that this conventional wisdom just isn't true. Or, at least, it need not be. Yes, small and agile beats big and slow, but big and agile beats anyone—and that combination is more possible than ever.

Start-Ups Aren't All They're Cracked Up To Be

Yes, Silicon Valley has the cachet, but Harvard Business School research shows that the failure rate for start-ups runs as high as 95 percent. Start-ups, as a group, succeed largely because there are so many of them, not because of any special insight.

What's more, the National Bureau of Economic Research (NBER) found that start-ups shift rewards to financiers while saddling entrepreneurs with most of the risk. Entrepreneurs invest their time, reputations and accumulated expertise for modest salaries and long hours in the hope of gaining huge rewards at "exit," when the start-up goes public or is acquired. NBER researchers found, however, that start-ups rarely pay off for the entrepreneurs who slave away at them. At 68 percent of companies that reached an exit (after a median time of 49 months from first venture funding), no meaningful wealth went into the pockets of the entrepreneurs. These numbers add up to pretty long odds for corporate innovators looking to find greener pastures at start-ups.

The story is not much better for strategic investors chasing start-ups through venture capitalists. Numerous studies, including a 2012 study by the Ewing Marion Kauffman Foundation and a more recent one by Cambridge Associates, show that venture capital has delivered poor returns for more than a decade. VC returns haven't significantly outperformed the public market since the late 1990s, and since 1999, less cash has been returned to investors than has been invested in venture capital. Risk and reward have not been correlated.

Vinod Khosla, a billionaire venture capitalist and cofounder of Sun Microsystems, tweeted a revealing line from an executive at one of his companies in 2012: "Entrepreneurs really are lousy at predicting the future…VCs are just as bad."

Large Company Scale Is More Valuable Than Ever

In the context of today's immense technology-enabled opportunities, large companies have growth platforms that would take start-ups years to build. Incumbents have products with which to leverage new capabilities such as mobile devices, pervasive networks, the cloud, cameras and sensors. Social media can amplify their brand power and customer relationships. Large companies also sit on mountains of market and customer data and are therefore in the best position to extract knowledge from big data.

The possibilities are startling. And tapping into them

isn't optional. A perfect storm of six technological innovations—combining mobile devices, social media, cameras, sensors, the cloud and what we call emergent knowledge—means that more than $36 trillion of stock-market value is up for what some venture capitalists are calling "re-imagination" in the near future. That $36 trillion is the total market valuation of public companies in the 10 industries that will be most vulnerable to change over the next few years: financials, consumer staples, information technology, energy, consumer goods, health care, industrials, materials, telecom and utilities. Incumbent companies will either do the re-imagining and lay claim to the markets of the future, or they'll be re-imagined out of existence.

The Difference Between Innovation Success and Failure

Since the start of the Internet boom some two decades ago, so many companies have looked to information technology to innovate that there's now a track record showing what works and what doesn't. The problems that have stifled innovation in large companies are now known and can be avoided. These problems are not inherent to bigness.

Instead, through an analysis of thousands of innovation efforts, we found that the distinction between companies that succeed at disruptive innovation and those that don't boiled down to three major issues. The successful ones think big, start small and learn fast. The failures do not.

Think Big

By think big, we mean that successful innovators consider the full range of possible futures. They make sure they understand the emerging technology context, rather than assume that their current assumptions are right. They're not too proud to explore their doomsday scenarios, including how new developments might drive them out of business. And, rather than just looking for incrementally faster, better or cheaper products, they dare to dream big. Successful innovators are willing to start from a clean sheet of paper to pursue "killer apps"—new products that might rewrite the rules of a category or entire industries.

For example, Google does not just aim to make people better drivers with its self-driving car; it is trying to take human drivers out of the loop entirely. Google didn't just aim to make slightly better cars; it focused on full automation—because full automation enables dramatically improved usage patterns and disruptive business models.

By contrast, those who fail typically think small. They assume that the future will be a slightly different version of the present. It's human nature to see change as incremental and to think that our customers will stick with us, but incremental thinking can be very dangerous. For example, Microsoft, Motorola, Blackberry and Nokia all missed the smartphone because it didn't fit with their own technology assumptions, and they couldn't envision how it might challenge their own products.

Start Small

Successful companies start small after thinking big. Rather than jumping on the bandwagon for one potentially big product, they break the idea down into smaller pieces for testing. They don't allow themselves to make decisions solely on intuition, or allow themselves to lock in on financial projections based on wishful thinking. They defer important decisions until they have real data.

Google's early investment in its driverless car was not much more than car companies spent on Super Bowl ads during the same time, and on par with what it might take a car company to develop a new fender.

Those who fail typically think small—like Borders, Blackberry, Blockbuster, Kodak, Motorola and Nokia—but then start big when they do finally move. Our research found that companies that should be innovating in the face of a disruptive technology tend to swing from complacency to panic. After ignoring opportunities because they can't accept that they're in danger, they finally see the disruption and make a last-chance, massive bet on a single idea—only to have it not pan out.

Learn Fast

Companies that learn fast take a scientific approach to innovation. They take the attitude that a demo is worth more than thousands of pages of business plans. They conduct extensive, inexpensive prototyping before they even get to the pilot phase—let alone the big rollout—so they can gather comprehensive information and quickly analyze both what's working and what isn't. They also don't fall in love with their own ideas. The successful companies develop the institutional discipline to keep on asking the tough questions, and are ready to set aside

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or alter projects based on what they learn, not what they hope.

Again, you can see this with Google, which has fielded dozens of cars for hundreds of thousands of miles of very public testing and learning. But at other companies, experiments are mostly hidden on their test tracks, except for very staged press events.

By contrast, thinking small and then betting big usually leaves neither the time nor the inclination to learn. The combination of thinking small, starting big and not learning fast is what killed Blockbuster. That company ignored Netflix's DVDs-by-mail model for years, then bet big on its own version before fully working out the economic and operational implications—and it turned out that Blockbuster's business model couldn't handle the loss of those hated late fees.

Eight Rules For Corporate Innovation

We applied these three principals—Think Big, Start Small, Learn Fast—to the junctures that our research and experience show to be the most important for successful innovation. The result is eight rules that will help large companies build on their creativity and assets to unleash killer apps, not killer flops.

Think Big

1. Context is worth 80 IQ points. As they start to "think big," large company innovators must understand the information-technology environment in which they are operating. As previously mentioned, six technological innovations—combining mobile devices, social media, cameras, sensors, the cloud and emergent knowledge—are reshaping both what is possible and the competitive landscape in every information-intensive industry.

In addition to all the traditional forces shaping their industries, innovators must come to grips with the above technological megatrends, both individually and in combination.

2. Embrace your doomsday scenario. Thinking big is not just about bold aspirations; it also requires understanding the starkest threats facing the organization.

One reason to look for doomsday scenarios is that it helps spot vulnerabilities and spark improvements, even if doomsday never comes. Another reason is that it helps to build alignment. Getting beyond vague views and developing detailed, shared views of existential threats and how quickly they might arrive can help management teams develop consensus on timing and move forward in unison. But people tend to avoid thinking about truly worst-case scenarios, so this rule is designed to make sure that they do so.

3. Start with a clean sheet of paper. A markets change, large companies' strategic assets too often become liabilities. Success brings with it priorities to juggle, budgets to protect, bonuses to maximize, resources to defend, loyalties to reward, egos to stroke. People have all sorts of incentives in big organizations to slow or halt innovation, and many manage to do so.

That's why it is important periodically to start with a clean sheet of paper and think about key trends and looming inventions, then envision how everything could come together to transform the business—without worrying about what people, capabilities and other assets have to be added or subtracted to become that perfect version of the business.

Start Small

4. First, let's kill all the finance guys. To start small, large company innovators must fight the tendency to settle on financial projections too soon; such projections can't be accurate, and they hamstring innovation. By definition, disruptive innovations deal with future scenarios that are hard to read and where the right strategy is not clear; the right strategy has to emerge over time.

This rule, then, is a reminder to take a more iterative approach to understanding the finances of new businesses. A culture has to be established, beginning at the very top of the organization, that says newborns get to crawl and walk and maybe even start preschool before their talents are evaluated.

5. Get everyone on the same page. While the tendency is to leap into action as soon as a possible killer app is identified, it is crucial to take the time to step back, assess where the organization is and identify possible impediments to change. One challenge is to understand who wins and who loses if the envisioned innovations succeed. If an innovation has to kill the core business to succeed, it won't be possible to get everyone to embrace it. Those in the existing business

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will always try to kill rather than be killed. In some cases, you can delay an uprising by being discreet. In other cases, where those not on the same page can't cripple the innovation, be overt and simply pit the new business against the existing one (while protecting the new efforts sufficiently).

Another challenge is to understand the cultural implications of the desired innovation. Many executives believe they can change a culture to suit a strategy, rather than try to make the strategy fit the culture. That route is possible but usually takes longer than most are willing to admit. Sometimes it is better to work with what you've got. The key is to understand that there is no silver bullet to managing change. Instead, have a cleared-eye view of the particular circumstances that must be addressed, and manage accordingly. Remember Nelson Mandela's admonition: "Lead from the front but don't leave your base behind."

6. **Build a basket of killer options.** Once organizations are ready to start building killer apps, they must invest only small amounts and test a number of possibilities. At the early stages, any fledgling killer app is more likely to fizzle than sizzle. Do not waste a lot of money plunging toward The Answer. What is really needed is a finely nuanced understanding of The Question. Do this by employing the discipline associated with financial options. Rather than investing tens or hundreds of millions of dollars to build out a full-fledged business, invest in iterative experiments that can be expanded as they prove out, or be set aside if they don't.

It is important to limit the number of options to a handful. Innovations of transformative potential require CEO attention—which is limited—to make sure the efforts are protected from the organizational antibodies; to make sure they do not take on a life of their own; and, to shepherd them to scale if their potential proves viable. (In most organizations, only the CEO can play this role.) Our experience is that the right number is around three "killer options" and no more than five.

Learn Fast

7. A demo is worth a thousand pages of a business plan. Too often, early success or optimism about a big idea quickly transforms it into a conventional business development program: a long march where the only acceptable outcome is to get a product to market. As a result, people do all the analysis they can, however imprecise, and the result becomes The Plan. Some of this is due to habit; planning is what big companies do, and business initiatives can't typically proceed without detailed business plans and reams of confirming spreadsheets.

Our research revealed the need for less planning and more testing. Rather than prematurely building out the new business, keep prototyping to explore key questions, such as whether the technology will work, whether the product concept will meet customer needs, and whether customers will prefer it over the competitive alternatives.

8. Remember the Devil's Advocate. Setting up the right process for demos, prototypes and scaling is crucial but only half the battle. The other half is to ask the tough questions during the process and remain open to hearing uncomfortable answers. Devil's advocates are individuals or groups whose role is to stress test critical assumptions, key forecasts, and other make-or-break aspects of a potential killer app. The goal is not to interject an abject naysayer into the decision-making process but rather to drive at the answer that best serves the long-term success of the organization. Nor is the goal to relegate the task of critical thinking to the devil's advocate. Instead, the devil's advocate process serves as a safety net, and, because everyone knows that tough questions are forthcoming, they'll be more likely to confront them.

Done right, a devil's advocate frames the most important questions that need to be answered before moving to the next stage of commitment. The advocate also guides the process along, making sure that the right amount of uncertainty is reduced at each step and that the possibility of a graceful exit is always preserved.

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Following these eight rules won't guarantee killer-app-level innovation. Business is a contact sport. Some companies win. Some companies lose. That won't change.

What following these rules will do, however, is help large companies overcome the biggest barriers to innovation and turn size into an advantage. These rules will help corporate innovators do a far better job of sensing what's really going on in their markets and of putting themselves at the forefront of the powerful trends that are transforming our economy.

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