

## Failed Paradigms of Financial Analysis

The second of a two-part series explores discounted cash flow analysis, the notion of maximizing shareholder value, and the use of gross margins as a measure of competitive health

BY CLAYTON M. CHRISTENSEN

## Escaping the Marketing Morass

A jobs-based view of markets can help you master the innovation life cycle

BY SCOTT D. ANTHONY & JOE SINFIELD

Last issue, I introduced the notion that flawed financial metrics could be one explanatory factor for why well-run companies struggle with innovation. Specifically, I discussed the problems that can result when incumbent firms fail to account for sunk or fixed costs when responding to disruptive attackers. This issue, I examine the remaining three failed paradigms. The first explains how discounted cash flow (DCF) analysis can bias managers against funding innovation. The second paradigm—that management is obligated to maximize shareholder value—is a pox that distorts managers' sense of responsibility. Finally, I look at problems resulting from the use of gross margins as a measure of competitive health.

At their core, each of these paradigms concerns the central goal of a firm: To undertake value-enhancing opportunities that will enable future success. This commonality reveals a fundamental difference between the objectives of company managers and outside investors. The first group endeavors to maximize the long-term value of the company; the latter group seeks to profit on stock movements over a variety of different—and often arbitrary, from the view of an operating company—time periods.

It is one of the holy grails of marketing: predictability in new product innovation. Yet again and again, smart companies spend tens of millions of dollars doing the best research they can do only to have products flop in the marketplace.

Our perspective is that the way that companies assess and analyze markets shoulders at least a portion of the blame for this unpredictability. Segmenting markets into demographic segments, or assuming that product categories divide the world, can consistently lead to offerings that don't connect with

### INSIDE

see 'Failed Paradigms' on page 6

see 'Marketing Morass' on page 10



#### Do You Know What You Don't Know?

When dealing with innovation, a critical factor is a company's ability to manage something called the knowledge-to-assumption ratio. This article explains how the difference between what a company knows and what it assumes decreases as it enters new markets. See page 14

- 2 Voices of Disruption:** In the second of a two-part series, Innosight board member Richard N. Foster, author of the books *Innovation: The Attacker's Advantage* and *Creative Destruction*, discusses how the create-operate-trade model applies to upstart companies and how his theories can be applied to countries on a national scale.
- 4 Innovators' Update:** In a 2006 Insight, we argued that mega-mergers in the telecommunications industry were likely to prove disappointing. With such mergers continuing at a rapid clip, how has our analysis held up?
- 5 Innovation Assessment:** A disruptive comparison of Sleep Solutions' NovaSom and SLP's SleepStrips, two competing solutions in the \$15 billion market for obstructive sleep apnea treatments; plus, a look at three emerging technologies.

# Voices of Disruption

RICHARD N. FOSTER

This issue we feature the second of a two-part series with Richard N. Foster, the managing partner of Investment & Advisory Services, LLC, and a member of Innosight's board of directors. He is the author of two best-selling books on innovation, *Innovation: The Attacker's Advantage* (1986) and *Creative Destruction* (2001).

**Last issue, you explained the create-operate-trade model and showed how companies such as General Electric and Johnson & Johnson have used this to sustain growth. How does this model pertain to a new entrant as opposed to an established incumbent?**

We discuss this issue quite extensively in *Creative Destruction*. One of the biggest dangers young, growing companies face is creating something called cultural lock in. My model of the corporation states that, at the end of the day, the thing managers can observe is actions—actions that are the result of a set of decisions one makes. Ultimately, of course, these deci-

sions are supported by systems that gather, analyze, and transmit that information to decision makers. Those elements, in turn, are guided by an often implicit mental model of how the corporation should “work” internally, meet customer needs, and compete externally.

As companies grow, they gather more and more information that leads to a growing set of decisions. Consequently, a company's decision-making structure grows large, intricate, and difficult to change. To handle this, management adopts control systems that are meant to convey an implicit model of the way the business should operate. As a result, the “mental model” of the

corporation and how its parts should work together becomes increasingly rigid, making it more difficult and costly to change.

At the early stages of a company's life, the organization is very flexible with these models. Managers are quite free to change the way they think of themselves, change what they measure, and change what they do.

Assuming they are doing the right things, they get more successful and begin to associate that success with their implicit systems. So, they begin to reinforce these systems—to train people and make the systems explicit. While this seems to make a great deal of sense, some companies actually go too far. The systems themselves become paramount. Changing the systems becomes extremely hard, perhaps unthinkable.

When this happens, the cost of change becomes extraordinarily high. Flexibility is largely lost and the company becomes vulnerable to an attack from a more nimble organization that can adopt change more quickly and cheaply.

The entrant, in other words, has become an incumbent and has acquired an ensemble of legacy costs



## STRATEGY&INNOVATION

Publisher and Editor-in-Chief: Jonathan Barrett

Editor: Scott D. Anthony

Circulation Manager: Cheryl Riley

Business Manager: Matt Eyring

Editorial Advisers: Clayton M. Christensen, Professor, Harvard Business School; Clark Gilbert, Director, Innosight; Richard N. Foster, Director, Innosight



Innosight is a boutique consulting and training firm that helps companies improve their ability to create innovation-driven growth. Its unique methodologies and proprietary tools facilitate the discovery of new, high-growth markets and the rapid creation of breakthrough products and services. Its approach builds on the research of its founder, Harvard Business School Professor Clayton Christensen, author of *The Innovator's Dilemma*, *The Innovator's Solution*, and *Seeing What's Next*. For more information, visit our website at [www.innosight.com](http://www.innosight.com), call us toll free at 1-877-934-7787, or email us at [inquiries@innosight.com](mailto:inquiries@innosight.com)

Letters and Reader Feedback: Letters, editorials, ideas for articles, and other contributions may be submitted to: Editor, at [editorial@strategyandinnovation.com](mailto:editorial@strategyandinnovation.com)

Subscription Information: Subscription price is U.S. \$149 (6 issues); single copy: U.S. \$26.95. To subscribe to Strategy & Innovation, call 617.393.4535. Web: <http://www.strategyandinnovation.com/subscribe>. To subscribe to receive Innovators' Insights alone for \$49.95, call 617-393-4535 or go to [www.strategyandinnovation.com](http://www.strategyandinnovation.com). For group subscription rates, call 617-393-4535.

Services, Permissions, and Back Issues: Strategy & Innovation (ISSN 1543-7760) is published bimonthly by Innosight, LLC. POSTMASTER: Send address changes to SI, P.O. Box 257, Shrub Oak, NY 10588-0257. To resolve subscription service problems, please call 617.393.4535. E-mail to [inquiries@strategyandinnovation.com](mailto:inquiries@strategyandinnovation.com). Copyright © 2007 by Innosight, LLC. Material may not be reproduced in whole or in part in any form whatsoever without permission from the publisher. To order back issues or reprints of articles, or for information about group subscription rates, please call 617.393.4535. E-mail: [inquiries@strategyandinnovation.com](mailto:inquiries@strategyandinnovation.com). Web: <http://www.strategyandinnovation.com>

that are difficult to shed. The message for the small companies getting started is to keep these things in mind. You need to develop in a way to minimize your legacy cost. So when it comes time to change and attack, you can change.

### **How has acceptance of this notion that companies need to embrace change and be on the offensive evolved over the last few decades?**

The community of people who are focused on the economics of innovation and who understand that disruption is at the core of long-term growth has grown immensely. Many more people realize that to be successful companies need to attack, not just defend.

I used to give speeches 25 years ago to the Industrial Research Institute, which was an association of vice presidents of many of the largest corporations in the United States that were conducting 90 percent of all research and development. Back then, pursuing these types of new, innovative projects was viewed as cost, and companies always seek to contain costs.

When I wrote *The Attacker's Advantage*, I was working closely with several senior people in GE's research labs. A lot of their managers were very upset by the notion that they needed to go out on the attack. "Defense is the first strategy and attack only when you are forced to," would summarize the prevailing view of the time.

Now, innovation—and disruption in particular—is viewed as the engine of change and growth. Then, it was viewed as something unwanted and costly. So the environment has changed enormously.

### **How do you see things evolving?**

Well, I think this creative destruction process works not only on the company scale, but on the national scale as well. So, for example, one phrase that I use is you have to change at the "scale and pace of the market" or you're going to fall behind. This is true for countries as well as companies.

If you look at New Zealand in the mid-1960s, it was fourth in GDP per capita in the OECD countries; now it's something like number 18. If you ask New Zealanders how things were during that time, they would say things weren't so bad: "I still had my sheep and enjoyed Pinot Noir and it is a beautiful country." But they have been out paced by a dozen other countries.

Take Japan. They've been in a recession for years. In 1986, they were ready to take over the world; now they're barely holding on? But how did it feel in Japan? It didn't feel too bad, actually; it's just that they have fallen behind other countries.

The principles of creative destruction have a lot to do with capital markets. As capital flows increase—and they inevitably do because capital increases faster than population—there will be more wealth per capita and competition between nations will continue, as we see with China.

### **How do you see innovation developing in China?**

There are two major things to watch: the growth of capital markets and the culture of entrepreneurialism. We would not have had the level of innovation we have had in North America without NASDAQ. I think I could say that peri-

od, end of story. Certainly it would not have unfolded the way it did without the different rules and regulations of NASDAQ. You see this happening in Europe, too. With the growth of the AIM market, you see more entrepreneurship in Britain.

This works because there is a system of laws to protect minority investors. Most investors in the U.S. are minority investors. In China, most of the investment comes from a majority investor—the central communist party. There are fewer protections for minority investors in China than in the U.S. and they are less rigorously enforced.

The second thing is a culture of entrepreneurialism. Creativity often occurs in the social margins, a finding that is documented to a very fine level. In America, we idolize the individual. Our laws are written around the rights of the individual and we have a healthy disrespect for authority.

In China, both of these things are different. The group is more important than the individual and you certainly do not challenge authority. Not without great risk. These are 2,000-year-old traditions that have not been associated with creativity. Transplanting American methods of entrepreneurialism into China will be more difficult to implement on a large scale because the social and legal differences are so substantial.

Chinese citizens are as creative as any in the world, but whether the national culture will embrace innovation at a sufficient scale and with sufficient creativity to meet President Hu Jintao's goals is not yet clear. It will be interesting to see how it plays out. ♦

Reprint # 050202A

# Innovators' Update: Mega Mergers Revisited

Telecommunications titans have had mixed results  
at mastering disruptive forces

*Each issue, we take a look back at a past Innovators' Insight to see how our analysis has held up. This issue, we look at Insight #60, "When Is Bigger Not Better?" The insight argued that mega-mergers in the telecom industry were likely to prove disappointing. What has happened since?*

Merger fever continues to course through the global economy as companies with ample cash use acquisitions to satiate the growth desires of hungry investors. Even Cisco Systems, a company famous for focusing on small acquisitions, has expanded its merger efforts. In 2005, Cisco purchased video network equipment provider Scientific-Atlanta for \$6.9 billion. This year, it purchased web conferencing provider WebEx for \$3.2 billion.

One of the mergers described in last year's Insight proves a cautionary tale for future mega-mergers. In April 2006, French communications equipment provider Alcatel announced plans to merge with Lucent to create a giant with annual revenues of more than \$25 billion and close to 90,000 employees.

At the time, Patricia Russo, the CEO of the combined Alcatel-Lucent, said: "This presents extraordinary opportunities for our combined company to accelerate its growth. The combination creates a new industry competitor with the most comprehensive portfolio that will be poised to deliver significant benefits to customers, shareowners and employees."

Over the last year, Alcatel-Lucent's stock price has sagged 20 percent; it has had to deal with an employee march in Paris protesting job cuts; and in February it report-

ed an \$800 million fourth quarter loss. This is probably not what Russo had in mind. Boston Scientific's well-publicized struggles to swallow Guidant are another cautionary example of how mega-mergers can be a huge distraction.

Generally, companies facing disruptive threats should be cautious of undertaking a mega-merger. The inevitable distractions can divert attention when it is most needed.

The other mega-merger described in last year's Insight was the re-constitution of AT&T as a powerful telecom service provider. In March 2006, AT&T (itself purchased by SBC Communications in 2005) announced plans to swallow up BellSouth for \$67 billion.

The company doesn't seem to have stumbled over the same issues as Alcatel-Lucent: In the last year, AT&T's stock has risen about 50 percent. The company expects nearly \$8 billion in cost savings over the next three years and plans to pour that money into innovation, such as its foray into television.

Moving into television is unlikely to be sufficient for AT&T to weather the disruptive storms raging in the rapidly converging communications and media industries. And the company's mammoth size raises concerns about its ability to create booming new growth offerings.

Why might size impair growth

efforts? Large shadows can obscure high-potential opportunities. It's just hard to support small-starting growth efforts when revenues reach the tens of billions. An executive could easily dismiss a business that offers \$220,000 in first year revenue. Of course, Google's first-year revenues were \$220,000.

Many great growth stories have similarly humble beginnings, but massive companies can struggle to prioritize the small beginnings that translate to blockbuster endings.

Generally, the disruptive models suggest that companies generate greater returns from acquisitions if they systematically scan for small companies following disruptive strategies. A company can snatch the disruptor up at a reasonable price before the market fully realizes the disruptive potential.

Electronics retailer Best Buy successfully followed this approach when it acquired tech service provider Geek Squad in 2002. Geek Squad provides an affordable way for consumers to access IT experts in their home. Best Buy paid roughly \$3 million to purchase the company. Analysts estimate that Geek Squad produced close to \$1 billion in revenues and \$280 million in operating profits in Best Buy's recently completed fiscal year.

Similarly, drug store retailer CVS purchased MinuteClinic—long a *Strategy & Innovation* favorite—for \$170 million last year.

Alcatel-Lucent has struggled, AT&T has surged, but in the long run our assessment is that both mega mergers will end up being disappointments unless AT&T finds ways to give growth efforts sufficient space. ♦

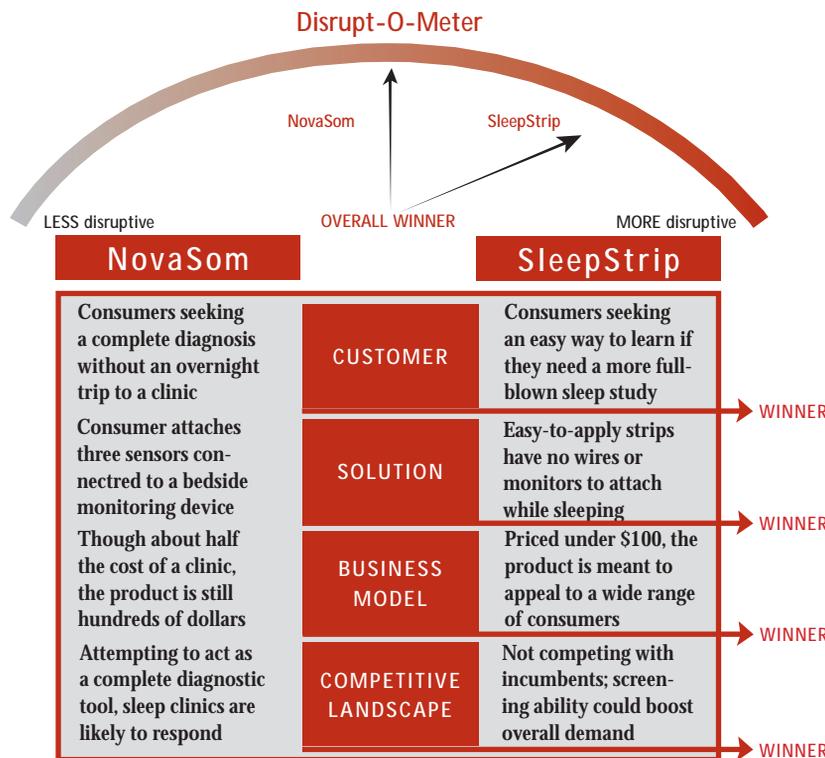
Reprint # 050204A

# Disrupt-O-Meter

## Tale of the Disruptive Tape: NovaSom vs. SleepStrip

*"Is company X disruptive?" Whenever we're asked this question—and we're asked it often—we run through a simple mental checklist that looks at the target customer, the solution, the business model, and the competitive landscape. In this issue, we use our "Disrupt-O-Meter" to analyze solutions in the \$15 billion market for obstructive sleep apnea (OSA) treatments.*

Obstructive sleep apnea is a sleep disordered breathing condition that impacts up to an estimated 18 million Americans at an annual cost of nearly \$15 billion. Traditional diagnosis requires patients to spend a night hooked up to monitors at a sleep clinic and costs as much as \$3,000. Two new solutions, NovaSom QSG by Sleep Solutions and SleepStrip by SLP Ltd., are trying to market lower cost products that patients can use at home. Which is more disruptive?



**More Disruptive: SleepStrip.** NovaSom certainly has some disruptive potential, as its at-home solution should enable consumption in new context and by consumers who historically have avoided the hassle of an overnight stay at sleep clinic. The steep price tag of the product—combined with the fact that many health insurers refuse to reimburse for the device—likely will turn off many consumers, however. SleepStrip has taken a more classic disruptive approach. Relative to all other available solutions, its offering is cheap, convenient, and simple to use—all enablers of new consumption. Additionally, the product is not trying to compete with incumbent solutions by offering best-in-class diagnoses. Instead, doctors can use SleepStrips as a low cost screening tool to determine whether a patient should undergo further treatment.

Reprint # 050105A

## EMERGING TECHNOLOGY WATCH

The (auto) doctor is in

As automobiles have become more complex, computer-based diagnostics have replaced old-fashioned tire kicking techniques. In response, mechanics have purchased a host of complex, electronic tools, and companies like OnStar now offer remote, onboard computer assessments. However, few low-cost diagnostic options are available for consumers hoping to debug their car the same way that they might debug a computer. The SAM system by Smart Auto Management, Inc. seeks to provide this service with an ATM-style drive-through booth that will scan and assess over 2,000 onboard diagnostic codes in the space of 10 minutes for less than \$15. The system then provides a comprehensive report that points out potential faults in each of the car systems, from engine to chassis. These systems should be appearing in Jiffy Lubes, Kwik Kar stations, and selected gas stations in 2007.

Print your house

If everything goes according to plan, one of the largest printers in the world will roll into Los Angeles this August. After it is bolted in place, the printer will construct the shell of a full-sized house in less than a week with minimal human intervention. The eventual goal: To use rapid-set concrete to print shell houses in 24 hours that require only electrical and plumbing installation. The inventor, Dr. Behrokh Khoshnevis, sees multiple applications of the technology, from emergency shelter construction to low-waste civil engineering projects. If successful, such contour-crafting machines could provide a cheap, convenient way to build some of the concrete structures used in major construction projects.

Here comes the sun

Conventional photovoltaic cells that produce solar power are similar to the high grade silicon semiconductors used in computer. While research has led to ever-more efficient power conversion from silicon, solar-grade silicon is expensive and relatively fragile. That's why researchers are pursuing next generation "thin film" solar technologies to generate power. Many thin film techniques also provide greater flexibility, enabling the manufacture of solar cells directly into glass, other building materials, and even plastics and fabrics. Leading thin film technologies (including low cost organic polymers) are nearing market viability; venture-backed companies are breaking ground on massive factories to produce them. Look for thin film cells to start picking off market niches in which their flexibility and cost advantages outweigh their inferior power production relative to silicon.

Reprint # 050205B

## Problems with discounted cash flow and net present value

The method of discounting cash flow to calculate the net present value of an initiative can be a misleading tool when misapplied.

This “DCF” method of discounting a projected future stream of cash flows into a “net present value” (NPV) of that stream assumes that a rational investor would be indifferent to having a dollar today, versus receiving that same dollar a year from now, plus the interest or return that could be earned by investing that dollar during the year-long period in question.

DCF is a valid and valuable tool that is rightly applied in many circumstances when the future can be accurately predicted. The concerns are not with the concepts of DCF and NPV themselves, but rather with the impact that misapplication of these tools can have on investing for innovation and growth.

There are two problems with the mathematics of discounting as applied to innovative initiatives. The first problem is that its practice is commonly grounded on the assumption that the base case of not investing in the innovation—the “do-nothing” scenario against which the cash flows from the innovation are compared—is that the present health of the company will persist indefinitely into the future if the investment is *not* made.

In other words, the mathematics

compares the expected present value of the cash stream from investing in an innovation (*Cash Stream A* as illustrated in **Figure 1**), with the expected present value of a do-nothing scenario (*Cash Stream B*). In most situations, however, the combined impact of competitors’ sustaining and disruptive investments results in price and margin pressure, technology changes, mar-

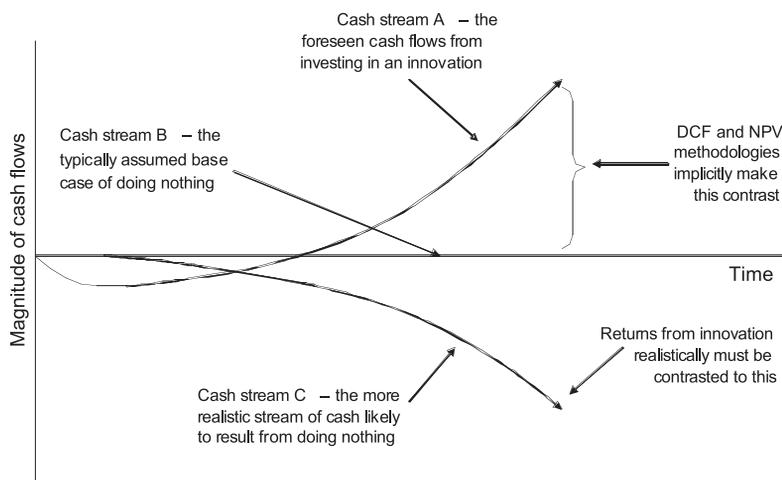


Figure 1: The cash flow from an innovation should be compared to a decline of the core business, not a continuation of the status quo

ket share losses, sales volume decreases, and a declining stock price.

This means that the most likely stream of cash in the do-nothing scenario is *not* the line represented by *Cash Stream B*. It in fact is a non-linear decline in performance as suggested by the trajectory of *Cash Stream C* in the diagram.

It’s tempting, but wrong, to analyze a proposal by asking whether, if the new investment were made, it will make you better off than you are now. Why? Because, if conditions are deteriorating on their own, you well might be worse off in the future than you are now after making the proposed investment, *but you still will be better off than you would have been without it.*

Philip Bobbitt, a law professor at the University of Texas, calls this logic “Parmenides’ Fallacy,” after the ancient Greek logician who claimed to have proved that the world must necessarily be entirely unchanging and, thus, that all change is illusion. In Professor Bobbitt’s words, “This fallacy occurs when one tries to assess a future state of affairs by measuring it against the present, as opposed to comparing it to other possible futures.”

Analysts who attempt to distill the value of an innovation into a single simple number that they can compare to other simple numbers are generally trapped by Parmenides’ Fallacy.

Of course, it’s hard to forecast

accurately the stream of cash from an investment in innovation. And it is even more difficult to forecast the extent to which a firm’s financial performance will deteriorate in the *absence* of that same investment. But it must be done. Ask a good economist the question, “How are you?” and the response will be, “Relative to what?”

This is a crucial question that is not often asked when assessing the value of an innovation. It entails assessing the value created by the innovation against a range of scenarios, the most realistic of which is a deteriorating competitive and financial future. (For more on this, see the sidebar “Share prices and the impact of expectations.”)

The second problem with relying on DCF analysis is linked to the first, but arises specifically in the assumptions commonly used when calculating a “terminal value.” Most analysts will project a year-by-year stream of numbers for five years or so, and then “punt” by calculating a terminal value to account for everything that subsequently will happen. The logic, of course, is that the year-to-year estimates for distant years are so imprecise that attempts to feign precision yield no more accurate an estimate than does a terminal value.

To calculate a terminal value, analysts typically divide the cash to be generated in the last year for which they’ve done an estimate, by a discount rate minus a projected growth rate. They then discount that single number to the present.

The problem with the mathematics of terminal value is that they don’t allow the requisite scenario testing described above—contrasting the result of this investment with the deterioration in future competitiveness and performance that is the most likely result of doing nothing. The terminal value calculation implicitly assumes that from that point on, the do-nothing base case is continuation of the status quo as it exists in that year.

In our experience, assumed terminal values often account for more than half of a project’s total NPV. And yet, because of market inertia, competitors’ development cycles, and the typical pace of disruption, it is often in the fifth year out that the decline of the enterprise in the do-nothing scenario accelerates, as depicted in Figure 1.

It is very possible that a root

cause of companies’ persistent under-investment in the innovations required to sustain their long-term success is the indiscriminant and over-simplified use of NPV as an analytical tool.

### Maximizing Shareholder Value

The now widely accepted doctrine that management is responsible for maximizing shareholder value also often impedes companies’ innovation efforts and is largely responsible for driving quarterly earnings management behavior.

Most management teams desperately want to avoid missing their earnings targets and the consequence is a hesitancy to invest in innovations that appear likely to hurt near-term financial performance. Ironically, it is just these innovation investments that have the greatest potential to enable the long-term success of an enterprise.

Contrary to popular belief these days, it turns out that the doctrine that management is responsible for maximizing shareholder value was never revealed by deity to any of the prophets of profit. Rather, it came from economists.

Calculus is a primary analytical tool of microeconomics. At some point in the past, some defunct microeconomist who had built a set of mathematical equations describing a problem facing a management team seems to have said, “Let us assume that managers’ responsibility is to maximize shareholder value.” Because the essence of calculus is maximization and minimization of objective functions, this assumption made the mathematics tractable. (For more on this, see Sumantra Ghoshal’s “Bad Man-

agement Theories Are Destroying Good Management Practices,” *Academy of Management Learning and Education*, March 2005.)

As a consequence, more economists began using this convenient assumption as they built and solved their own mathematical models of business problems. They then used this assumption as they taught these models to their students; and

### Share prices and the impact of expectations

Scenario-grounded NPV analysis is especially important when a company’s share price is a concern. Few executives aspire to a stagnant share price. Most “plan” that their share price will increase in the future. The problem is that because investors have a pesky habit of discounting a company’s foreseeable growth into the present value of its stock, the stock price will only increase if the company grows *faster* than investors expect.

There are two components to investors’ expectations. First, a portion of each company’s share price reflects investors’ assessment of the growth potential of existing businesses. The second is investors’ bet that the management team will find ways to create new growth opportunities beyond those that presently are known. If managers fulfill the first component of expectation but not the second, the company’s share price will generally fall. If they actually go on to fulfill the second component, the share price will only grow at the company’s weighted average cost of capital.

So how can companies achieve a growth in share price? It is only if executives generate *more* growth, beyond what is known about the existing businesses *and* beyond the unknown businesses that investors already are expecting them to create, that the company will succeed in generating abnormally high cumulative returns. Hence, a deteriorating share price is the most likely scenario against which to compare investments in innovation.

through endless repetition it ultimately came to be assumed by nearly everyone that managers are responsible for maximizing shareholder value.

Through the 1960s, this assumption actually wasn't at odds with reality: the average holding period of shares in shareholders' portfolios was between five and six years. Managers seeking to maximize the long-term strength and growth of their companies could reward their shareholders over that somewhat extended time period.

By 2005, however, the world had changed dramatically. Over 8,200 hedge funds managing \$1.2 trillion in assets held 10 percent of the market value of publicly traded stocks. But because the average holding period of stocks in hedge fund portfolios is about 60 days, they account for approximately 35 to 40 percent of the trading volume on stock exchanges.

Another 72 percent of shares, by value, are held in institutional portfolios—primarily pension and mutual funds. The average holding period in these portfolios is 10 months, which means that many funds don't hold a stock long enough to vote the proxy. (This information on hedge funds and mutual funds comes from a 2006 speech by Louis M. Thompson, president & CEO of the National Investor Relations Institute.)

The behavior of stock prices in response to these speculators' interests and holding horizons is anomalous, when viewed through the lens of conventional theory—

which asserts that a stock's price is the risk-adjusted discounted present value of a foreseen future stream of cash flows.

If this is indeed true, why does a company's stock fall, often by as much as 10 to 20 percent, when its quarterly earnings announcement "disappoints" shareholders? Is the future really so volatile and unpredictable, that a report card on the past causes a sudden efficient re-estimation of future possibilities?

A paradigm rooted in the convenience of mathematical optimization has run amok.

Of course not.

What has happened is that hedge funds, guessing that the company's reported quarterly performance might fall short of analysts' estimates, have shorted the company's stock. Hence, volatility in the company's stock price, which managers work assiduously to pre-empt through quarterly earnings management, is driven by a set of forces that are at best tangentially related to the value of the company's future.

An entire ecosystem has emerged around the institutions that seek to profit from short-term inefficiencies in stock markets. The most prized sell-side analysts, for example, are not those who can see five and ten years in the future. Rather, they are those who can estimate next quarter's earnings and advise whether short or leveraged long is a better speculative position to have taken at the time of the next earn-

ings announcement.

Ought managers regard mutual funds, and hedge funds as shareholders, when their average holding periods are 10 and two months, respectively? Their holding period is shorter than the investment horizon of the most near-sighted of managers.

A paradigm rooted in the convenience of mathematical optimization has run amok.

It is possibly time to adjust the paradigm of management responsibility to the reality of today's financial markets. Instead of worrying about returns to funds, managers could say to

these fund managers:

"You are *investors and speculators*, not shareholders—and you temporarily find yourselves holding the securities of our company. *You* are responsible for maximizing the returns on your investments.

"*Our* responsibility is to maximize the long-term value of this company. We will therefore act in the interest of those whose interests coincide with our long-term prospects—including employees, customers, the communities in which our employees live, and that small minority of investors who plan to hold our securities for several years."

It perhaps is not coincidental that certain companies that have demonstrated time and again the ability to catch disruptive waves of growth have a different ownership structure than do most public companies in America and Europe.

Tata Sons in India, for example,

is a major manufacturer of steel and automobiles. It owns Taj, a significant global chain of luxury hotels. Tata Consultancy Services (where I sit on the board of directors) is the largest and most successful of that country's IT services companies. Tata Interactive is a major developer of on-line education and entertainment.

The holding company, Tata Sons, is privately held. Certain of its subsidiaries are publicly held, while others are private. This seems to give them the luxury of creating under the private umbrella new business units whose economic models are disruptive relative to those of Tata's public subsidiaries.

Li & Fung in Hong Kong, and Cox Enterprises in the United States are structured in a similar way—and each seems to have demonstrated the ability to invest in disruptive growth much more nimbly than firms whose shares at the holding company level are publicly traded. Their ownership structure does not enslave their executives to the pursuit of this false paradigm.

### Use of gross margins as a measure of competitive health

Analysts often build spreadsheet models that segregate fixed and variable costs in order to estimate the impact that sales volume changes in various products and markets will have on the financial performance of a company. The perspective that these models offer is that if managers increase revenues from products that generate higher percentage gross margins, more revenue will drop to the bottom line—and vice versa. It is quite common,

as a result, for stock prices to rise or fall in response to quarterly announcements that reveal changes in gross margin percentages.

While these measures indeed signal how changes in product mix are likely to affect profitability, they make it difficult for managers to move down-market to counter disruptive competitors attacking from below. The low-end of most markets in which disruptive competitors typically take root usually can be characterized by higher unit volumes, at lower prices and lower gross margin percentages. Although the total gross margin *dollars* generated at the low end often exceeds the total gross margin *dollars* generated at the high end of many markets, the instincts generated by analysts' financial models cause most managers to "flee" up-market towards customers who will pay for higher margin products, even though unit volumes are smaller, when attacked from below by disruptive competitors. This proclivity to focus exclusively on gross margin, in many ways, causes the innovator's dilemma.

Some companies have come to measure financial health differently. For example, some measure gross margin x inventory turns—a metric that has amply helped discount retailers, such as Wal-Mart. Others create a common product or service platform that can extend from the low to high end of the market by adding and removing features and functionality.

They then measure profitability not by gross margin percentages, but by net operating profit after fully allocated fixed costs. When they do that, it actually creates an

incentive to defend the low end of the market—because the volume there absorbs overhead costs, and can make high-end products appear to be even more profitable. In other words, it makes both ends of the market appear to managers and sales people to be attractive. Many firms that do this find that they escape the innovator's dilemma that causes up-market flight.

### Overcoming the challenges

As I noted last issue, this series of articles on failed paradigms of financial analysis only begins to identify some of the complicated problems that can result from a reliance on these failed financial paradigms.

The article "Do You Know What you Don't Know" on page 14 of this issue, offers some helpful strategies for companies to use when evaluating potential investments in innovations. Relying on financial forecasts simply is not enough—indeed such techniques often lead to a troubling decline in companies' ability to successfully innovate.

As always, I would love to hear your thoughts and get your feedback on the topics presented here. Overcoming these factors is hard and requires the use of entirely new techniques., but companies, analysts, and even government officials need to think about whether the financial measures we rely upon actually set companies up for long-term success. ♦

Clayton M. Christensen is the Robert and Jane Cizik Professor of Business Administration at Harvard Business School; the author of *The Innovator's Dilemma*, *The Innovator's Solution*, and *Seeing What's Next*; and a co-founder of Innosight.

Reprint#050201A

consumers and miss opportunities for innovation. Companies continue to push for improvements along dimensions that overshoot consumer needs and then complain that commoditization has set in when looking at the market the right way can highlight attractive avenues for differentiation.

There must be a better way, one that allows companies to identify *real* opportunities that promise extraordinary returns.

We believe that focusing on the “job” a customer is trying to get done can help companies break out of the marketing morass. This article describes how this jobs-to-be-done framework can help companies master the “innovation lifecycle,” improving their ability to spot high-growth opportunities, optimize existing products, and inject life into even the most stagnant categories.

### Jobs and the innovation life cycle

The concept of jobs to be done is described in Chapter 3 of Clayton Christensen’s 2003 book *The Innovator’s Solution*. The concept is simple. It holds that customers don’t really *buy* products, they *hire* them to get jobs done. To identify opportunities to create new growth, then, look first for important “jobs” that can’t be done satisfactorily with available solutions.

You can think about a job as a problem a customer needs to solve.

Remember the phrase attributed to Harvard Business School marketing guru Ted Levitt: “People don’t want a quarter-inch drill—they want a quarter-inch hole.”

For example, Intuit’s QuickBooks software makes it easy for small business owners to accomplish an important job: Make sure my business doesn’t run out of cash. Before Intuit’s innovation, existing alternatives, such as pen and paper and Excel spreadsheets, weren’t good enough to get this job done. Professional accounting

form (often because they have no better alternative), it zeros in on *circumstances* and *constraints* that surround the jobs people are trying to get done. These characteristics are more deeply connected to the “best” possible solution than any other segmentation scheme.

In short, the jobs to be done model provides a blueprint for innovation: Find that frustrated customer and zero in on the roots of their frustration.

Generally speaking, any successful innovation follows a life cycle.

As **Figure 1** depicts, before there is an innovation, there is market demand. Then an innovator finds a way to tap into that demand. In the early days, the innovator’s key challenge is optimizing the innovation for maximum success, then finding creative ways to capture value.

Markets abhor vacuums, so any

successful innovator must ward off encroaching competitors. Finally, when the innovation reaches a seeming stage of maturity, the innovator must find new ways to revitalize growth. Jobs-based thinking can help the marketer in each stage of the innovation lifecycle.

### Stage 1: Identifying demand

Jobs thinking illuminates opportunities to innovate in the marketplace. These opportunities may stem from identifying jobs for which existing solutions are

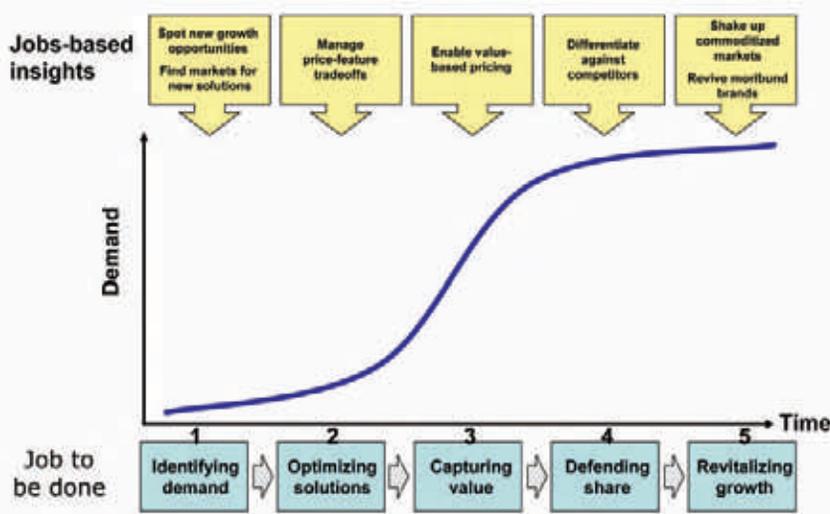


Figure 1: The innovation life cycle

software packages were actually *too good*—confusing and filled with unnecessary features. QuickBooks did the job better than any alternative and took over the category.

The jobs to be done model is simple but powerful. It shifts focus from solutions that customers utilize to the problems they can’t adequately solve. Instead of categorizing customers into demographic groups that can be poor predictors of behavior, attitudes that *might* influence purchasing behavior, or activities that people *currently* per-

ineffective or nonexistent, or by pinpointing “employers” who will eagerly hire a new offering.

Understanding important, unsatisfied jobs almost always highlights substantial opportunities for growth. As part of a yearlong study of the newspaper industry, we worked with a team at *The Boston Globe* to understand the problems facing small businesses in its market that didn’t consume any of the *Globe*’s existing products.

It discovered that, among other things, many small businesses wanted to find more effective ways to make their phone ring with a high-potential customer. Many had heard about new ways to place search-advertisements on web sites like Google and Yahoo!, but thought the programs would be too complex to manage—especially since many had websites that had been hastily designed years ago.

The *Globe* decided to sell small businesses a search-engine marketing program to provide guaranteed “clicks” to their websites. The *Globe* estimates that this and other offerings targeting the jobs of small businesses could be a multi-million dollar opportunity.

While companies often seek to develop market understanding before innovating, sometimes the process works in the other direction. In other words, a company often starts with a technology and has to figure out what market has the highest potential for growth.

In these circumstances, start by assessing the problems the technology could solve, the contexts in which the technology could be used, and its performance benefits and liabilities compared to existing

solutions. Then, consider all of the “employers” who might be interested in hiring the technology. Ask questions like:

- **Who needs to solve the problems the technology could solve?**
- **Who would be delighted by this solution despite its limitations?**
- **In which contexts could it be used where existing technologies could not?**

For example, in the early 2000s, California-based Linksys (purchased by Cisco Systems) had to decide how to commercialize wireless networking technologies. Existing versions of the technology allowed users to send data wirelessly over short distances. Signals degraded rapidly beyond about 300 feet and provided low levels of security and encryption. Linksys wisely decided to target users looking to network their home or small office. The technology helped these users address important jobs, and security- and distance-related limitations were irrelevant in that context.

### **Stage 2: Optimizing Solutions**

Identifying the opportunity is never enough. Companies face significant challenges when they seek to introduce products that adequately get the innovation job done. Companies need to carefully balance price and features to deliver a product that people are willing to buy.

A staple in the marketing tool kit is the customer survey or focus group designed to identify “what customers really want.” All too often, these exercises result in wish lists that if accommodated will cre-

ate an all-capable, and often very expensive, offering that is desirable to no one. Understanding the ways in which customers determine value can highlight the tradeoffs between features and price customers will consider tolerable.

For example, consider the insights a major consumer health company gleaned through applying the jobs-to-be-done methodology in the area of nutritional products. The company’s initial research efforts surfaced important and unsatisfied jobs ranging from treating heart disease and cancer to maintaining basic health.

The company’s initial inclination was to create a “do everything” product to try to—at least tangentially—stave off many of these conditions. However, more in depth research identified that consumers really wanted solutions that were specific to them as individuals. A do everything product would actually provide too *much* performance on some dimensions and too *little* on others. The company recognized this issue and is now pursuing focused formulations for specific high demand health conditions that tend to coexist in the population.

### **Stage 3: Capturing Value**

When products successfully address an important, unsatisfied job, the value created by the offering often goes well beyond the traditional “cost plus” target margin many companies use to create a pricing strategy. Deep understanding of jobs positions a company to more comprehensively capture the value created by an offering.

Consider the case of a global

upstream chemical manufacturer that produced latex compounds. This company traditionally sold its product to the pulp and paper industry by the ton. It positioned its offering as little more than a binder used to hold together pulp in the manufacture of office paper.

Careful study of the end-user market surfaced a key frustration point for customers who used the paper in high-speed photocopiers: frequent paper jams and smudged ink. The chemical company recognized that its latex technology could alter the paper texture to facilitate both smooth passage of the paper through photocopiers and improved ink retention.

The chemical manufacturer's solution satisfied a much more valuable job than simply "binding paper pulp." It had a direct impact on the end-user experience, and gave the paper manufacturer the opportunity to command a premium for its paper. The chemical company's awareness of the job positioned it to grab a piece of the value it created.

#### Stage 4: Defending Share

Once an idea begins to gain momentum, competitive response is inevitable. As described in *Seeing What's Next* (written by Clayton M. Christensen, Scott D. Anthony, and Erik A. Roth, Harvard Business School Press), nimble disruptive competitors typically take advantage of an incumbent's structural weaknesses and blind spots. The jobs-aware incumbent, however, need not forfeit its prized market.

One medical device company Innosight advised faced an attack from a competitor that tore a page out of the disruptive playbook to

launch a "good enough" solution at radically lower price points.

Of course, our client could have matched the offering. It wondered if there might be a way to optimize its existing offerings so that customers *wouldn't* consider the competitor's offering good enough.

To do so, it sought to understand the full range of jobs that practitioners needed to get done. The company learned that practitioners employing its device sought much more than clinical benefits. They also required training on how to effectively use the product, assistance in building market awareness of the device's advantages over alternative treatments, tools that allowed them to communicate the device's functionality to patients, and new mechanisms to help patients pay for the treatment.

By pulling these and other innovation levers, the company was able to more sharply differentiate itself against its competitors.

#### Stage 5: Revitalizing Growth

Even white-hot categories cool. Jobs-based thinking can restart growth by helping companies shake up commoditized markets and highlighting opportunities to revive even the most moribund of products.

Few words cause as visceral reaction from executives as *commoditization*. Every executive can tell a horror story of how one of their company's crown jewels found its differentiation dissipating and its margins crumbling. In these circumstances, plowing more money into innovation seems to make the problem worse, not better. General Electric Chief Executive Jeffrey Im-

melt put it well when he noted, "We're all just a moment away from commodity hell."

But what exactly does commoditization mean? It means that customers just don't value further improvements along particular dimensions. Does that mean that there's *no* improvement that customers would value? The answer oftentimes is no.

Hill-Rom Industries, a company that sells beds to hospitals, is an illustrative example. Hospital beds would seem to have all the characteristics of a commoditized product. Yet, between 1975 and 1990 Hill-Rom grew its share of the hospital bed market from 30 to 90 percent and doubled the frequency with which hospitals replaced beds.

By working to understand how the company could improve its customers' business, it learned that nurses, who account for a significant share of hospitals' operating costs and whose interactions with patients strongly influenced perceptions of care, were spending inordinate time on non-nursing tasks—picking up things that patients had dropped and solving television problems, for example.

By adding features and functions to their beds that obviated many non-nursing tasks, Hill-Rom differentiated its beds in ways that helped hospitals make money. Hospitals readily paid premium prices for these improvements. These insights did not come from segmenting markets by small, medium, and large hospitals. They came from understanding the job—the levers that drive hospitals' profitability.

It turned out that there was tremendous room for differentiation

and premium pricing in the hospital bed market, but it required taking a fresh perspective to identify dimensions along which existing products were not good enough to get important jobs done.

Many companies find that the power of particular brands wanes over time. A brand that was a powerhouse decreases in importance as core customers age and a new generation arises without the close connection to the brand.

Additionally, a jobs to be done perspective can illuminate ways to reinvigorate a brand. Procter & Gamble did just this several years when it attempted to revive its Mr. Clean brand. P&G asked a simple, powerful question: What was the real reason people hired Mr. Clean products when the brand was its strongest in the 1960s and 1970s? Its conclusion: to magically clean the seemingly uncleanable.

With that understanding, P&G began actively seeking circumstances where consumers were frustrated by their inability to mag-

ically clean surfaces. It identified three clear circumstances and three new offerings:

1. My rogue child has decided that our walls made an ideal blank canvas for his crayons. Mr. Clean Magic Eraser cleans these hard-to-clean surfaces...like magic.
2. I spend hours a day in my car and it gets dirty. I don't have the time to go to a professional car cleaner and the soap and bucket doesn't get the job done. Mr. Clean Auto Dry does.
3. I'd love to clean behind my toilet, the corner of the shower, and under the sink. I'd also love to not kill my back. Mr. Clean Magic Reach Bathroom Explorer solves this problem.

By asking what job customers historically hired Mr. Clean to get done, P&G was able to focus its innovation energy on circumstances where that job couldn't adequately get done, helping it to return the brand to its former prominence.

properly—provide tremendous insight into important, unsatisfied innovation jobs.

Our experience suggests that there are two critical success factors for job-to-be-done thinking. First, act like an investigative reporter, using a variety of techniques to unearth and synthesize jobs clues. Focus groups, observational research, internal brainstorming, and expert interviews can all be helpful ways to generate long lists of jobs. Quantitative research can help with prioritization and tradeoff decisions.

Second, ensure that the questions change in ways that are consistent with the jobs-to-be-done model (for some sample questions, see the sidebar on this page). The jobs to be done model places the customer's problem squarely in the center of the information equation. Questions must focus on understanding *problems* instead of gaining reactions to proposed *solutions*.

The biggest impediment to change can be existing mindsets. Start changing mindsets with simple starting points. Gather critical managers together. Introduce the concepts. Get people to start talking about the jobs for which customers hire the company's products. Or have people open their briefcase, pull out a product, and describe the jobs for which is gets hired. Simple steps begin the process of transformational changes. ♦

Joe Sinfield is a partner at Innosight and also a professor of civil engineering at Purdue University. He can be reached at [jsinfield@innosight.com](mailto:jsinfield@innosight.com).

Scott D. Anthony is president of Innosight. He can be reached at [santhony@innosight.com](mailto:santhony@innosight.com).

This article is an adapted version of an upcoming piece that will run in the April 2007 edition of *Marketing Management* magazine.

Reprint # 050201B

### Sample Questions To Identify Jobs

- What is the problem you are facing? Why do you care about solving it?
- What is the process you use to solve that problem?
- What alternatives do you consider when going through this process?
- Why do you select the option you select?
- What do you like about the option?
- What don't you like?
- What frustrates you when you are trying to solve this problem?
- What other people are involved in this process? What is the nature of your interaction with these people?

### Doing the job of finding the job

The jobs concept is highly intuitive and extremely understandable. Case studies like those above ring true to most marketers. When it comes time to act on the concept, however, many companies get stuck. Concepts that look so appealing in print become surprisingly difficult to implement.

The good news is that utilizing the concept does not require radically new market research techniques. The tried and true techniques that companies use to conduct research can—if used

# Do You Know What You Don't Know?

When entering uncharted markets, it is crucial to recognize that a strategy is likely to be based more on assumptions than actual knowledge

BY JONATHAN BARRETT

When dealing with innovation, a critical factor that impacts a company's success is an ability to manage something called the knowledge-to-assumption ratio. The ratio reflects the difference between what a company knows and what it assumes.

Broadly, there are three different levels of knowledge-to-assumption. In classic sustaining circumstances, the ratio is high (lots of knowledge, few assumptions). In other words, you “know what you know.” Generally, business as usual and confident execution works well here, as when Gillette throws another blade on a razor.

There are two other circumstances that are much less predictable, however. The first is when there are things that are known to others, but not known to a company. In such situations, one needs to find ways to acquire this missing market knowledge. Before Honda launched a hybrid car, for example, it analyzed other efforts to learn more about the new market.

Finally, there are circumstances when some factors are unknown and unknowable—you “don't know what you don't know.” These “unknown unknowns” are responsible for numerous big flops. When AOL and Time Warner gamble billions based on little data from a new market, managers are blindly assuming they understand a market that does not yet exist.

## You know what you know

Businesses that are launching incremental improvements to existing products that will be sold to their best customers can usually be confident in their direction. When Tylenol launched its “Extra Strength” product, it had a lot of knowledge about the factors that were going to determine success.

A high knowledge-to-assumption ratio means that a company knows its target market's size, growth rate, customer needs, likely competitor responses, and channel-partner incentives. In this circumstance, a *deliberate strategy* should be employed.

As Chapter 8 of *The Innovator's Solution* explains, a deliberate strategy is rigorously analytical. After examining all factors that surround the particular innovation project, managers implement

the strategy “top down.” Execution is key: Managers can and should be held to detailed plans and timelines. Of course, any strategy based on rigorous analysis can only be as good as the information that supports it, so deliberate strategies formed when there are more than a few key unknown variables are likely meet with frustration.

Most companies are quite good at this type of innovation and need to be especially aware of one common pitfall: overshooting. Are you making a product that is *too good* for most users needs? If so, the bulk of the market likely will not pay a premium for the product and the offering will attract only the most demanding tiers of the market. This can be profitable, but the company needs to recognize it is going after a smaller opportunity.

## Known to others, not to you

This circumstance typically arises when companies seek to move into an adjacent market. Incumbent companies operating in the market have a great deal of knowledge about their customers, competitors, suppliers, and partners, but an entrant from an adjacent market likely has little first-hand information about such issues.

It is tempting—but dangerous—for companies to look at an adjacent market and assume that they can grow by simply leveraging their existing, successful pro-

### How much market knowledge do you really have?

Honestly answering the three questions below can help you determine the level of knowledge that your company actually has about a market.

- What about what you are trying to do have *you* done before?
- What about what you are trying to do have *others* done before?
- What about what you are trying to do has *never* been done before?

cesses into the new space. Such a strategy relies heavily on a number of assumptions that may or may not prove to be correct. Only after rigorously identifying such assumptions—and then testing these assumptions to gain actual knowledge—should companies look to enter these new markets.

When Disney opened in Europe, for example, it assumed that European consumers would follow the same patterns as consumers in other markets. But European consumers were used to lower admissions prices, didn't stay in hotels for as many nights, ate less food, and bought cheaper merchandise.

Armed with knowledge gained from experience, companies that had been operating in that market for years most likely would not have made many of Disney's decisions. They would not have built numerous, large hotels and they would not have banned wine from all restaurants, for example.

Disney, of course, did not explicitly acknowledge the numerous assumptions it was making about consumer habits and purchasing decisions. After all, Disney had had years of success operating theme parks. It had a powerful brand, world class amusements, and a proven ability to execute. The company believed it *knew* what it took to succeed and did not examine the assumptions underlying this con-

fidence. Failing to address those assumptions led to an ill-conceived strategy that lost a lot of money.

The further a company moves from its core, the more important it is to think carefully about the implicit assumptions it takes for granted in its core business.

A consumer-packaged goods company Innosight worked with fell prey to this trap. The company was used to selling low priced consumer goods. The low price point meant that the company almost never had to worry about consumer returns. Then the company began selling a higher priced

assumption—and being humble about what you truly know.

This humility allows companies to begin identifying of the many assumptions that underlie a new business strategy. Some of these assumptions may turn out to be rather unimportant to ultimate success, but others likely will prove critical. Once such assumptions have been identified, companies should run tests to learn more about the market: They find facts that can turn assumptions into knowledge.

### The unknown and unknowable

Managing a circumstance with variables that are unknown and unknowable is deeply challenging. New-to-the-world technologies and untested business models typically fall into this category. For example, no one knew exactly how eBay's auction model would be used or what people would do with content on the Internet. In these circumstances, nearly every aspect of a business model and product offering

was initially based on assumptions, not market knowledge.

In some situations marketers and engineers have a sense that a new technology has the potential to unleash new applications—to do jobs that customers aren't doing now and cannot articulate that they might want to do if technology were to make it possible. In these situations, the company and its customers must discover the product and the job together. This

	The Core	New to Us, Known to Others	New to the World
<b>Knowledge</b>	Confident: We know	Discoverable: Careful analysis can unearth what we don't know	Experimental: Action, not analysis, will point the way
<b>Examples</b>	Line extension in known market	Economics of durable-based business models	How people will use Web-based auction
<b>What to Do</b>	Follow standard procedures	Carefully map out <i>all</i> assumptions	Push for fast, lean and adaptable first-generation solutions
<b>What Not to Do</b>	Seek to follow different (and inappropriate) approaches	Assume that everything stays the same	Invest huge sums based on detailed analysis

What you know decreases as you move into new markets

“durable” good. Its financial models assumed the same low replacement level. When it turned out that consumers returned more than 20 percent of the durable product, the model fell apart.

The company had an implicit assumption that turned out to be wrong. Had it stepped back and carefully assessed what it actually knew, it might have recognized this problem earlier. The key to success in this circumstance is clearly delineating what is knowledge versus

requires that the company get into the market quickly with a very flexible product and discover with customers value-adding ways to use it.

General Motors' highly successful OnStar service was in this situation in the late 1990s, when the emerging technology of "telematics" seemed poised to give drivers maps to their destinations, tell them of shops in the area that sold products they might want to buy, help police find their vehicles in case of theft or accident, enable hands-free telephone calling, and on and on.

While competing auto makers have been paralyzed by their inability to know the answers to these questions about potential applications, GM got into the market quickly with a flexible, configurable product platform and minimal fixed cost.

OnStar's marketers then watched carefully to understand the circumstances their customers were in when they signed up for the service and those they were in when they actually used the service. After a couple of years of co-evolution, the job had become clear: "I want peace of mind that, if something unfortunate happens, my loved ones and I will be taken care of." OnStar is now a highly profitable, rapidly growing, differentiated service that GM provides to millions of its customers.

In many ways, co-evolution is as much an innovation process as it is a research method. It creates its own data. When it is undertaken, interviews, observation, and empathic participation all can be used to figure out the job.

The key to success in this circumstance is to generate facts through prototyping and consumer re-

search. This can be done by following a four-part pattern:

- Map out everything that is behind a strategy
- Critically evaluate what is fact versus what is assumption, recognizing the further you go from your core business, the less you know
- Determine the quickest, easiest way to turn assumption into knowledge, ranging from basic research to co-creation
- Execute knowledge-gathering exercise and adjust the strategy accordingly.

Unlike in sustaining circumstances, when dealing with "unknown unknowns," using the emergent strategy process is crucial to maintaining flexibility. (For on this, see "Mastering the Emergent Strategy Process," *Strategy & Innovation*, March-April 2006.)

### Ruthlessly assess what you know

Often a company can get extremely excited about an offering that just "feels" like it has a great deal of market potential. No matter how seemingly "cool" a product looks or innovative a new service seems, a company is likely to struggle if it does not honestly acknowledge what it knows versus what it assumes. Importantly, don't think of assumptions as negatives or "innovation killers." On the contrary, acknowledged assumptions provide an opportunity to increase the market knowledge that can lead to innovative new businesses. ♦

Jonathan Barrett is the editor of *Strategy & Innovation*. He can be reached at [jbarrett@strategyandinnovation.com](mailto:jbarrett@strategyandinnovation.com)

Reprint#050214A

## INDEX

AOL LLC	15
Boston Globe, The	10
Cisco Systems, Inc.	11
eBay	15
General Electric Co.	2,12
General Motors Corp.	16
Gillette Company, The	15
Hillenbrand Industries	12
Hill-Rom Company	12
Intuit Inc.	10
Jiffy Lube International	5
Johnson & Johnson	2
Kwik Industries, Inc.	5
Linksys	11
OnStar	16
Pets.com	15
Procter & Gamble	13
Sleep Solutions	5
SLP Ltd.	5
Smart Auto Management	5
Time Warner	15
Toyota Motor Corp.	15
Tylenol	15
Walt Disney Company	15

### Introducing *Strategy & Innovation Healthcare Edition*

*Strategy & Innovation* is launching a new, quarterly newsletter covering innovation in healthcare. The newsletter is being launched in conjunction with a new series of quarterly live events and webcasts being offered by Innosight and The Kinetix Group.

To learn more about these events or to order a free trial issue of the healthcare newsletter e-mail [inquiries@strategyandinnovation.com](mailto:inquiries@strategyandinnovation.com) or call 888-851-5766.