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HBR'S 10 MUST READS

BONUS ARTICLE
"Preparing Your
Business for a
Post-Pandemic
World"

By Carsten Lund Pedersen
and Thomas Ritter

EXPANDED
EDITION

On Managing in a Downturn

If you read nothing else on surviving a tough economy
and coming back stronger, read these definitive articles
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On
Managing in
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Seize Advantage in a Downturn

by David Rhodes and Daniel Stelter

INACTION IS THE RISKIEST RESPONSE to the uncertainties of an economic crisis. But rash or scattershot action can be nearly as damaging. Rising anxiety (how much worse are things likely to get? how long is this going to last?) and the growing pressure to do *something* often produces a variety of uncoordinated moves that target the wrong problem or overshoot the right one. A disorganized response can also generate a sense of panic in an organization. And that will distract people from seeing something crucially important: the hidden but significant opportunities nestled among the bad economic news.

We offer here a rapid but measured approach—simultaneously defensive and offensive—to tackling the challenges posed by a downturn. Many companies are already engaged in some kind of exercise like this. Certainly every organization with an institutional pulse has held discussions focusing on what it should do about the current economic crisis. We hope this article will help you move from what may have been ad hoc conversations and initiatives to a carefully thought-out plan.

The merits of a comprehensive and aggressive approach are borne out in research by the Boston Consulting Group, which indicates that companies whose early responses to a downturn are tentative (for example, modest belt-tightening) typically overreact later on (say, cutting costs more than they ultimately need to). This results in an expensive recovery for the company when the economy rebounds.

Our approach has two main objectives, from which a series of action items devolves. First, stabilize your business, protecting it from downside risk and ensuring that it has the liquidity necessary to weather the crisis. Then, and only then, can you identify ways to capitalize on the downturn in the longer term, partly by exploiting the mistakes of less savvy rivals.

For some companies, the outcome of this process will be a program of immediate actions that represent a turbocharged version of business as usual. For others, it will be a painful realization that nothing short of an urgent corporate turnaround will suffice.

What Is Your Exposure?

The first step for a company to take in a challenging economic environment—especially one that could significantly worsen—is to assess in a systematic manner its own vulnerabilities, at the company level and by business unit.

Consider several scenarios

As an economic crisis evolves, sketch out at least three scenarios—a modest downturn, a more severe recession, and a full-blown depression, as defined by both duration and severity. Consider which scenario is most likely to unfold in your industry and your business, based on available data and analysis. There was evidence from the beginning, for example, that the current global downturn truly stands apart. Early on, banking losses had outstripped those of recent financial disasters, including the United States savings and loan crisis (1986–1995), the Japanese banking crisis (1990–1999), and the Asian financial crisis (1998–1999). Furthermore, as the economy first began to stall, the underlying problem of consumer and corporate indebtedness—in the United States, it totaled about 380% of GDP, nearly two and a half times the level at the beginning of the Great Depression—pointed to a prolonged period of economic pain.

Next, determine the ways in which each of the scenarios might affect your business. How would consumers' limited capacity to borrow reduce demand

for your products? Will job insecurity and deflating asset prices make even the creditworthy increasingly reluctant to take on more debt? Will reduced demand affect your ability to secure short-term financing, or will weak stock markets make it difficult to raise equity? Even if you are able to tap the debt and equity markets, will higher borrowing costs and return requirements raise your cost of capital?

Idea in Brief

Many companies fail to see the opportunities hidden in economic downturns.

To take advantage of opportunities, you first need to do a thorough but rapid assessment of your own vulnerabilities and then move decisively to minimize them.

This will position you to seize future sources of competitive advantage, whether from bold investments in product development or transformative acquisitions.

Quantify the impact on your business

Run simulations for each of these scenarios that generate financial outcomes on the basis of major variables, including sales volume, prices, and variable costs. Be sure to confront head on what you see as the worst case. For example, what effect would a 20% decline in sales volume and a 5% decline in prices have on your overall financial performance? You may be surprised to find out that, even in the case of a still-healthy company with operating margins (before interest and taxes) of around 10%, such a decline in volume and prices could turn current profits into huge losses and send cash flow deep into the red. Conduct a similar analysis for each business unit.

Next, quantify how your balance sheet might be affected under the different scenarios. For example, what will the impact be of asset price deflation? To what extent might lower cash flows and the higher cost of capital affect

goodwill and require write-offs on past acquisitions? Will falling commodity prices cushion some of the detrimental effects?

Idea in Practice

Before trying to capitalize on the opportunities presented by a recession, you must assess and minimize your firm's vulnerabilities. The authors suggest setting up a recession checklist.

Financial Fundamentals

Liquidity is the key to surviving and thriving in tough times, when both cash to meet current obligations and capital for investing in the future are scarce. So you need to ...

Monitor and maximize your cash position

- Calculate expected cash inflows and outflows
- Produce a rolling weekly or monthly cash report
- Centralize or pool cash across units

Tightly manage customer credit

- Segment customers based on their credit risk
- Offer financing only to credit-worthy or strategic customers
- Assess trade-offs between credit risks and marginal sales

Aggressively manage working capital

- Reduce inventories by monitoring production and sourcing
- Reduce receivables by actively managing customer credit

Optimize your financial structure

- Reduce debt and other liabilities
- Secure access to lines of credit
- Secure access to equity capital by tapping nonmarket sources such as sovereign wealth funds

Share Price

A strong market valuation relative to rivals is important in raising capital and acting on acquisition opportunities. So you need to ...

- Inform investors and analysts of your recession preparedness
- Consider opting for dividend payments rather than share buybacks

Current Business

Loosely run operations, sluggish unit sales, and an overextended enterprise leave you vulnerable to economic shocks. So you need to ...

Reduce costs and increase efficiency

- Root out long-standing activities that add little business value
- Revive earlier efficiency initiatives too controversial to fully implement in better times
- Consolidate or centralize key functions
- Analyze current suppliers and procurement practices
- Reexamine the economics of offshoring

Aggressively manage the top line

- Revitalize customer retention initiatives
- Realign sales force utilization and incentives to generate additional short-term revenue
- Reallocate marketing spending toward immediate

revenue generation

- Consider more-generous financial terms for customers in return for higher prices

Rethink your product mix and pricing strategies

- Offer lower-price versions of existing products
- Identify products for which customers are still willing to pay full price
- Consider creative strategies such as results-based or subscription pricing
- Unbundle services and adopt à la carte pricing

Rein in planned investments and sell assets

- Establish stringent capital allocation guidelines
- Shed unproductive assets that were difficult to dispose of in good times
- Divest noncore businesses

Assess rivals' vulnerabilities

Of course, none of this process should be carried out in a vacuum. Your industry and the locations of your operations around the world will help determine how your business will be affected. It's critical to understand your own strengths and weaknesses relative to those of your competitors. They will have different cost structures, financial positions, sourcing strategies, product mixes, customer focuses, and so on. To emerge from the downturn in a lead position, you must calibrate the actions you plan to take in light of the actions that your competitors will most likely take. For example, assess potential acquisitions with a focus on vulnerable customer groups of weaker competitors.

This assessment of different scenarios and their effects on your company and its rivals, while just a first step, will help you identify particular areas where you're vulnerable and where action is most immediately needed. This analysis will also help you to communicate to the entire organization the justification and the motivation for actions you'll need to take in response to the crisis.

How Can You Reduce Your Exposure?

Once you understand how your business could be affected, you need to figure out the best way to survive and maximize your company's performance during the downturn. This requires achieving several broad objectives.

Protect the financial fundamentals

The aim here is to ensure that your company has adequate cash flow and access to capital. Not only does a lack of liquidity create immediate problems but it also is critically important to your ability to make smart investments in the future of the business.

Consequently, you need to *monitor and maximize your cash position*, by using a disciplined cash management system, by reducing or postponing spending, and by focusing on cash inflow. Produce a rolling report on your cash position (either weekly or monthly, depending on the volatility of your business) that details expected near-term payments and receipts. Also estimate how your cash position is likely to evolve in the midterm, calculating expected cash inflows and outflows. You may need to establish a centralized cash management system that provides companywide data and enables pooling of cash across business units.

How much spending you postpone depends on your assumptions about the severity of the downturn and to what degree such spending is discretionary. But you'll want to be just as aggressive in looking for ways to improve cash flow—if you were facing a worst-case-scenario liquidity crisis, for example, just how much cash would you be able to raise during the next quarter?

One way to improve cash flow is to more aggressively *manage customer credit*

risk. Trade credit—financing your customers’ purchases by letting them pay over time—should be reduced where possible. Given the economic environment, buyers will seek credit more frequently and your risk will increase. You’ll need to segment your customers by assigning them each a credit rating. Avoid granting trade credit to higher-risk customers or to those whose business is less strategically important to you. Also, assess the trade-off between credit risks and the revenue potential of a marginal sale. This will require cooperation between people in sales and customer finance, as well as a review of those employees’ incentives to make sure they’re aligned with revised strategic goals for the downturn.

Another way to free up cash is to look for opportunities to *reduce working capital*. A surprisingly large number of companies are unaware of the benefits of aggressively managing their working capital—the difference between a company’s current assets and liabilities—and thus make little effort to even monitor it. As a rule of thumb, most manufacturing companies can free up cash equivalent to approximately 10% of sales by optimizing their working capital. This involves reducing current assets, such as inventories (through more careful management of both production and sourcing processes) and receivables (through, in part, the active management of trade credit).

As you scrutinize your customers’ debt profiles, you should review your own as well, in order to *optimize your financial structure and financing options*. The heyday of leverage, with constant pressure from the market to operate with relatively low levels of equity, is clearly over for now. You should be looking for ways to strengthen your balance sheet, reducing debt and other liabilities, such as operating leases or pension obligations, with the dual aim of reducing your financial risk and enhancing your risk profile in the eyes of investors.

Be sure, as well, to secure financing—for example, draw on lines of credit as soon as possible to provide liquidity for day-to-day operations, holding onto any excess cash to avoid refinancing problems in the future. Meeting such needs may require some creativity in a tight credit market. For example, some companies, in renewing revolving credit facilities with banks, have agreed to

forgo fixed interest rates on the funds they draw down under the facility. Instead, borrowers have agreed to link the rate to the trading price of their so-called credit default swaps. These financial instruments, which represent a form of insurance against a borrower defaulting, reflect the market's perception of a company's creditworthiness. By agreeing to initially high and variable interest rates for a line of credit, borrowing companies can secure access to funds at a time when skittish banks are reluctant to lend. To secure equity capital, companies need to look beyond the market to sources such as sovereign wealth funds, private equity firms, or cash-rich investors.

Protect the existing business

After ensuring that the company is on a firm financial footing, turn to protecting the viability of the business. You must be prepared to act quickly and decisively to improve core operations.

Begin with aggressive moves to *reduce costs and increase efficiency*. Although cost-cutting is the first thing most companies think about, their actions are often tentative and conservative. You need to work rapidly to implement measures, using the turbulent economic environment to catalyze action that is long overdue—or to revive earlier initiatives that proved too controversial to fully implement in good times. Keep in mind, though, that while speed is important so is a well-reasoned plan: You don't want to make cuts that in the long term will hurt more than they help by, for example, putting important future business opportunities at risk.

Some means of streamlining the organization and lowering break-even points are obvious: stripping out layers of the organizational hierarchy to reduce head count, consolidating or centralizing key functions, discontinuing long-standing but low-value-added activities. SG&A expenses—selling, general, and administrative costs, such as marketing—are also prime targets for cost-cutting. As such, they can highlight the risks of purely reactive action: Companies that injudiciously slash marketing spending often find that they later must spend far more than they saved in order to recover from their prolonged absence from the media landscape.

Opportunities to reduce materials and supply chain costs also arise in a downturn. Now is the time to pursue a comprehensive review of your current suppliers and procurement practices, which undoubtedly will prompt new initiatives—the adoption of a demand management system, say, or the standardization of components. In particular, consider how the downturn affects the economic equation of offshore manufacturing. Falling shipping costs could make offshoring more attractive, even for low-cost items; at the same time, a weakening domestic currency, trade barriers, and especially the cash tied up in the additional working capital required to source a product far from its market may offset any savings.

While looking for opportunities to reduce spending, you'll also want to *aggressively manage the top line*, cash being crucially important in a recession. Actively work both to protect existing revenue and identify ways to generate additional revenue from your current business. Customer retention initiatives become more valuable than ever. Consider tactical changes in sales force utilization and incentives. Reallocate marketing spending to bolster immediate revenue generation rather than longer-term brand building. While granting trade credit sparingly, also consider the possible benefits of offering customers more-generous financial terms while charging them higher prices—provided you've done your homework on your own financial structure.

As these initiatives suggest, you'll want to *rethink your product mix and pricing strategies* in response to shifting customer needs. Purchasing behavior changes dramatically in a recession. Consumers increasingly opt for lower-priced alternatives to their usual purchases, trading down to buy private label products or to shop at discount retailers. Although some consumers will continue to trade up, they'll do so in smaller numbers and in fewer categories. Consumer products companies should consider offering low-priced versions of popular products—think of the McDonald's Dollar Menu in the United States or Danone's Eco-Pack yogurt in France. Whatever your business, determine how the needs, preferences, and spending patterns of your customers, whether consumer or corporate, are affected by the economic

climate. For example, careful segmentation may reveal products primarily purchased by people still willing to pay full price. Use that intelligence to inform product portfolio and investment choices.

Innovative pricing strategies may also alleviate downward pressure on revenue. These include: results-based pricing, a concept pioneered by consulting firms that links payment to measurable customer benefits resulting from use of a product or service; changes in the pricing basis that would allow a customer to, for example, rent equipment by the hour rather than by the day; subscription pricing, by which a customer purchases use of a product—say, a machine tool—rather than the product itself; and the unbundling of a service so that customers pay separately for different elements of what was previously an all-in-one package, as airlines have done with checked baggage and in-flight meals and entertainment. Offering consumers new and creative customer financing packages could tip the balance in favor of a sale. It was during the Great Depression, after all, that GE developed its innovative strategy of financing customers' refrigerator purchases.

You should definitely *rein in your investment program*. Most developed economies had excess capacity even before the downturn: Capacity utilization in the United States, for example, fell below 80% of potential output beginning in April 2008. In the current economy, there is even less need, in most industries, to invest in further capacity. You need to establish stringent capital allocation guidelines aligned with the current economic climate, if you haven't already. This may also be the time to shed unproductive assets, including manufacturing plants that have previously been difficult to shut down, selling them where possible to generate cash for the business.

Finally, take this opportunity to *divest noncore businesses*, selling off peripheral or poorly performing operations. Don't wait for better times, in the hope of getting a price that matches those of recent years, when the economy was buoyant and credit was plentiful. Those conditions aren't likely to return anytime soon, and if the business isn't critical to your activities and increases your vulnerability to the downturn, divest it now.

Avoiding the Snags of Implementation

ONE KEY TO THE SUCCESS of downturn-related initiatives is rapid implementation. A formal crisis management team to oversee your company's response to the recession can help the organization avoid these typical sources of failure.

Insufficient understanding and appreciation of the evolving crisis

The crisis management team can help create and maintain a sense of urgency within the organization, in part by creating a transparent, consistent, and fact-based process for carrying out the necessary initiatives. The team should also continually monitor the economic situation and, if needed, move from, say, a modest downturn scenario to a worst-case action plan.

Senior leaders' lack of preparation and commitment

By promoting a close working relationship with the sponsor of the company's recession response (often the CEO), the team can keep the company's senior executives informed of progress and direct them to where their participation is needed.

Failure to see how individual initiatives are part of a comprehensive plan

By establishing the priority and timing of initiatives, the team can help ensure that the individual measures reinforce one another. The team should continually evaluate initiatives both individually and collectively, with the aim of suspending, accelerating, or combining existing efforts—or initiating new ones.

Lack of attention to the human element

To earn employees' commitment to the initiatives, the team must articulate the threats facing the organization, explain why change is

needed and what it will entail, and clearly communicate to individuals how they will be affected.

Research by our firm shows a strongly positive market reaction to the right divestitures in recessionary times. And shedding noncore operations ideally will end up energizing your core business. In 2003, in the middle of a particularly acute economic downturn in Germany, MG Technologies, a €6.4 billion engineering and chemicals company, decided to focus on its specialty mechanical engineering business. It sold its noncore chemical and plant engineering businesses and emerged as the renamed GEA Group, a slimmed down but successful specialty process engineering and equipment company, better positioned to pursue growth opportunities in its core areas.

Maximize your valuation relative to rivals

Your company's share price, like that of most firms, will take a beating during a downturn. While you may not be able to prevent it from dropping in absolute terms, you want it to remain strong compared with others in your industry. Much of what you've done to protect the financial fundamentals of your business will serve you well. In a downturn, our data shows that markets typically reward a strong balance sheet with low debt levels and secured access to capital. Instead of being punished by activist investors and becoming a takeover target for hedge funds, a company sitting on a pile of cash is viewed positively by investors as a stable investment with lower perceived risk. For that to happen, you need to *create a compelling investor communications strategy* that highlights such drivers of relative valuation. This will also be important as you try to capitalize on the competitive opportunities that a recession offers, such as seeking attractive mergers and acquisitions.

You can further enhance your relative value if you *reassess your dividend policy and share buyback plans*. A Boston Consulting Group study of U.S. public companies found that, on average, investors favor dividends because they represent a much stronger financial commitment to investors than buybacks, which can be stopped at any time without serious consequences. On average,

sustained dividend increases of 25% or more overwhelmingly resulted in higher relative valuation multiples in the two quarters following their announcement. By contrast, buybacks had almost no impact on the relative valuation multiple in the two quarters following the transaction. For example, TJX Companies, a U.S. discount retailer, announced a dividend increase of 33% in June 2002, when the country was in a recession—and then enjoyed a price-to-earnings multiple 42% higher than the average of S&P 500 companies over the two quarters following the announcement. These are exceptional times, though, and we recommend that companies analyze their particular situation as well as investor preferences before taking a specific measure.

How Can You Gain Long-Term Advantage?

The best companies do more than survive a downturn. They position themselves to thrive during the subsequent upturn, guided again by a number of broad objectives.

Invest for the future

Investments made today in areas such as product development and information or production technology will, in many cases, bear fruit only after the recession is past. Waiting to move forward with such investments may compromise your ability to capitalize on opportunities when the economy rebounds. And the cost of these investments will be lower now, as competition for resources slackens.

Given current financial constraints, you won't be able to do everything, of course, or even most things. But that shouldn't keep you from making some big bets. Prioritize the different options, protecting investments likely to have a major impact on the long-term health of the company, delaying ones with less-certain positive outcomes, and ditching those projects that would be nice to have but aren't crucial to future success.

Sanofi-Synthélabo, the French pharmaceutical company, entered the economic recession that began in 2001 with a solid product portfolio.

Throughout the downturn, the company maintained, and in some cases increased, its R&D spending in order to keep its product pipeline robust. Sanofi increased its absolute R&D expenditure from €950 million in 2000 to €1.3 billion in 2003. Because of its strong business and financial performance, the company gained market share and outperformed peers in the stock market. The company was thus well positioned to acquire Aventis, a much larger Franco-German pharmaceutical company, after a takeover battle, in the economic upswing of 2004.

Or look at Apple Computer. The company wasn't in particularly good shape as it headed into the 2001–2003 recession. For one thing, revenue fell 33% in 2001 over the previous year. Nonetheless, Apple increased its R&D expenditures by 13% in 2001—to roughly 8% of sales from less than 5% in 2000—and maintained that level in the following two years. The result: Apple introduced the iTunes music store and software in 2003 and the iPod Mini and the iPod Photo in 2004, setting off a period of rapid growth for the company.

A downturn is also a good time to invest in people—for example, to upgrade the quality of your management teams. Competition for top people will be less fierce, availability higher, and the cost correspondingly lower.

Pursue opportunistic and transformative M&A

The recession will change several of the long-standing rules of the game in many industries. Exploit your competitors' vulnerabilities to redefine your industry through consolidation. History shows that the best deals are made in downturns. According to research by our firm, downturn mergers generate about 15% more value, as measured by total shareholder return, than boom-time mergers, which on average exhibit negative TSR.

To capitalize on opportunities, closely monitor the financial and operational health of your competitors. Companies lacking the financial cushion to benefit from the recession—or even to stay afloat—may even welcome your advances.

In late 2001, only weeks after the 9/11 terrorist attacks had brought vacation travel to a near standstill, Carnival, the world's largest cruise ship

operator, interceded in the planned friendly merger of Royal Caribbean and P&O Princess Cruises, then the second and third largest cruise operations respectively. Its own bid to acquire P&O Princess required persistence—it was 15 months before P&O Princess shareholders finally accepted Carnival’s offer—but the deal turned out to be a smart strategic move for the company, whose total shareholder returns far surpassed those of the S&P 500 in the years following the announcement and then the completion of the acquisition.

Of course, you’ll have to ride out the recession carrying the baggage of any company you acquire, so due diligence—particularly concerning a potential target’s current and future cash positions—takes on even more importance during a downturn. This knowledge will help you to limit the particular risks arising from an acquisition made during a recession, as well as to convince your management teams and supervisory boards that a bold move during a period of caution makes sense.

Rethink your business models

Downturns can be a time of wrenching transformation for companies and industries. The economics of the business may change because of increased competition, changing input costs, government intervention, or new trade policies. New competitors and business models may emerge as companies seek to increase revenue through expansion into adjacent product categories or horizontal integration. Successful companies will anticipate these changes to the industry landscape and adapt their business models ahead of the competition to protect the existing business and to gain advantage.

Consider IBM. During the U.S. recession of the early 1990s, the company under Lou Gerstner faced its first decline in revenue since 1940 and endured successive years of record losses. In this context, it began to rethink its business model. Struggling with sluggish economic growth, particularly in Europe and Japan, as well as increased price competition, IBM was forced to confront head on the inevitable decline of its traditional business, mainframe computers. Realizing that the company’s markets were shifting, Gerstner redefined the company’s business model, transforming IBM from a hardware

producer into a computer services and solutions provider.

Where Do You Take Action?

The process we have laid out should yield a list of promising initiatives—undoubtedly more of them than you’ll have the capacity to launch and manage all at once. So you’ll need to prioritize, carefully assessing each initiative based on several criteria—most notably, urgency, overall financial impact, barriers to implementation, and risks that the initiative might pose for the business. The result will be a portfolio of actions with the right blend of short-term and long-term focus.

Who is going to carry out the recession plan? We recommend that you form a dedicated crisis management team to manage your organization’s response to the recession. The team will develop different economic scenarios and determine how they might affect the business; identify recession-related risks and opportunities; and prioritize initiatives designed to mitigate the risks and capitalize on the opportunities. It will then oversee implementation of the initiatives, monitoring their progress and continually reevaluating them in the light of changes in the economic landscape. (For a summary of how the crisis management team can help ensure a recession plan’s success, see the sidebar “Avoiding the Snags of Implementation.”)

Companies adopting the comprehensive approach we have laid out will be not only better placed to weather the current storm but also primed to seize the opportunities emerging from the turbulence and to get a head start on the competition as the dark clouds begin to disperse.

Originally published in February 2009. Reprint R0902C

How to Survive a Recession and Thrive Afterward

A Research Roundup. *by Walter Frick*

IN EARLY 2000, A FIVE-YEAR-OLD online bookseller called Amazon.com sold \$672 million in convertible bonds to shore up its financial position. One month later, the dot-com bubble burst. More than half of all digital startups went out of business over the next few years—including lots of Amazon's then-rivals in e-commerce. Had the bubble burst just a few weeks earlier, one of the most successful companies ever might have fallen victim to that recession.

Recessions—defined as two consecutive quarters of negative economic growth—can be caused by economic shocks (such as a spike in oil prices), financial panics (like the one that preceded the Great Recession), rapid changes in economic expectations (the so-called “animal spirits” described by John Maynard Keynes; this is what caused the dot-com bubble to burst), or some combination of the three. Most firms suffer during a recession, primarily because demand (and revenue) falls and uncertainty about the future increases. But research shows that there are ways to mitigate the damage.

In their 2010 HBR article “Roaring Out of Recession,” Ranjay Gulati, Nitin Nohria, and Franz Wohlgezogen found that during the recessions of 1980, 1990, and 2000, 17% of the 4,700 public companies they studied fared particularly badly: They went bankrupt, went private, or were acquired. But just as striking, 9% of the companies didn't simply recover in the three years after a recession—they flourished, outperforming competitors by at least 10%

in sales and profits growth. A more recent analysis by Bain using data from the Great Recession reinforced that finding. The top 10% of companies in Bain's analysis saw their earnings climb steadily throughout the period and continue to rise afterward. A third study, by McKinsey, found similar results.

The difference maker was preparation. Among the companies that stagnated in the aftermath of the Great Recession, "few made contingency plans or thought through alternative scenarios," according to the Bain report. "When the downturn hit, they switched to survival mode, making deep cuts and reacting defensively." Many of the companies that merely limp through a recession are slower to recover and never really catch up.

How should a company prepare in advance of a recession and what moves should it make when one hits? Research and case studies examining the Great Recession shed light on those questions. In some cases, they cement conventional wisdom; in others, they challenge it. Some of the most interesting findings deal with four areas: debt, decision making, workforce management, and digital transformation. The underlying message across all areas is that recessions are a high-pressure exercise in change management, and to navigate one successfully, a company needs to be flexible and ready to adjust.

Deleverage Before a Downturn

Rebecca Henderson (of Harvard Business School) likes to remind her students, "Rule one is: Don't crash the company." That means, first and foremost, don't run out of money. Because a recession usually brings lower sales and therefore less cash to fund operations, surviving a downturn requires deft financial management. If Amazon hadn't raised all that money prior to the dot-com bust, its options would have been much more limited. Instead, it was able to absorb losses in its investments in other startups and also launch Amazon Marketplace, its platform for third-party sellers, later that year. It further expanded during and after the recession into new segments (kitchens, travel, and apparel) and markets (Canada).

Companies with high levels of debt are especially vulnerable during a recession, studies show. In a 2017 study, Xavier Giroud (of MIT's Sloan School of Management) and Holger Mueller (of NYU's Stern School of Business) looked at the relationship between business closures and associated unemployment and falling housing prices in various U.S. counties. Overall, the more housing prices declined, the more consumer demand fell, driving increased business closures and higher unemployment. But the researchers found that this effect was most pronounced among companies with the highest levels of debt. They divided up companies on the basis of whether they became more or less leveraged in the run-up to the recession, as measured by the change in their debt-to-assets ratio. The vast majority of businesses that shuttered because of falling demand were highly leveraged.

“The more debt you have, the more cash you need to make your interest and principal payment,” Mueller explains. When a recession hits and less cash is coming in the door, “it puts you at risk of defaulting.” To keep up with payments, companies with more debt are forced to cut costs more aggressively, often through layoffs. These deep cuts can impair their productivity and ability to fund new investments. Leverage effectively limits companies' options, forcing their hand and leaving them little room to act opportunistically.

The extent to which high levels of debt pose a risk during a recession depends on various factors. Shai Bernstein (of the Stanford Graduate School of Business), Josh Lerner (of Harvard Business School), and Filippo Mezzanotti (of Northwestern University's Kellogg School of Management) have found that companies owned by private equity firms—which often require the companies they finance to take on debt—fared better during the Great Recession than similarly leveraged non-PE-owned firms. Companies with lots of debt struggle in part because access to capital slows to a trickle during a downturn. PE-backed firms emerged in better shape, the study suggests, because their owners were able to help them raise capital when they needed it. Issuing equity is another way companies can avoid the burden of

debt obligations. “If you issue equity in the run-up to a recession,” Mueller says, “the problem of defaulting will be less pronounced.”

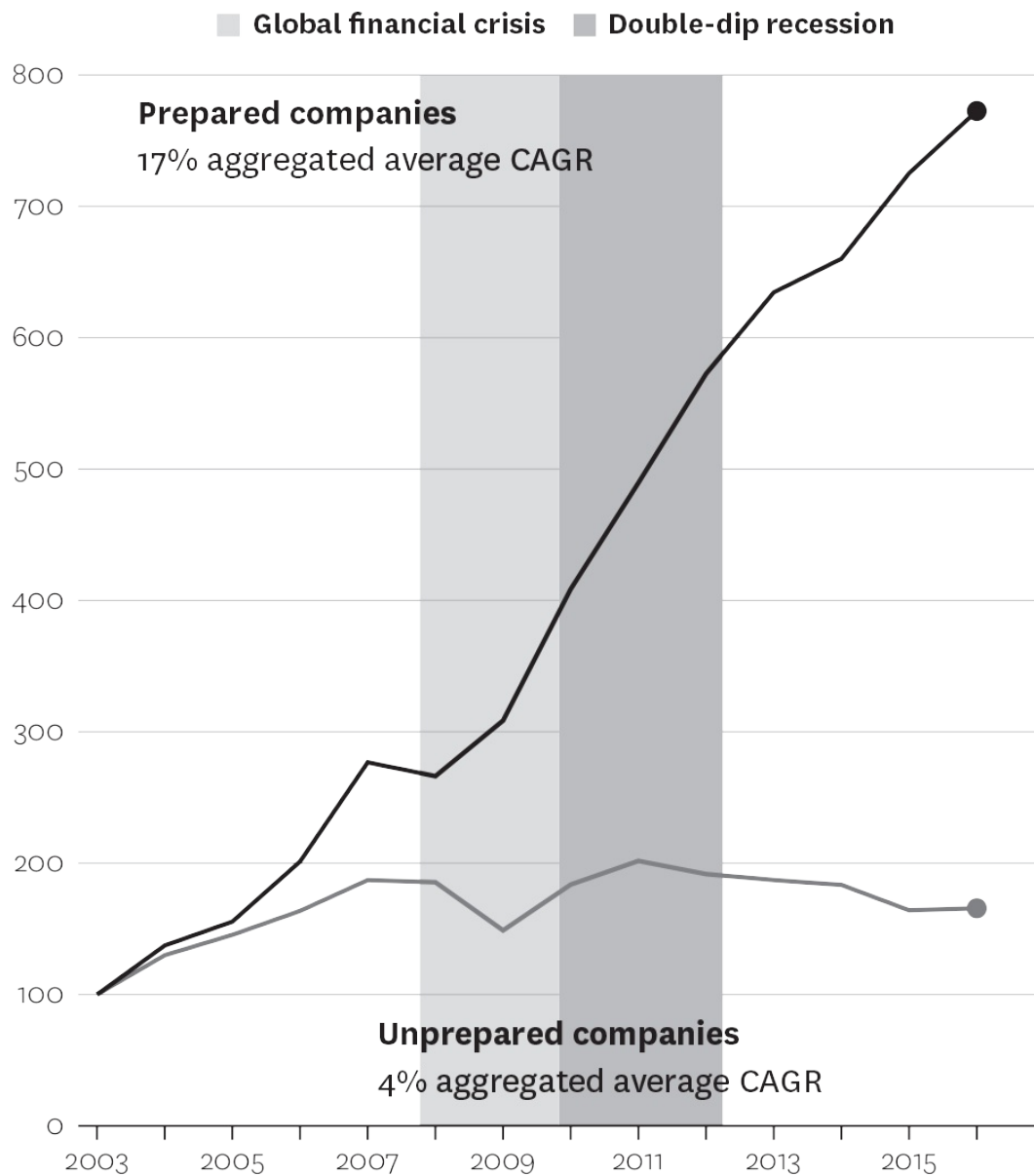
Companies That Prepare for a Recession Pull Ahead During and After It

by Mark Kovac and Jamie Cleghorn

RECESSIONS CATCH MANY COMPANIES by surprise, with predictable results. In the 2001 recession, total sales for the S&P 500 declined by 9% from its prerecession peak to its trough 18 months later—almost a year after the recession officially ended. But these periods also present opportunities for well-prepared companies to take advantage of the turmoil and gain share.

Companies that prepare for a recession pull ahead during and after it

Aggregated average EBIT indexed to 2003



Source: Bain analysis of Capital IQ data. Includes 388 prepared companies and 3,113 unprepared companies worldwide.

Note: A double-dip recession is when GDP becomes negative after at least a quarter of positive growth. EBIT and CAGR are not adjusted for inflation.

The best time to undertake major changes that will strengthen a company during recession is before it hits. Prior to the past recession, both eventual winners and eventual losers in a group of 3,500 companies worldwide experienced double-digit growth rates. Once the recession struck, however, performance began to diverge sharply—the winners continued to grow while losers stalled out. The performance

gap widened during the recovery. What did the winners do that losers didn't? They pursued a variety of tactics *before* the recession that were designed to fortify the firm when the downturn hit.

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Adapted from Mark Kovac and Jamie Cleghorn, "What Sales Teams Should Do to Prepare for a Recession," hbr.org, November 23, 2018.

The reality, of course, is that many companies have some level of debt going into a recession. Mueller's study found that the average debt-to-assets ratio among firms that had increased debt levels in the run-up to the Great Recession was 38.3%. Among the group that had deleveraged, it was 19.5%. Although there's no magic number, modest levels of debt aren't necessarily a problem, research shows. Nonetheless, Mueller suggests that if a company thinks a recession is coming, it should consider deleveraging. McKinsey's recent recession research supports this: Firms that emerged in better shape from the Great Recession had reduced their leverage more dramatically from 2007 to 2011 than had less successful ones.

When it comes to deleveraging, it helps to start early, says McKinsey's Mihir Mysore. That means reducing debt levels before it's clear the economy is in recession. "You need to take a hard look at your portfolio," Mysore advises, because shedding assets can be a way to reduce leverage without necessarily cutting core aspects of operations.

Focus on Decision Making

A company's performance during and after a recession depends not just on the decisions it makes but also on who makes them. In a 2017 study, Raffaella Sadun (of Harvard Business School), Philippe Aghion (of Collège de France), Nicholas Bloom and Brian Lucking (of Stanford), and John Van Reenen (of MIT) examined how organizational structure affects a company's ability to navigate downturns. On the one hand, "the need to make tough decisions may

favor centralized firms,” the researchers write, because they have a better picture of the organization as a whole and their incentives are typically more closely aligned with company performance. On the other hand, decentralized firms may be better positioned to weather macro shocks “because the value of local information increases.”

The researchers relied on data from the World Management Survey of manufacturers, which includes questions on how much autonomy a plant manager has to make investments, introduce new products, make sales and marketing decisions, and hire employees. Companies in which plant managers had little discretion were considered highly centralized; those in which they had a lot of discretion were scored as less so. The researchers also examined results from a similar survey run by the U.S. Census and matched them with company reports of sales, employment levels, profits, and other performance measures. And they gathered data on which industries were hardest hit by the Great Recession. “Decentralization was associated with relatively better performance for firms or establishments facing the toughest environment during the crisis,” the researchers report. They also found that the benefits of decentralization faded as economic conditions improved—a sign that delegation has particular value during uncertain times.

Why did decentralization help? “The recession introduced a lot of uncertainty and turbulence,” says Sadun. Because decentralized firms delegated decision making further down the hierarchy, they were better able to adapt to changing conditions. For example, they were more aggressive in adjusting their product offerings in response to changes in demand. “One [piece of] advice would be [to] really think carefully about your organizational structure because that’s one way you cope with uncertainty,” says Sadun.

Of course, organizational structure isn’t easy to adjust quickly in preparation for a recession, but that doesn’t mean companies can’t learn from these findings. “What decentralization does,” says Sadun, “is match decisions with expertise.” She says companies can fall into the trap of hoarding decision rights during a downturn. But the uncertainty of a recession necessitates

experimentation, which requires that decisions be made throughout the organization. Even if companies decide not to decentralize, they can try to do a better job of gathering input from employees at all levels when making key decisions. “Recessions offer opportunities for change,” notes Sadun.

Look Beyond Layoffs

Some layoffs are inevitable in a downturn; during the Great Recession, 2.1 million Americans were laid off in 2009 alone. However, the companies that emerged from the crisis in the strongest shape relied less on layoffs to cut costs and leaned more on operational improvements, Ranjay Gulati and his colleagues found in their study of public companies.

That’s because layoffs aren’t just harmful to workers; they’re costly for companies, too. Hiring and training are expensive, so companies prefer not to have to rehire when the economy picks back up, particularly if they think the downturn will be brief. Layoffs can also hurt morale, dampening productivity at a time when companies can ill afford it.

Fortunately, layoffs aren’t the only way to cut labor costs. Companies should consider hour reductions, furloughs, and performance pay. After the stock market crash in 2000, Honeywell laid off nearly 20% of its workforce and then struggled to recover in the downturn that followed. So when the Great Recession hit, in 2008, the company took a different approach, as Sandra J. Sucher and Shalene Gupta describe in their 2018 HBR article, [“Layoffs That Don’t Break Your Company.”](#) “Honeywell furloughed employees for one to five weeks, providing unpaid or partially compensated leaves, depending on local labor regulations,” Sucher and Gupta wrote. That saved an estimated 20,000 jobs. Honeywell emerged from the Great Recession in better shape than it did from the 2000 recession in terms of sales, net income, and cash flow, despite the fact that the 2008 downturn was much more severe.

In some parts of the world, policy makers encourage shorter hours as an alternative to layoffs. Many countries and more than half the states in the U.S.

have some sort of “short-time” compensation program, whereby workers whose hours are reduced receive partial unemployment compensation. In France, 4% of workers and 1% of firms took advantage of short-time work programs in 2009, and the program paid off for both workers and companies. In a 2018 discussion paper for the European think tank Centre for Economic Policy Research, Pierre Cahuc, Francis Kramarz, and Sandra Nevoux found that companies that took advantage of the short-time work program laid off fewer workers and were more likely to survive during the Great Recession. The effect was most significant among the companies most severely hit by the recession and those with the highest levels of debt. According to the researchers, the short-time work approach allowed vulnerable companies to hold on to more of their workforce. Absent the subsidies, they most likely would have had to lay off more employees, making it more difficult to recover after the recession or causing them to go out of business altogether. The researchers estimate that for every five workers on short-time work, one job was saved. And they estimate that the cost per job saved was less than that of comparable programs; since the alternative was paying unemployment, the program actually saved the French government money.

One appealing thing about both furloughs and short-time work is that, as with layoffs, companies have discretion over which workers are affected. By contrast, across-the-board pay cuts or hiring freezes that fail to consider employee productivity can backfire, damaging morale and driving away the most productive employees. Similarly, hiring freezes affect every department indiscriminately, without weighing the value of various potential hires.

Performance pay—compensation based on some measure of productivity or business outcome—is another way to control labor costs without hurting productivity. There is a long-running debate about performance pay, for executives and frontline workers, and plenty of evidence for and against the management tool on both sides. But a recent study by Christos Makridis (of the White House Council of Economic Advisers) and Maury Gittleman (of the U.S. Bureau of Labor Statistics) documents an important fact. Using responses

to the National Compensation Survey from 2004 to 2014, the study shows that U.S. companies rely on performance pay more frequently during economic downturns. Although they can't say whether this strategy works out for companies, they show that a given job is more likely to come with performance pay when times are tough. They hypothesize that this is because performance pay makes companies more flexible by aligning workers' incentives with changing conditions.

Invest in Technology

It's tempting to think of a recession as a time to batten down the hatches and play it safe. However, downturns actually appear to encourage the adoption of new technologies. In a 2018 paper, Brad Hershbein (of the Upjohn Institute for Employment Research) and Lisa B. Kahn (of the University of Rochester) compared more than 100 million online job listings posted from 2007 to 2015 with economic data to see how the Great Recession affected the types of skills employers were looking for. They found that the U.S. cities hardest hit by the recession saw a greater demand for higher-order skills—including computer-related skills. The boost in demand was partly due to employers' taking advantage of high unemployment to be choosier, as suggested by Alicia Sasser Modestino (of Northeastern), Daniel Shoag (of Harvard Kennedy School and Case Western Reserve), and Joshua Ballance (of the New England Public Policy Center). Their study found that the demand for tech skills returns to more normal levels once the labor market improves.

But companies weren't only being choosier, Hershbein and Kahn found; they were becoming more digital, too. In those hard-hit areas of the United States, companies also increased their investment in information technology, driving the surge in IT skill requirements in their job postings.

Why do companies invest in technology during a recession when money is tight? Economists theorize that it's because their opportunity cost is lower than it would be in good times. When the economy is in great shape, a company has every incentive to produce as much as it can; if it diverts

resources to invest in new technologies, it may be leaving money on the table. But when fewer people are willing to buy what you're selling, operations need not be kept humming at maximum capacity, which frees up operating budget to fund IT initiatives without dampening sales. For that reason, adopting technology costs less, in a sense, during a recession.

That's fine in theory, but other reasons may make more practical sense to managers. Technology can make your business more transparent, more flexible, and more efficient. According to Katy George, a senior partner at McKinsey, the first reason to prioritize digital transformation ahead of or during a downturn is that improved analytics can help management better understand the business, how the recession is affecting it, and where there's potential for operational improvements.

The second reason is that digital technology can help cut costs. Companies should prioritize "self-funding" transformation projects that pay off quickly, George says, such as automating tasks or adopting data-driven decision making. The third reason is that IT investments make companies more agile and therefore better able to handle the uncertainty and rapid change that come with a recession. In manufacturing, "we are finally seeing uptake now in the adoption of digital and advanced analytics," she says. It used to be that a manufacturer could be the cheapest in the market or could stay nimble—but not both. Flexibility came with serious costs. However, digital technologies "create much more flexibility around product changes, volume changes, etc., as well as around movement of your supply chain around the world."

That, in George's view, is one way the next recession might be different from past ones. Companies that have already made an investment in digital technology, analytics, and agile business practices may be better able to understand the threat they face and respond more quickly. As we've seen, recessions can create wide and long-standing performance gaps between companies. Research has found that digital technology can do the same. Companies that have neglected digital transformation may find that the next recession makes those gaps insurmountable.

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How to Bounce Back from Adversity

by Joshua D. Margolis and Paul G. Stoltz

THINGS ARE HUMMING ALONG, and then: A top client calls and says, “We’re switching suppliers, starting next month. I’m afraid your company no longer figures into our plans.” Or three colleagues, all of whom joined the organization around the same time you did, are up for promotion—but you aren’t. Or your team loses another good person in a third round of layoffs; weak markets or no, you still need to make your numbers, but now you’ll have to rely heavily on two of the most uncooperative members of the group.

So how do you react? Are you angry and disappointed, ranting and raving to anyone who will listen? Do you feel dejected and victimized, resigned to the situation even as you deny the cold reality of it? Or do you experience a rush of excitement—perhaps tinged with fear—because you sense an opportunity to develop your skills and talents in ways you’d never imagined? The truth is, you’ve probably reacted in all those ways when confronted with a challenge—maybe even cycling through multiple emotional states in the course of dealing with one really big mess.

Whatever your initial reaction, however, the challenge is to turn a negative experience into a productive one—that is, to counter adversity with resilience. Psychological resilience is the capacity to respond quickly and constructively to crises. It’s a central dynamic in most survival stories, such as those of the shell-shocked individuals and organizations that rallied in the wake of 9/11 and Hurricane Katrina. But resilience can be hard to muster for many reasons: Fear, anger, and confusion can paralyze us after a severe setback. Assigning

blame rather than generating solutions is an all-too-human tendency. Worse yet, those to whom we turn for counsel may offer us exactly the wrong kind of advice.

Decades of research in psychology, on topics including hardiness, learned helplessness, coping, and the correlation between cognitive style and health, confirms that each of us has a distinct, consistent pattern of thinking about life's twists and turns—a pattern of which most of us are largely unaware. It may be an unconscious reflex to look backward from traumatic incidents to explain what just happened. Such analysis can be useful, certainly—but only up to the point where strong negative emotions start to prevent our moving on.

We believe that managers can build high levels of resilience in themselves and their teams by taking charge of how they think about adversity. Resilient managers move quickly from analysis to a plan of action (and reaction). After the onset of adversity, they shift from cause-oriented thinking to response-oriented thinking, and their focus is strictly forward. In our work with leaders in a variety of companies and industries, we've identified four lenses through which managers can view adverse events to make this shift effectively.

- **Control.** When a crisis hits, do you look for what you can improve now rather than trying to identify all the factors—even those beyond your control—that caused it in the first place?
- **Impact.** Can you sidestep the temptation to find the origins of the problem in yourself or others and focus instead on identifying what positive effects your personal actions might have?
- **Breadth.** Do you assume that the underlying cause of the crisis is specific and can be contained, or do you worry that it might cast a long shadow over all aspects of your life?
- **Duration.** How long do you believe that the crisis and its repercussions will last?

Idea in Brief

Psychological resilience—the capacity to respond quickly and constructively in a crisis—can be hard to muster when a manager is paralyzed by fear, anger, confusion, or a tendency to assign blame.

Resilient managers shift quickly from endlessly dissecting traumatic events to looking forward, determining the best course of action given new realities. They understand the size and scope of the crisis and the levels of control and impact they may have in a bad situation.

The authors describe a **resilience regimen**—a series of pointed questions designed to help managers replace negative responses with creative, resourceful ones and to move forward despite real or perceived obstacles.

The first two lenses characterize an individual's personal reaction to adversity, and the second two capture his or her impressions of the adversity's magnitude. Managers should consider all four to fully understand their instinctive responses to personal and professional challenges, setbacks, or failures.

In the following pages we'll describe a deliberative rather than reflexive approach to dealing with hardship—what we call a *resilience regimen*. By asking a series of pointed questions, managers can grasp their own and their direct reports' habits of thought and help reframe negative events in productive ways. With the four lenses as a guide, they can learn to stop feeling paralyzed by crisis, respond with strength and creativity, and help their direct reports do the same.

When Adversity Strikes

Most of us go with our gut when something bad happens. Deeply ingrained habits and beliefs sap our energy and keep us from acting constructively.

People commonly fall into one of two emotional traps. One is *deflation*. Someone who has marched steadily through a string of successes can easily come to feel like a hero, able to fix any problem single-handedly. A traumatic event can snap that person back to reality. Even for the less heroic among us, adversity can touch off intense bursts of negative emotion—as if a dark cloud had settled behind our eyes, as one manager described it. We may feel disappointed in ourselves or others, mistreated and dispirited, even besieged.

That was the case with an executive we'll call Andrea, who headed up a major subsidiary of a U.S. automotive parts supplier. She had put up with years of internal bickering and the company's calcified cost structure. But over time she managed to bring the warring factions—unions, management, engineers, and marketers—together, and she gained widespread approval for a plan that would phase out old facilities and reduce crippling costs: Rather than try to supply every make and manufacturer, the company would focus on the truck market. Even more important, Andrea rallied everyone around a new line of products and a clear value proposition for customers that would rejuvenate the company's brand. The future looked bright.

Then fuel prices skyrocketed, the economy seized up, and demand from all segments of the truck market evaporated almost overnight. The recession had brought unfathomable challenges to the organization, and their suddenness left Andrea feeling as if she'd been socked in the stomach. After all her hard work, difficult conversations, and strategizing to fix the previous problems, she felt overmatched—for the first time in her career. Andrea lacked resilience precisely because she had a long history of wins.

The other emotional trap is *victimization*. Many of us assume the role of helpless bystander in the face of an adverse event. "Those people" have put us in an unfortunate position, we tell ourselves (and others) again and again. We dismiss both criticism and helpful suggestions from others, and go out of our way to affirm that we're right, everyone else is wrong, and no one understands us. Meanwhile, self-doubt may creep in, making us feel hopelessly constrained by circumstances.

Greg, a senior business development manager at an electronic accessories company, felt just this way. He had sailed through his first three years at the company with several promotions, taking on increasing responsibility—first for building brand awareness among younger consumers, and then for building new relationships (and gaining more shelf space) with large retailers throughout the United States and Canada. But as global competition heated up, Greg’s peers and superiors asked him to rethink his approach and questioned whether retail outlets were still a viable distribution channel. Big-box stores were squeezing the company’s margins, and physically servicing all the company’s accounts seemed unnecessarily expensive compared with online options. Greg reacted to his colleagues’ requests by becoming more and more defensive and extremely angry.

These stories illustrate the two-headed hydra of contemporary adversity. First, highly accomplished managers are confronting, in rapid succession, challenges the likes of which they’ve never seen before—a worldwide economic crisis, the globalization of business, the rise of new technologies, deep demographic shifts. Feeling discouraged and helpless, they turn away from the problem and, unfortunately, from people who might be able to help. Second, even if these managers went to their bosses for guidance, they’d most likely receive inadequate coaching. That’s because most supervisors, riding their own long wave of hard-won successes, lack the empathy to intervene effectively. They may not know how to counsel direct reports they feel aren’t quite as talented as they were at escaping the shadow of defeat. They may be so well accustomed to handling adversity in ways that minimize their psychological stress that they don’t recognize their own bad habits. (See the sidebar “Coaching Resilience.”)

Coaching Resilience

OFTEN EVEN THE MOST RESILIENT managers run into trouble trying to coach direct reports in crisis. They react with either a

how-to pep talk delivered utterly without empathy or understanding, or a sympathetic ear and reassurance that things will turn out OK. Neither response will equip your team members to handle the next unforeseen twist or turn. Instead, you should adopt a collaborative, inquisitive approach that can help your direct reports generate their own options and possibilities.

Suppose a defensive employee were self-aware enough to ask you, his mentor, for help dealing with a professional setback—say, being passed over for promotion. You could just acknowledge his feelings and basically manage his response for him—outlining who he needs to talk to and in what order, and what to do if he doesn’t get the answers he wants. But if you ask specifying, visualizing, and collaborating questions—such as “How can you step up to make the most immediate, positive impact on this situation?” and “How do you think your efforts in that direction would affect your team and your peers?”—you put the ball back in your employee’s court. You’re not endorsing any particular perspective, you’re not providing absolute answers—you’re helping to build resilience in a team member.

The Capacity for Resilience

Independent studies in psychology and our own observations suggest that the ability to bounce back from adversity hinges on uncovering and untangling one’s implicit beliefs about it—and shifting how one responds.

Most of us, when we experience a difficult episode, make quick assumptions about its causes, magnitude, consequences, and duration. We instantly decide, for example, whether it was inevitable, a function of forces beyond our control, or whether we could somehow have prevented it. Managers need to shift from this kind of reflexive thinking to “active” thinking about how best to respond, asking themselves what aspects they can control, what impact they can have, and how the breadth and duration of the crisis might be contained. Three types of questions can help them make this

shift.

Specifying questions help managers identify ways to intervene; the more specific the answers, the better. *Visualizing questions* help shift their attention away from the adverse event and toward a more positive outcome.

Collaborating questions push them to reach out to others—not for affirmation or commiseration but for joint problem solving. Each type of question can clarify each of the four lenses of resilient thinking.

Taken together, the four sets make up the resilience regimen. Let's take a closer look at each set in turn.

Control

According to multiple studies—including those by Bernard Weiner, of UCLA, and James Amirkhan, of Cal State Long Beach, and the classic University of Chicago study of executives by Suzanne Ouellette and Salvatore Maddi—our reactions to stressful situations depend on the degree of control we believe we can exercise. Andrea struggled with whether she could still contribute meaningfully to her company or whether the sudden shifts in the economy had moved the situation beyond her control. If Greg continued to attribute criticism of his retail strategy to “scheming peers,” he might fail to see what he personally could do to influence the company's long-term strategy or his own destiny. The following questions can help managers identify ways to exercise control over what happens next:

Specifying: What aspects of the situation can I directly influence to change the course of this adverse event?

Visualizing: What would the manager I most admire do in this situation?

Collaborating: Who on my team can help me, and what's the best way to engage that person or those people?

The goal in asking these questions is not to come up with a final plan of action or an immediate understanding of how the team should react. Rather, it is to generate possibilities—to develop, in a disciplined and concrete way, an inventory of what *might* be done. (The next set of questions can help managers outline what *will* be done.) Had Andrea asked herself these three questions, she

might have identified an opportunity to, say, rally the company around emerging safety and fuel-efficiency devices in the industry, or to use the slowdown to perfect the company's newer, still-promising products by working more closely with major customers. Similarly, if Greg had undertaken the exercise, he might have been able to channel something his mentor once told him: "It's not about whether I'm right or wrong. It's about what's best for the company." With that in mind, Greg might have clearly seen the benefits of reaching out to his peers and team members to assess alternative go-to-market approaches. The ingenuity and work ethic he had applied to building the retail business could have been turned to devising the next great strategy.

The Research Behind the Resilience Regimen

TWO CONVERGING STREAMS OF RESEARCH informed our work. The first examines how patterns of understanding the world shape people's responses to stressful situations. Albert Ellis and Aaron Beck pioneered this research, followed by, among others, Martin Seligman and Christopher Peterson on learned helplessness; Richard Lazarus and Susan Folkman on coping; and Lyn Abramson, David Burns, and James Amirkhan on how "attributional styles" affect health. More recently, Karen Reivich and Andrew Shatté identified how people can strengthen their resilience.

The second stream, pioneered by Suzanne Ouellette and Salvatore Maddi in their studies of hardiness and extended most recently by Deborah Khoshaba and Aaron Antonovsky, explored what differentiated two groups of people who encountered intense stress. One group flourished while the other sank.

A common finding emerges from these two streams of inquiry: How people approach trying circumstances influences both their ability to deal with them and, ultimately, their own success and well-being.

Impact

Related to our beliefs about whether we can turn things around are our assumptions about what caused a negative event: Did the problem originate with us personally, or somewhere else? Greg attributed the criticism of his retail distribution strategy to his “competitive, power-hungry” colleagues rather than to the possible shortcomings of his approach. He was too deeply mired in defensiveness to get out of his own way. Andrea felt powerless in the face of challenges she’d never before had to meet and forces that eclipsed her individual initiative and effort. Instead of giving in to deflation and victimization, managers can focus intently on how they might affect the event’s outcome.

Specifying: How can I step up to make the most immediate, positive impact on this situation?

Visualizing: What positive effect might my efforts have on those around me?

Collaborating: How can I mobilize the efforts of those who are hanging back?

If he had focused on these questions, Greg might have seen that he was not simply being asked to discard his accounts and acknowledge that his strategy was misguided; rather, he was being cast as a potential player in the organization’s change efforts. He might have appreciated that openly and rigorously assessing his business-development strategy could influence others—whether his assessment validated the status quo or led to a solution no one had thought of yet. And he might have reignited the entrepreneurial culture he so valued when he joined the company by soliciting others’ input on the marketing strategy. For her part, Andrea knew all too well that her company’s fortunes depended on economic conditions—but she couldn’t see how her response to the market failures might energize the organization. These questions might have helped her.

Breadth

When we encounter a setback, we tend to assume that its causes are either specific to the situation or more broadly applicable, like poison that will taint

everything we touch. To build up resilience, managers need to stop worrying about the reach of the causes and focus instead on how to limit the damage. These questions may even highlight opportunities in the midst of chaos.

Specifying: What can I do to reduce the potential downside of this adverse event—by even 10%? What can I do to maximize the potential upside—by even 10%?

Visualizing: What strengths and resources will my team and I develop by addressing this event?

Collaborating: What can each of us do on our own, and what can we do collectively, to contain the damage and transform the situation into an opportunity?

These questions might have helped Andrea achieve two core objectives. Instead of endlessly revisiting the repercussions of plummeting truck sales, she might have identified large and small ways in which she and her team could use the economic crisis to reconfigure the company's manufacturing processes. And rather than fixating on how awful and extensive the damage to the organization was, she could have imagined a new postrecession norm—thriving in the face of tighter resources, more selective customers, and more exacting government scrutiny. Greg might have seen that he had a rare opportunity to gain valuable leadership skills and relevant insights about competitors' marketing strategies by engaging peers and team members in reassessing the retail strategy.

Duration

Some hardships in the workplace seem to have no end in sight—underperformance quarter after quarter, recurring clashes between people at different levels and in different parts of the company, a stalled economy. But questions about duration can put the brakes on such runaway nightmares. Here, though, it's important to begin by imagining the desired outcome.

A change in mindset

Cause-oriented thinking	Response-oriented thinking

Control	What features of the situation can I (even potentially) improve?
Was this adverse event inevitable, or could I have prevented it?	
Impact	What sort of positive impact can I personally have on what happens next?
Did I cause the adverse event, or did it result from external forces?	
Breadth	How can I contain the negatives of this situation and generate currently unseen positives?
Is the underlying cause of this event specific to it or more widespread?	
Duration	What can I do to begin addressing the problem now?
Is the underlying cause of this event enduring or temporary?	

Visualizing: What do I want life to look like on the other side of this adversity?

Specifying: What can I do in the next few minutes, or hours, to move in that direction?

Collaborating: What sequence of steps can we put together as a team, and what processes can we develop and adopt, to see us through to the other side of this hardship?

Greg was sure that criticism of his business-development approach signaled the end: no more promotions, no more recognition from higher-ups of his hard work and tangible results, nothing to look forward to but doing others' bidding in a company that was sowing the seeds of decline. These three questions might have broadened his outlook. That is, he might have seen the benefits of quickly arranging meetings with his mentor (for personal counsel) and with his team (for professional input on strategy). The questions could have been a catalyst for listing the data required to make a case for or against change, the analyses the team would need to run, and the questions about various sales channels and approaches that needed to be answered. This exercise might have helped Greg see a workable path through the challenge he was experiencing. The result would have been renewed confidence that he and his team could keep their company at the forefront of customer service.

Answering the Questions

Although the question sets offer a useful framework for retraining managers' responses, simply knowing what to ask isn't enough. You won't become more resilient simply because you've read this far and have made a mental note to pull out these questions the next time a destabilizing difficulty strikes. To strengthen your capacity for resilience, you need to internalize the questions by following two simple precepts:

Write down the answers. Various studies on stress and coping with trauma demonstrate that the act of writing about difficult episodes can enhance an individual's emotional and physical well-being. Indeed, writing offers people command over an adverse situation in a way that merely thinking about it does not. It's best to treat the resilience regimen as a timed exercise: Give yourself at least 15 minutes, uninterrupted, to write down your responses to the 12 questions. That may seem both too long and too short—too long because managers rarely have that much time for any activity, let alone one involving personal reflection. But you'll actually end up saving time. Instead of ruminating about events, letting them interrupt your work, you'll have solutions in the making. As you come to appreciate and rely on this exercise, 15 minutes may feel too short.

Do it every day. When you're learning any new skill, repetition is critical. The resilience regimen is a long-term fitness plan, not a crash diet. You must ask and answer these questions daily if they are to become second nature. But that can't happen if bad habits crowd out the questions. You don't need to experience a major trauma to practice; you can ask yourself the questions in response to daily annoyances that sap your energy—a delayed flight, a slow computer, an unresponsive colleague. You can use the four lenses in virtually any order, but it's important to start with your weakest dimension. If you tend to blame others and overlook your own potential to contribute, start with the impact questions. If you tend to worry that the adverse event will ruin everything, start with the breadth questions.

Under ongoing duress, executives' capacity for resilience is critical to maintaining their mental and physical health. Paradoxically, however, building resilience is best done precisely when times are most difficult—when we face the most upending challenges, when we are at the greatest risk of misfiring with our reactions, when we are blindest to the opportunities presented. All the more reason, then, to use the resilience regimen to tamp down unproductive responses to adversity, replace negativity with creativity and resourcefulness, and get things done despite real or perceived obstacles.

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Rohm and Haas's Former CEO on Pulling Off a Sweet Deal in a Down Market

by Raj Gupta

SHORTLY BEFORE CHRISTMAS 2008, I left my office at the specialty chemicals company Rohm and Haas for what I thought would be the last time. I had spent much of the year leading up to my long-planned retirement orchestrating the sale of the company—a deal with its former rival Dow Chemical had been forged in July 2008—and there was little left to do but hand over the reins. I had succeeded at one of the hardest goals I'd ever been set: quietly negotiating a friendly sale for \$18 billion. All we still needed was the Federal Trade Commission approval that, per our agreement, would trigger the close of the deal within 48 hours. As I drove away from the office on December 18, a colleague called to say that, as planned, my office had been essentially demolished in preparation for its new occupant. My assistant had been reassigned to work with our COO. My work with Rohm and Haas was finished.

But it nagged at me that I hadn't heard recently from Andrew Liveris, Dow's chairman and CEO. Market conditions had worsened globally, and the equity and credit markets were in turmoil. Dow had been expecting a large cash influx of \$9.5 billion from a proposed joint venture with Kuwait Petroleum. On December 29 Kuwait canceled the venture. But our deal with Dow was unconditional. And then I got the call.

"Raj, you and I need to sit down and go over where we are," Liveris said. Because I didn't even have an office at Rohm and Haas anymore, I had to

arrange for temporary space at our Philadelphia headquarters—and a temporary assistant. When we met, I learned that Dow saw no way to get the cash it needed elsewhere, given the state of the financial markets and its own deteriorating financial performance.

I organized an emergency conference call to brief the directors on the situation. We believed that our contract with Dow was airtight. Our shareholders had approved the transaction in October by an overwhelming majority. The board and I had a fiduciary responsibility to complete the deal.

I had led the process from the beginning, and the board was very clear that it was my role to see it to an end—one way or another. My personal credibility was on the line.

An Unexpected Request

In November 2007, representatives of the Haas family trusts, which collectively owned 32% of outstanding shares, had asked me to explore disposing of all or most of their holdings at a “full and fair” price within 12 to 18 months. The timing and nature of the request were surprising. Until then the trusts had appeared to be very happy with the level of their ownership and the performance of the company. The board and I, perhaps naively, believed that as long as John C. Haas, the 89-year-old son of the founder, was alive, no such request would be made. We clearly did not read the tea leaves.

Rohm and Haas had been a quiet but steady business since its founding, in 1909. Our performance had been strong, with an average annual return to shareholders of 13.5% since 1949. For the past 30 years we had increased our dividends by an average of 10% a year. The majority of shares were held by the family trusts, several large institutional shareholders, and employees. I was only the sixth CEO in the company’s history. In my 10 years as CEO, the board hadn’t faced any big, difficult decisions until now.

Idea in Brief

Raj Gupta had led the specialty chemical company Rohm and Haas without drama for years when some of its most important shareholders asked him to orchestrate its sale. Surprised but determined to do his best for the company, in July 2008 he arranged an \$18 billion deal with competitor Dow Chemical, which the industry press called the “deal of the century.”

But Dow was relying on cash from a planned joint venture of its own with Kuwait Petroleum, and when the stock market plummeted, the joint venture—and Dow’s financing—fell through. Then things got really interesting. Would Dow try to walk away from the deal? Could Rohm and Haas insist that it go through in spite of the unforeseen global meltdown? How airtight was that agreement? Gupta, who learned he had cancer in the midst of all this, had to find a way through the complicated financial and economic issues. In this first-person account he talks about the most difficult deliverable ever asked of him—seeing through the sale of his company as the world economy was collapsing.

I took my leadership in the sale very personally, and I was determined to keep the company whole and operating smoothly during this extended period of uncertainty. I spent months exploring options and strategies with the board and our outside advisers. In hindsight, the timing couldn’t have been worse. The economy was starting to weaken, and the request that we sell for all cash at a premium price, though entirely reasonable, limited our options. We identified just three companies as strategic buyers—on the basis of their interest, their ability to finance a transaction of this size, and the likely business synergies: BASF, with headquarters in Germany; Dow, based in Michigan; and DuPont, based in Delaware.

I had layers of concern: What if potential buyers didn’t show up? What if our discreet outreach to potential buyers was inconclusive, just as the economy was rapidly deteriorating? The worst possible outcome, I thought, would be an aborted process; our key stakeholders would doubt our strategy and future at a time when we needed steady support and performance.

Rohm and Haas's success rested on building relations for the medium to long term. Our position was downstream in the industry value chain; our customers relied on the performance embedded in our science and our commitment to ongoing technology support. Confidence in our future was essential. A mishandled disclosure or rumormongering would cause chaos among our employees and customers and risk destroying the foundations of the enterprise.

I had invested a great deal of time and effort in forming personal relationships with many of my peers—in particular the CEOs of BASF, Dow, and DuPont. The burden was on me to deliver a buyer, so I arranged individual face-to-face meetings with them to plant the seed. I told them we recognized that financial conditions were not as favorable as they could be, but our board supported my outreach. If they wanted to explore this opportunity, they'd have to get back to me swiftly.

The Brewing Deal

Within a week Andrew Liveris called to say he was ready to talk. He came to Philadelphia with an all-cash bid of \$74 a share—in the range of value our advisers had suggested. At that time our stock was trading at \$52 a share, and the highest it had ever gone was \$62. His offer was good for only 48 hours.

The board concluded that it was our fiduciary duty to get in touch with BASF and DuPont to see if they wanted to make an offer. BASF's CEO, Jürgen Hambrecht, returned my call within 15 minutes. "Raj," he said, "I was hoping you were calling me to say that this whole process is off, given what's going on in the world." But he promised to get back to me quickly, and he did—with an offer of \$70 a share, all cash, no conditions except regulatory approval. DuPont, however, let us know that its interest was restricted to only part of our portfolio.

The brewing deal was so secret that I virtually lived a double life for months. Only the board, six people within the company, and a few of our outside advisers knew about it. I was the focal point for all information and

decisions. All our meetings were held offsite and during off hours, including many weekends.

We announced the deal with Dow on July 10—at a final price of \$78 a share—and I’m sure that every Rohm and Haas employee in the world was in absolute shock. The shareholders were delighted, however, and the industry press called it the “deal of the century.” From July into the fall, the stress of seeing the deal through took its toll on me. We worked hard to keep employees, shareholders, and customers well informed and comfortable about the company’s future. But I was getting e-mails at midnight: “Are you awake?” The answer was always yes, I’m awake. There were 22 board meetings and dozens of phone calls with the directors from the time we first explored the idea of selling the company until the deal closed. I knew it was crucial that I present a calm face to my staff, but I was constantly worried.

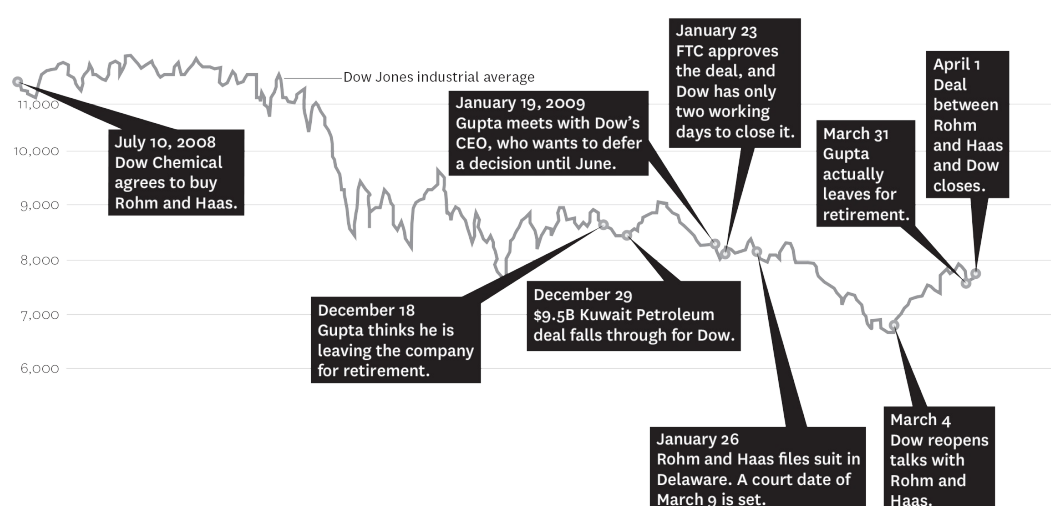
In August, totally unexpectedly, I learned that I had prostate cancer, which added a new dimension to my stress. A low point came when I passed out on a flight to Germany and had to be admitted for emergency care. I withdrew from day-to-day operations to focus on my health and had surgery a few months later. My sole responsibility to the company remained seeing the deal through.

When Liveris and I met in January 2009, it was with just one key adviser each. He laid out all his concerns and issues and what he was trying to resolve. I could see that he had a Herculean task on his hands. “Andrew,” I said, “I understand what you’re dealing with, but you have to put yourself in my situation. I need something to take to my board. I’d like to tell them that you fully intend to close the deal but you need more time. Give me a deadline, and we can go public with an announcement that this is the situation.” I offered to assist with the Haas family trusts to get some kind of bridge financing. Liveris didn’t want to pursue that. Ultimately, he offered to let us know by June whether Dow could do the deal or not.

On January 23 we got FTC approval for the deal. According to the contract, Dow had just two working days to close the transaction. That was simply not

going to happen. Dow's backup financing lines would expire in June, but I believed that the company had enough resources, given time, to complete the deal under the original terms. Nevertheless, we had to protect our shareholders. With the board's approval, we filed suit in Delaware, asking the court for an expedited hearing to enforce our contract. Everyone was well aware of the significance of that lawsuit: We were essentially asking the court to decide whether Dow—and implicitly any other company—should be held to the terms of a deal regardless of external conditions. Our court date was set for March 9, and we knew the world would be watching.

Timeline of the deal: July 10, 2008, to April 1, 2009



Our board sent a letter, which we made public, to Dow's board, urging it to take control of the situation and honor the contract. Speculation in the financial press was intense: Would the transaction close? If it didn't, would our share price fall dramatically? Would Dow be forced into bankruptcy or have to sell valuable assets to close the deal?

I spent this period explaining to Rohm and Haas employees why we had to take this drastic action and why it was in their best interests and our customers' that the deal go through. My energy went into urging employees to

stay calm, keeping the board informed, and communicating with key customers, the Haas family trusts, and our large hedge fund shareholders.

On Wednesday, March 4, less than a week before we were set to square off in court, I received an e-mail from Andrew Liveris. “Raj,” he wrote, “should we give this one last try?” We agreed to meet in New York the next day, along with our respective advisers. We also decided that each of us would bring one highly respected board member to help facilitate the process. Our discussion focused on two key points: how to obtain bridge equity sufficient to reduce the debt financing required and how to keep Dow’s credit rating from being downgraded to junk status by Standard & Poor’s and Moody’s.

Dow came up with some creative solutions, including working out arrangements with two of Rohm and Haas’s largest shareholders, the Haas family trusts and Paulson & Co., to obtain the equity financing. And we participated in calls with S&P and Moody’s to persuade them that Dow’s situation warranted “investment grade” status. This was all hastily done in the days before our Monday court appointment. At 8 p.m. on Sunday, Andrew called me and said, “Raj, we’re making progress. We don’t have all the answers yet, but can you go to the judge and tell him that we are working on it?” In court the next morning we asked the judge for more time, and he said, “You can have all the time you want.” I think he was relieved.

How Did the Deal Work Out for Dow?

by **Karen Dillon**

ON JULY 10, 2008, when the deal with Rohm and Haas was announced, Dow’s share price was around \$35. The following March, as Dow scrambled to find alternatives to a collapsed joint venture with Kuwait Petroleum, it dipped to an interday low of under \$6.

Ultimately, Dow arranged a bridge loan of more than \$9 billion, sold a \$3 billion equity stake to Rohm and Haas’s two major shareholders,

and procured investments of \$3 billion from Berkshire Hathaway and \$1 billion from the Kuwait Investment Authority.

The market waited to see if that complex financing would crush Dow under its weight. But Dow paid off the bridge loan ahead of schedule, retired the debt to purchase Rohm and Haas, and has made a profit in every quarter since. The acquisition “was a pivotal point in the transformation of Dow,” says a company spokesperson. Dow’s so-called performance businesses, which include the majority of former Rohm and Haas assets, accounted for nearly two-thirds of its sales in the second quarter of 2010. By mid-September the company’s shares hovered near \$26.

The relationship between the two CEOs survived the ordeal as well. “A week after the closing [Dow CEO Andrew Liveris] sent me a case of excellent Australian wine as a thank-you,” Gupta says. “And we continue to maintain cordial relations.”

By 4 p.m. that day Dow had arranged its financing and we had an agreement, which we asked the judge to read into the record. The same day—one of the lowest points of the year for the stock market—Dow’s directors signed off on the deal. Up until then I hadn’t been certain it would really happen. Our stock had been trading down, and at one point it went under \$50 a share. But in the end we got the \$18 billion.

On March 31, I finally left Rohm and Haas for the last time. The deal closed the following day. I hadn’t allowed myself to breathe a sigh of relief until that moment. It was a bittersweet victory for me, because I had invested so much of my time and energy in building the organization and managing for the long term that it was hard to let it go. I took solace in the fact that most of the family trusts’ proceeds from the sale were invested in charities right away. There’s a sense, though, that the company doesn’t exist anymore, which is sad for me.

But I concluded that I could move on with my life—the retirement I had

long planned. I'm not certain I could lucidly recite that day's events. Certainly I can't offer profound reflections on them. At the time, I was focused on the misfortune of having had to deal with this problem at the end of my career. Now, with the benefit of more than a year's hindsight, I recognize that we had a strong dose of good fortune, too, which allowed us to achieve this nearly impossible outcome.

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How to Be a Good Boss in a Bad Economy

by Robert I. Sutton

THESE ARE TOUGH TIMES for every boss I know. Fear and paranoia are running wild, not just in financial markets but in workplaces, too. A few weeks back a weary executive at a professional services firm told me how painful it had been to lay off 10% of his people and how he was struggling to comfort and inspire those who remained. When I asked a mutual friend, the CEO of a manufacturing firm, to “show some love” to this distressed executive, he jumped in to help—but admitted that he was wrestling with his own demons, having just implemented a 20% workforce reduction.

It was not a coincidence to find two friends in such similar straits; few organizations seem to have avoided them. Even in businesses renowned for having heart, bosses have been forced to wield the ax. NetApp, declared number one in *Fortune*’s “100 Best Companies to Work For” for 2009, announced it was cutting loose 6% of its employees less than a month after the ranking appeared. Google, top-rated by *Fortune* in 2008, has shed hundreds of full-time employees. And layoffs aren’t the only reason it’s a miserable time to be the boss. Where cuts haven’t occurred, people suspect they will, and the lingering dread creates its own challenges. One technology sector CEO I’ve worked with for years felt compelled to inform his people in writing that not only were no layoffs planned but the company would be hiring a lot more people in the coming year. Yet, he said, “no matter how much I share about how safe we are, people still ask, When are the layoffs coming?” Even where jobs are demonstrably safe, lesser but real disappointments occur: Salaries are

cut, budgets are pared, projects are back-burnered.

As a result, most bosses—like you, perhaps—are operating in difficult and sometimes unfamiliar territory. Equipped with skills and approaches honed over long years of business growth, they now find their roles defined by an unexpected question: How should people be managed when fear is in the air, confidence is slipping, and it looks as if the road ahead will remain rough for many miles? This isn't the job most executives and managers signed on for, and not everyone will rise to the occasion. This article is designed to help those who want to do so—first by clarifying why it's so hard to be a good boss, and then by sharing the essence of what the best bosses do during tough times.

The Toxic Tandem

Let's be clear: It's never easy to be a great boss, even in good economic times. It's challenging in part because of an unfortunate dynamic that naturally arises in relationships of unequal power. Research confirms what many of us have long suspected: People who gain authority over others tend to become more self-centered and less mindful of what others need, do, and say. That would be bad enough, but the problem is compounded because a boss's self-absorbed words and deeds are scrutinized so closely by his or her followers. Combined, these tendencies make for a toxic tandem that deserves closer study.

To appreciate the first half of the dynamic—that bosses tend to be oblivious to their followers' perspectives—consider the “cookie experiment” reported by the psychologists Dacher Keltner, Deborah H. Gruenfeld, and Cameron Anderson in 2003. In this study, teams of three students each were instructed to produce a short policy paper. Two members of each team were randomly assigned to write the paper. The third member evaluated it and determined how much the other two would be paid, in effect making them subordinates. About 30 minutes into the meeting, the experimenter brought in a plate of five cookies—a welcome break that was in fact the focus of the experiment. No one was expected to reach for the last cookie on the plate, and

no one did. Basic manners dictate such restraint. But what of the fourth cookie—the extra one that could be taken without negotiation or an awkward moment? It turns out that a little taste of power has a substantial effect. The “bosses” not only tended to take the fourth cookie but also displayed signs of “disinhibited” eating, chewing with their mouths open and scattering crumbs widely.

Idea in Brief

It's not easy being the boss during a downturn. Your natural impulse is to focus on your own well-justified concerns, but your people are watching your every move for clues to their fate.

You need to rethink your responsibilities in terms of what your people may lack most in unsettling times: predictability, understanding, control, and compassion.

By making tough times less traumatic, you'll equip your organization to thrive when conditions improve—and earn the loyalty of individuals who will remain in your network for years to come.

It's a cute little experiment, but it beautifully illustrates a finding consistent across many studies. When people—independent of personality—wield power, their ability to lord it over others causes them to (1) become more focused on their own needs and wants; (2) become less focused on others' needs, wants, and actions; and (3) act as if written and unwritten rules that others are expected to follow don't apply to them. To make matters worse, many bosses suffer a related form of power poisoning: They believe that they are aware of every important development in the organization (even when they are remarkably ignorant of key facts). This affliction is called “the fallacy of centrality”—the assumption that because one holds a central position, one automatically knows everything necessary to exercise effective leadership.

Idea in Practice

Some years ago Robert Sutton led a workshop with the senior managers of Procter & Gamble that touched on the importance of providing workers with predictability, understanding, control, and compassion. It turned out that his framework aligned with what they'd already learned in the context of plant closings. John E. Pepper, Jr., who was then P&G's chairman, explained an internal analysis of the effects that management's actions had on productivity, retention of employees who were offered jobs elsewhere in the company, and sales in the cities where the closings occurred. Plant closings did far less damage when leaders:

1. Announced the closing date and key milestones well in advance and described how events would unfold both for employees and for members of the affected community.
2. Explained in detail to employees and the community the business case for closing the plant.
3. Gave affected employees options for finding other jobs inside the company or resources to job hunt outside.
4. Expressed human concern—in public and in private—to affected employees and community officials.

In other words, P&G executives saw the value of predictability, understanding, control, and compassion in times of distressing organizational change.

Now let's look at the other half of the dynamic—that followers devote immense energy to watching, interpreting, and worrying about even the smallest and most innocent moves their superiors make. This is something we've long known about animals; studies of baboon troops show that the typical member glances at the alpha male every 20 or 30 seconds to see what he is doing. And although people don't check what their boss is doing two or three times a minute, this tendency is well documented in human groups, too.

As the psychologist Susan Fiske puts it, “Attention is directed up the hierarchy. Secretaries know more about their bosses than vice versa; graduate students know more about their advisors than vice versa.” Fiske explains: “People pay attention to those who control their outcomes. In an effort to predict and possibly influence what is going to happen to them, people gather information about those with power.” Further, people tend to interpret what they see the boss do in a negative light. Keltner and his colleagues report that when the top dog makes an ambiguous move (one that isn’t clearly good or bad for followers), followers are most likely to construe it as a sign that something bad is going to happen to them. Related studies also show that when people down the pecking order feel threatened by their superiors, they become distracted from their work. They redirect their efforts to trying to figure out what is going on and to coping with their fear and anxiety—perhaps searching the web for insight or huddling with their peers to gossip, complain, and exchange emotional support. As a result, performance suffers.

Even in the best of times, bosses fall prey to this toxic tandem. In a crisis, however, both sides of the dynamic are amplified. So it’s not your imagination; it is harder to be a good boss in a bad economy. Your own stress presses you to shut down emotionally, to focus attention on what your superiors are up to, to turn inward and wrestle with your fears. The heightened threat causes your followers to watch your moves even more closely, searching for clues about what is likely to happen to them and what they can do about it. The threats that arise in tough times are also more likely to be real than imagined, and to hit with greater frequency. Everyone involved is only human, with the usual foibles, quirks, and blind spots. The equipment remains the same, and it’s being put to an unusually hard test.

How can well-intentioned bosses avoid the toxic tandem? By mindfully taking attention from themselves in order to give it to their people’s challenges and worries. Bosses who do so will find that in stressful times people have an acute—and often unmet—need for four remedies: predictability, understanding, control, and compassion. My mentor Robert Kahn and I

outlined the first three in a 1987 paper that was inspired by the great and lousy bosses we had observed during a deep recession in the midwestern United States. Some years later my colleague Jeffrey Pfeffer helped me recognize the fourth as a distinct and equally crucial antidote to organizational stress.

Making the Best of a Bad Situation

WHETHER YOU OVERSEE JUST a few direct reports or are the CEO of a big company, these frightening times mean that you need to rethink your responsibilities as the boss. More than anything, people now need you to address deficits in four areas:

1. Predictability

Give people as much information as you can about what will happen and when. If shocks are preceded by fair warnings, people not only have time to brace themselves but also get chances to breathe easy.

2. Understanding

Explain why the changes you're implementing are necessary—and don't assume you need to do so only once.

3. Control

Take a bewildering challenge and break it down into “small win” opportunities. In situations where you can't give people much influence over what happens, at least give them a say in how it happens.

4. Compassion

Put yourself in the other person's shoes. Express empathy and—when appropriate—sorrow for any painful actions that have to be taken.

Providing Predictability

The importance of predictability in people's lives is hard to overstate, and has been demonstrated in numerous studies. The most famous is Martin Seligman's research on the signal/safety hypothesis. Seligman observed that when a stressful event can be predicted, the absence of a stressful event can also be predicted. Thus a person knows when he or she need not maintain a state of vigilance or anxiety. Seligman cites the function of air-raid sirens during the bombing of London in World War II. They were so reliable a signal that people felt free to go about their business when the sirens were silent. The hypothesis was bolstered by studies in which some animals and not others were given a warning in advance of a shock. Those that were never warned lived in a constant state of anxiety.

The same holds true for organizational shocks like layoffs. If you give people as much information as you can about what will happen (to them as individuals, to their work groups, and to the organization as a whole) and when it will happen, they will prepare to the extent they can and suffer less. Just as important, they can learn to relax in the absence of such a warning. This was the thinking behind one CEO's decision to issue a heads-up memo to the staff of his nonprofit organization. In it he laid out in detail the worst-case scenario that would result if the stock market and donations failed to rebound over a certain time period. But while preparing people for a future that might well involve job losses, he also made a firm commitment: No one would be asked to leave for at least three months. At another company I know, managers opted for a deeper staff cut than was immediately necessary, because they were determined not to inflict a second one right away and thus create a distracting fear of still more to come. They followed that cut with the message that although more might be needed in the future, none would be made for at least six months.

Providing more predictability is in large part a function of reducing the seemingly random. Certainly there are times when people seek out surprise and novelty. Most of us come to points in our lives when, in the words of Arthur Conan Doyle, we abhor the dull routine of existence. This is not one

of them. It is also important to realize that what will be seen as surprising or routine, as fair or unfair, is dictated by the quirks of your organization's history. Unfortunately, the better you have treated your people in the past, the more bruised they will be by layoffs, pay cuts, and other blows. When Advanced Micro Devices, which once touted its no-layoffs policy and called other firms that used layoffs "myopic as well as misanthropic," had to resort to staff cuts in 1986, the resulting anger and despair struck many as disproportionate. The same intensity of reaction was seen when other historically humane companies—Levi Strauss and Hewlett-Packard come to mind—were forced to lay off employees. Meanwhile, companies with a history of treating people as mere expenses and tossing surplus bodies out the door at the first whiff of bad times seem scarcely to miss a beat. After all, that is what their people expect. A 2006 study of 3,080 Canadian workplaces by Christopher Zatzick and Roderick Iverson showed that layoffs had the most negative effect on productivity in "high involvement" organizations—places where employees have greater responsibility and decision-making authority, and where more emphasis is put on treating people well than in traditional workplaces. Zatzick and Iverson also found that productivity dropped most sharply in once-enlightened workplaces that had shattered employee expectations with a one-two punch: They did deep layoffs *and* abandoned high-involvement work practices. The effort that people are willing to expend and the anger and anxiety that they suffer don't simply result from their objective fate; their reactions are shaped by the difference between what they expect and what they get.

Beware the Cone of Silence

FROM AN EMPLOYEE'S PERSPECTIVE, when to get nervous is often obvious: Bosses start huddling behind closed doors, deciding God knows what, and betraying as little as possible. As a boss, you might find some such "backstage work" unavoidable—but be aware

that it can reinforce feelings of unpredictability, misunderstanding, lack of control, and management's indifference, which will ultimately make things harder on everyone.

Don't Hide

In the worst cases I've seen, bosses have even hidden from their people: Knowing what they knew about impending cost cutting, they couldn't look subordinates in the eye. Years ago, when colleagues and I studied the collapse of the video game company Atari, we learned that top executives were using a back door rather than the front entrance to come and go, so determined were they to avoid contact with the rank and file. That study came to mind when, quite recently, a boss I know disappeared from his office for weeks after a layoff. In each case employees interpreted leadership's absence as a sign that something truly horrible was going to happen. The rumor mill sped up, and even less effort went into the work at hand.

Be Discreet

To be sure, the answer cannot be that senior managers should spend less time conferring. In a downturn the pressure is immense to make decisions that demand a shared understanding of rapidly evolving financials, scenarios and options, and constraints. Often it is impossible to open up this messy decision process to broader involvement and scrutiny, which might not only threaten legal and ethical requirements for confidentiality but could lead to worse decisions. (As the psychologist Philip Tetlock has shown, decision makers operating under excessive scrutiny tend to make the choices that are easiest to justify rather than those they think are best.) Information leaks can also hurt people or be downright embarrassing. Witness the chagrin of a major law firm in February 2009 after one of its partners had a sensitive phone conversation with the firm's COO while riding on a train from Washington, DC, to New York. Fellow passengers could not help overhearing that the firm was planning deep staff cuts in March, and at least one person deduced what firm the

partner was with after he rattled off the names of two dozen candidates for dismissal. That passenger promptly posted the news in a blog, and the story spread like wildfire. (To its credit, the firm quickly apologized for the indiscretion and acknowledged that the news was true.)

Rely on Your Peers

Some closed-door mystery is clearly inevitable. And even the hardest of bosses need some time away from the fray to recharge. But don't let such absences go unexplained. Your employees can appreciate the stress you are under, and won't begrudge you an occasional break. You won't want to burden them with your troubles when they have their own—but you and your management team can support one another, and you'll be available to talk about the team's fears and problems along the way.

The key is to be deeply sensitive to people's interpretations. Follow long closed-door meetings with longer open-door periods.

Communicate everything that can be communicated, both in writing and face-to-face. Be present and visibly on top of the situation.

Express warmth and concern, but also whatever optimism is warranted. Above all, look your people in the eye.

Increasing Understanding

If predictability is about what will happen and when, understanding is about why and how. The chief advice here is to accompany any major change with an explanation of what makes it necessary and what effect it will have—in as much detail as possible. This advice, too, is rooted in psychological research: Human beings consistently react negatively to unexplained events. The effect is so strong that it is better to give an explanation they dislike than no explanation at all, provided the explanation is credible.

Good bosses also know that more than a single communication is needed

to bring a large group to a point of real understanding. I mentioned above the technology CEO whose people persisted in expecting job losses even though the business was growing. Rather than assuming that his “no layoffs” message would suffice until further notice, he knew he would have to keep repeating himself and looked for other ways to help employees comprehend the reality. “We shared our bank statements with everyone,” he told me, “so that they could understand where our assets are and how safe they are.”

When operations are going haywire and people are rattled, it’s especially hard to get new ideas to take root or to teach new behaviors of any complexity. Your job as boss is to design messages that will get through to people who are distracted, upset, and apt to think negatively given any ambiguity. When it comes to internal communications, your mantra should be “Simple, concrete, and repetitive.” Think of the attendants on Flight 1549, in what has been called the Miracle on the Hudson. As the plane plummeted down, they chanted in unison, “Brace, brace, heads down, stay down.” Bosses who lead people through crises need to provide the same kind of clear and emphatic direction. For many scientific reasons, as Chip and Dan Heath show in their book *Made to Stick*, people are more likely to act on such messages. The best bosses I know have usually arrived at the same conclusion on the basis of experience. A.G. Lafley, the effective, humane, and wise CEO of Procter & Gamble, falls into that camp. One of his favorite pieces of advice is to keep it “*Sesame Street* simple.”

Remember: You may have spent an hour carefully crafting an e-mail and many hours making sure that all your direct reports know what is happening and what they can do—but even so, any one of them may have just glanced at the e-mail and become so agitated when you spoke that the message simply didn’t stick. I suspect that Lafley has repeated some of his *Sesame Street*—simple messages so often that they bore him silly. But he is smart enough to know that there is always someone in the room who hasn’t absorbed the point before—and that those hearing it for the tenth time can only conclude he really means it. If you aren’t saying the same things over and over again, and

aren't a bit bored with yourself, it may be that you aren't repeating yourself enough or your messages are overly complex.

Affording Control

People don't embark on careers to feel powerless. The whole point of work is to achieve outcomes and have impact. That's why people are so deeply frustrated when events seem to render them helpless. As a boss in a bad economy, you may not be able to give people much control over *what* happens, but it's important that they have as much say as possible in *how* and *when* it happens.

During overwhelming times, a good boss finds ways to keep up a drumbeat of accomplishments, however minor. The organizational theorist Karl Weick shows in his classic article "Small Wins" that when an obstacle is framed as too big, too complex, or too difficult, people are overwhelmed and freeze in their tracks. Yet when the same challenge is broken down into less daunting components, people proceed with confidence to overcome it. One boss I know at a troubled company recently launched a crucial sales campaign that in the best case may enable the company to raise everyone's pay and in the worst case may result in huge layoffs and possibly even the company's demise. It was a bet-the-farm move that had every chance of paralyzing his already spooked people. But rather than allowing them to fret about the scale of the effort, he kicked it off by asking the team to jot down on sticky notes every discrete task required to do the campaign right. Then he sorted the notes on a whiteboard according to whether each task was "easy" or "hard" in the team's opinion. It turned out that more than half were easy and could be accomplished within a few days. He then asked for a volunteer to take responsibility for each of the easy tasks and requested that when a task had been accomplished, its owner report back to the entire group via e-mail. Not only was a lot of progress made in the following week, but the flurry of "got it done" e-mails dramatically lowered people's collective anxiety, enhanced their collective energy, and gave them confidence that the hard tasks, too, could be handled.

Showing Compassion

Jerald Greenberg, a management professor at The Ohio State University, provides compelling evidence that compassion affects the bottom line in tough times. Greenberg studied three nearly identical manufacturing plants in the Midwest that were all part of the same company; two of them (which management chose at random) instituted a temporary 10-week pay cut of 15% after the firm had lost a major contract. At one of the two, the executive who conveyed the news did so curtly, announcing, “I’ll answer one or two questions, but then I have to catch a plane for another meeting.” At the other one, the executive who broke the news gave a detailed and compassionate explanation, along with apologies and multiple expressions of remorse. He also spent a full hour answering questions about why the cost cutting was necessary, who would be affected, and what steps workers could take to help themselves and the plant. Greenberg found fascinating effects on employee theft rates. At the plant where the curt explanation was given, the rate rose to more than 9%. But at the plant where management’s explanation was detailed and compassionate, it rose only to 6%. (At the third plant, where no pay cuts were made, the rate held steady at about 4% during the 10-week period.)

After pay was restored at the two plants, theft rates at both returned to the original level of about 4%. Greenberg’s interpretation is that employees stole more at the two plants where cuts were made to “get even” with their employer, and stole the most at the plant where managers exhibited a lack of compassion because they had more to get even for. This suggests that compassion from a boss adds corporate value—in good times and in bad. What’s more, it’s free.

Compassion can and does take many forms. At its heart it is as simple as adopting the other person’s point of view, understanding his anxiety, and making a sincere effort to soothe it. A manager who had just completed a second round of layoffs shared with me a valuable lesson she had learned about empathy: A boss delivering bad news to a subordinate is, by definition, at a later point in the emotional cycle of reacting to it. By the time they talk,

the boss has already worked through the shock, anger, and embarrassment; gone through all the scenarios in her head; made decisions; and come to terms with them. “You need to remind yourself,” this manager said, “that the person across the table is hearing the news for the first time and is just starting that process.” Not only will that person be unready to engage with the considerations the boss is outlining, but he may be appalled at how dispassionately they are presented. And as a boss, don’t assume that an employee’s initial reaction will persist. This manager told me that employees who had hugged her and thanked her sometimes came back to scream at her a few days later, after the shock wore off. Others, who had reacted angrily, came back to apologize and then hugged and thanked her.

Compassion is most important when it helps people retain their dignity. When layoffs and closings are unavoidable, tending to the emotional needs of people who are let go is essential both for them and for those who survive the cuts. One of the worst things a boss can do after a layoff is to bad-mouth or in any other way demean those who have departed. Even if you believe that you’ve cut out the deadwood, saying so will anger and demoralize your remaining employees and may drive the best of them to jump ship. Ray Kassar, the former CEO of Atari, generated a lot of anger in the 1980s when, after a deep layoff, he told survivors that the weak people were gone and only good people were left. Many survivors we interviewed perceived the layoffs as purely political and believed that some great people had been let go.

Unfortunately, not every executive has learned from Kassar’s blunder. Elon Musk, the CEO of Tesla Motors, which makes and sells electric sports cars that cost about \$100,000 each, cut some 10% of his workforce in late 2008. Although he was more subtle than Kassar, Musk made pretty clear that he was getting rid of the weakest people. “One of the steps I will be taking,” he wrote that October, “is raising the performance bar at Tesla to a very high level, which will result in a modest reduction in near term headcount. To be clear, this doesn’t mean that the people that depart Tesla for this reason wouldn’t be considered good performers at most companies—almost all would. However,

I believe Tesla must adhere more closely to a special forces philosophy at this stage of its life if we aspire to become one of the great car companies of the 21st century.”

Musk’s statement was interpreted both inside and outside the company as misguided and destructive. But it teaches us a valuable lesson: Before making a statement, stop to consider how it will sound to an upset and touchy person.

The Sign of a Great Boss

Bosses who increase predictability, understanding, control, and compassion for their people will allow employees to accomplish the most in a time of anxiety—and will earn their deep loyalty. A manager who provides all four will be perceived as “having people’s backs.” That’s a good phrase to keep in mind when you know your people are feeling vulnerable, because it will inform all your actions, big and small. Years ago, during a downturn, I was a consultant to a supply-chain group within Hewlett-Packard called SPaM. The company was struggling to cut costs and had eliminated free doughnuts in the morning—a long-standing tradition. At the time, people at SPaM were working very long hours and bringing in quite a bit of money. They were remarkably annoyed the day the doughnuts disappeared, and remarkably happy, proud, and motivated when their boss, Corey Billington, found some internal SPaM funds to bring the doughnuts back. I remember sitting in the coffee room one morning right after their return. One of the first employees to come in, who barely recognized me, couldn’t help commenting when he saw the spread: “Isn’t it great to have your boss in your corner?”

Bosses who do this sort of thing usually do it on many levels. I still hear stories about Bill Campbell’s leading the senior team of Go, a troubled pen-based computing company, in the early 1990s. Campbell is affectionately known as “the coach,” because he was head coach of the Columbia football team in the 1970s, and is widely respected in Silicon Valley. (He is known to be one of Steve Jobs’s most trusted advisers.) He played a major role in growing many companies and mentoring dozens of bosses, from Google’s

executive team to the Netscape cofounder Marc Andreessen to the entrepreneur and venture capitalist Randy Komisar. I've talked extensively with Komisar about how Campbell fought to save Go during those tough times and why not a single member of its top team left, even though things kept looking worse and worse. When I asked Komisar to explain exactly how Campbell made people feel so loyal and invested in saving the company, he pounded out this impressive list:

- He would hug people when he happened upon them.
- He would always make some hackneyed joke that each of us could have stepped in and completed after a short while, but it showed genuine warmth.
- His door was open and he would have one-on-ones at all levels of the company, being careful not to undermine his managers.
- He explicitly rewarded loyalty, singling people out in company presentations and building up those who showed real commitment.
- He punished disloyalty and lack of dedication by withdrawing his attention and warmth. Everyone could feel it.
- He insisted on excellence and held people accountable. He rewarded performance not with money but with responsibility and the status that came with his attention.
- He made himself visible.
- He would stand up for his people and organization with others (investors, partners, competitors), and everyone knew the stories and retold them until they became legendary.

The venture capitalist John Doerr told *Fortune*, “Bill was at his finest when we were winding down Go. His most important thing was that we take care of the people, that they leave that venture with dignity.” Many members of the

team went on to successfully lead other companies such as VeriSign, Netscape, and LucasArts Entertainment. Not only did people remain loyal to Campbell throughout the struggle to save Go, but most alums, including Komisar, look back on those days as one of the finest periods of their lives.

Bill Campbell's story contains a lesson that bosses often forget, given the tunnel vision and desperation provoked by tough economic times: Win or lose, if your people believe that you are always on their side, it will come back to help you—but if they believe you are willing to sell them out at the drop of a hat, it can haunt you down the road.

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Layoffs That Don't Break Your Company

by Sandra J. Sucher and Shalene Gupta

TWO GREAT FORCES ARE TRANSFORMING the very nature of work: automation and ever fiercer global competition. To keep up, many organizations have had to rethink their workforce strategies, often making changes that are disruptive and painful. Typically, they turn to episodic restructuring and routine layoffs, but in the long term both damage employee engagement and company profitability. Some companies, however, have realized that they need a new approach.

Consider the case of Nokia. At the beginning of 2008 senior managers at the Finnish telecom firm were celebrating a one-year 67% increase in profits. Yet competition from low-cost Asian competitors had driven Nokia's prices down by 35% over just a few years. Meanwhile, labor costs in Nokia's Bochum plant in Germany had risen by 20%. For management, the choice was clear: Bochum had to go. Juha Äkräs, Nokia's senior vice president of human resources at the time, flew in to talk about the layoff with the plant's 2,300 employees. As he addressed them, the crowd grew more and more agitated. "It was a totally hostile situation," he recalls.

The anger spread. A week later 15,000 people protested at Bochum. German government officials launched an investigation and demanded that Nokia pay back subsidies it had received for the plant. Unions called for a boycott of Nokia products. The news was filled with pictures of crying employees and protesters crushing Nokia phones. Ultimately, the shutdown cost Nokia €200 million—more than €80,000 per laid-off employee—not

including the ripple effects of the boycott and bad press. The firm's market share in Germany plunged; company managers estimate that from 2008 to 2010 Nokia lost €700 million in sales and €100 million in profits there.

In 2011, when Nokia's mobile phone business tanked, its senior leaders decided they needed to restructure again. That would involve laying off 18,000 employees across 13 countries over the next two years. Chastened by their experience in Germany, Nokia's executives were determined to find a better solution. This time, Nokia implemented a program that sought to ensure that employees felt the process was equitable and those who were laid off had a soft landing.

One of us, Sandra, has spent eight years researching best practices for workforce change in global multinational companies. She has seen that all too frequently companies do bad layoffs, do layoffs for the wrong reason, or worse, do both. By "bad," we mean layoffs that aren't fair or perceived as fair by employees and that have lasting negative knock-on effects. The job cuts in Bochum ignited outrage because Nokia had generated so much profit the year before. Consequently, they were seen as unjust and took a steep toll on Nokia's reputation and sales. And when we say "wrong reasons," we mean done to achieve short-term cost cuts instead of long-term strategic change. In 2008, Nokia did have the right reasons, but it still suffered because of its process.

Some governments, recognizing the massive damage layoffs create, have written laws protecting employees against them. For example, a number of European countries require companies to provide a social or economic justification before they can conduct layoffs. France, however, recently eliminated the requirement to provide an economic justification, and in the United States companies can conduct layoffs at will. Regardless of how easy it might be to cut personnel, executives should remember that doing so will have consequences.

The research clearly shows that bad layoffs and layoffs for the wrong reasons rarely help senior leaders accomplish their goals. In this article, we'll

present a better approach to workforce transitions—one that makes sparing use of staff reductions and ensures that when they do happen, the process feels fair and the company and the affected parties are set up for success.

Idea in Brief

The Situation

Automation and fierce competition are forcing many companies to resort to frequent rounds of layoffs.

The Problem

All too often, layoffs done for short-term gain damage employee engagement and actually reduce profitability.

The Better Way

Some companies have developed workforce change strategies that make sparing use of staff reductions and ensure that when they do happen, the process feels fair and the company and the affected parties are set up for success.

Why Layoffs Are Ineffective

If Nokia's story sounds familiar, albeit a little more colorful than usual, that's because it is. In the United States alone, the Bureau of Labor Statistics reports, 880,000 to 1.5 million people were laid off annually from 2000 to 2008 and from 2010 to 2013 (the last year data was compiled). This happened even when the economy was expanding. During 2009, the height of the Great Recession, 2.1 million Americans were laid off. Globally, unemployment rose by 34 million from 2007 to 2010, data from the International Labour Organization shows.

Layoffs have been increasing steadily since the 1970s. In 1979 fewer than 5% of *Fortune* 100 companies announced layoffs, according to McMaster University sociology professor Art Budros, but in 1994 almost 45% did. A

McKinsey survey of 2,000 U.S. companies found that from 2008 to 2011 (during the recession and its aftermath), 65% resorted to layoffs. Today layoffs have become a default response to an uncertain future marked by rapid advances in technology, tumultuous markets, and intense competition.

Yet other data on layoffs should give companies pause. In a 2012 review of 20 studies of companies that had gone through layoffs, Deepak Datta at the University of Texas at Arlington found that layoffs had a neutral to negative effect on stock prices in the days following their announcement. Datta also discovered that after layoffs a majority of companies suffered declines in profitability, and a related study showed that the drop in profits persisted for three years. And a team of researchers from Auburn University, Baylor University, and the University of Tennessee found that companies that have layoffs are twice as likely to file for bankruptcy as companies that don't have them.

All too frequently, senior managers dismiss such findings. Some argue that since companies do layoffs because they're already in bad shape, it's no surprise that their financial performance may not improve. Layoffs are so embedded in business as a short-term solution for lowering costs that managers ignore the fact that they create more problems than they solve.

Companies that shed workers lose the time invested in training them as well as their networks of relationships and knowledge about how to get work done. Even more significant are the blighting effects on survivors. Charlie Trevor of University of Wisconsin–Madison and Anthony Nyberg of University of South Carolina found that downsizing a workforce by 1% leads to a 31% increase in voluntary turnover the next year. Meanwhile, low morale weakens engagement. Layoffs can cause employees to feel they've lost control: The fate of their peers sends a message that hard work and good performance do not guarantee their jobs. A 2002 study by Magnus Sverke and Johnny Hellgren of Stockholm University and Katharina Näswall of University of Canterbury found that after a layoff, survivors experienced a 41% decline in job satisfaction, a 36% decline in organizational commitment, and a 20% decline

in job performance.

While short-term productivity may rise because fewer workers have to cover the same amount of work, that increase comes with costs—and not only to the workers. Quality and safety suffer, according to research by Michael Quinlan at the University of New South Wales, who also found higher rates of employee burnout and turnover. Meanwhile, innovation declines. For instance, a study of one *Fortune* 500 tech firm done by Teresa Amabile at Harvard Business School discovered that after the firm cut its staff by 15%, the number of new inventions it produced fell 24%. In addition, layoffs can rupture ties between salespeople and customers. Researchers Paul Williams, M. Sajid Khan, and Earl Naumann have found that customers are more likely to defect after a company conducts layoffs. Then there's the effect on a company's reputation: E. Geoffrey Love and Matthew S. Kraatz of University of Illinois at Urbana–Champaign found that companies that did layoffs saw a decline in their ranking on *Fortune's* list of most admired companies.

Employees who are downsized pay a price beyond the immediate loss of their jobs. Wayne Cascio, a professor at the University of Colorado, points to the Labor Department's survey of workers who were laid off during 1997 and 1998, an economic upswing. Most were worse off a year later: Only 41% had found work at equal or higher pay, 26% had found jobs at lower pay, and another 21% were still unemployed or had left the workforce entirely. The effects follow people throughout their lives. A 2009 Columbia University study that looked at employees who had been laid off during the 1982 recession showed that 20 years later they were still earning 20% less than peers who had kept their jobs. The aftershocks aren't limited just to earnings: According to a study by Kate Strully, an assistant professor at SUNY, laid-off employees have an 83% higher chance of developing a new health condition in the year after their termination and are six times more likely to commit a violent act.

The Search for Alternatives

A few companies have been experimenting with better ways to handle their changing workforce needs. Take AT&T. In 2013 the company's leaders concluded that 100,000 of its 240,000 employees were working in jobs that would no longer be relevant in a decade. Instead of letting these employees go and hiring new talent, AT&T decided to retrain all 100,000 workers by 2020. That way, the company wouldn't lose the knowledge the employees had developed and wouldn't undermine the trust in senior management that was necessary to engagement, innovation, and performance. So far, the results seem very positive. In a 2016 HBR article, AT&T's chief strategy officer, John Donovan (now CEO of AT&T Communications), noted that 18 months after the program's inception, the company had decreased its product development cycle time by 40% and accelerated its time to revenue by 32%. Since 2013, its revenue has increased by 27%, and in 2017 AT&T even made *Fortune's* 100 Best Companies to Work For list for the first time.

In her work, Sandra has studied seven companies that, like AT&T, have successfully pursued alternatives to traditional layoffs. An analysis of their experiences reveals that an effective workforce change strategy has three main components: a philosophy, a method, and options for a variety of economic conditions.

A philosophy

A workforce change philosophy serves as a compass for senior leaders. It builds on a company's values and spells out the commitments and priorities the company will abide by as it implements change. A philosophy helps leaders answer the following questions:

- What value do we believe employees contribute to our business and its success?
- What expectations do we have for employees' engagement, loyalty, flexibility, and ability to adapt and grow?
- What do we owe employees as a fair exchange for what they have given

us?

- How can employees help us develop and implement workforce change?

The philosophy of the French tire maker Michelin, for example, includes hiring people for their potential rather than for the job. In its labor relations policy, the company describes its commitment to employees' long-term growth. Each employee is assigned a career manager who oversees his or her development and helps make sure it aligns with Michelin's needs.

The company also has a defined approach to workforce change and restructuring. Michelin's labor relations policy described it like this in 2013:

Restructures are inevitable in certain circumstances in order to maintain the company's global competitiveness. These restructures must, as far as possible, take place at times when the company's health allows mobilization of adequate resources to attenuate the social consequences. Whenever possible, staff at the entities concerned and their representatives are invited to work together to seek and suggest solutions for restoring competitiveness and reducing overcapacity, which may open up an alternative to closing an activity or site. When restructuring is unavoidable, it must be announced as soon as possible and carried out according to the procedures negotiated with the staff representatives. The ensuing changes on a personal level must be supported for as long as is necessary to ensure that the reclassified employees find a satisfactory solution in terms of standard of living, stability, family life and self-esteem.

When Nokia was contemplating that massive workforce reduction in 2011, its senior leaders articulated a philosophy with four core values:

1. *We will accept our responsibility as the driver of the local economies and aim for the highest of aspirations in supporting our previous and current employees.*
2. *We will take an activist role and lead the program with our brand, expertise, and resources in the key areas that matter most.*
3. *We will involve all of the relevant parties in the program design and operations.*
4. *We will communicate openly towards all stakeholders, including employees, unions,*

government, and local stakeholders, even when we do not know the full answers.

As Nokia's philosophy highlights, workforce change can affect many people beyond employees. A company must communicate its intent directly without leaving any of them in the dark or piecing together scraps of information to figure out what the future holds.

A method

Having a clear methodology will allow companies to explore alternatives to layoffs, and if they cannot be avoided, minimize the harm they cause. To establish one, firms need to address three questions:

- How will we plan for workforce change on an ongoing basis?
- Who will be accountable for managing and supervising it?
- What metrics should we use to determine whether our actions are effective?

In 2013, Michelin's CEO, Jean-Dominique Senard, asked the members of his team to turn the insights they'd gathered from the previous decade's restructuring efforts into a formal process for workforce change. As a result, Michelin integrated three planning processes—product planning, territory planning, and restructuring planning—into one. The product-planning groups project their anticipated production for the next five years, and then the territories identify which regions will have too much or too little production capacity and what technologies each factory will need. The restructuring plans come out of the dialogue between the product and territory heads. For example, in October 2013, Michelin determined that it would have overcapacity for truck tire production in its Budapest factory and decided to close it in mid-2015. By making that call early, Michelin's team had time to carefully plan objectives for the shutdown and create a way to reduce the impact on the affected employees (something we'll discuss more later).

Michelin has set up an accountability structure that clearly delineates who is

responsible for what. The company's executive committee, led by the CEO, oversees workforce change globally. Because more than 50% of Michelin's factories and most of its workforce reductions are in Europe, a European restructuring committee supports the executive committee. It identifies factories that should be closed or downsized and directly oversees all European restructurings. Finally, Michelin establishes a committee for each factory that will be affected, consisting of regional and country executives who are responsible for implementing the restructuring plan. Two senior executives at headquarters—a director of restructuring and a director of product planning—coordinate the entire process.

Like any other good strategy, an effective workforce change strategy includes goals against which success can be measured. An example of these comes from Honeywell. In the 2001 recession, right before Dave Cote became its CEO, the company laid off 25,000 employees, or nearly 20% of its staff. Sales fell by 11% from 2000 to 2002. When the recession hit in 2008, and it looked as if more workforce changes might be required, Cote set two goals: to improve on Honeywell's poor performance during the 2001 recession, and to be in a stronger position than its competitors when the recovery came.

To measure the first goal, Cote decided to compare the company's sales, net income, and free cash flow figures for the two recessions. As it turns out, the firm was able to improve substantially on all three measures. In 2009 Honeywell's sales were 39% higher than its 2002 sales, its free cash flow was 94% higher, and its net income was more than six times higher. To monitor progress on the second goal, performance against competitors, financial data providers developed two measures: the percent change in operating income from the 2007–2008 peak to 2011, and total stock returns in 2012. At +1.8%, Honeywell had the highest postrecession increase in operating margins (versus –4.5% to +1% among its peers). And at 75.28, Honeywell also had the highest three-year total stock return in 2012, 50% better than its closest competitor's return and four times better than the lowest-performing competitor's.

Options for a variety of economic conditions

A workforce change strategy should anticipate three different scenarios: a healthy present, short-term economic volatility, and an uncertain future.

A healthy present. In the immediate term, senior leaders should practice disciplined hiring and use stringent performance metrics to build a strong organization that can weather change. A lean approach to staffing will help companies avoid yo-yoing between overexuberant hiring during growth and damaging staff reductions when demand falls.

Before Cote began his turnaround in 2002, Honeywell had a policy of hiring freely during good times and then cutting jobs in downturns. The drastic head count reduction of 2001 was too much for Cote, who responded by introducing hiring controls. Senior leaders had to justify how staff additions would help new-product or market development, and if they couldn't, had to trim costs elsewhere to fund the hires.

Too often managers use layoffs as an excuse to avoid difficult discussions about performance. Many companies practice “rank and yank” layoffs to thin out weaker employees, often on an annual basis, but it's more productive to use meaningful performance reviews and employee development plans to cultivate a base of high performers. Lincoln Electric, an arc-welding products and consumables manufacturer headquartered in Cleveland, Ohio, has had a no-layoff policy in its U.S. operations since 1958. Part of the reason it maintains that policy is that it has a reputation for high-quality and efficient staff, thanks to very strict performance standards and a rigorous evaluation process. Employees are assessed twice a year in five areas. Performance is competitive within departments, and performance ratings are tied to a merit-based compensation system. Employees who fall in the bottom 10% receive an improvement plan and, if they remain there consistently, are eventually let go.

Short-term volatility. Experienced managers develop a range of ways to reduce costs without resorting to destructive layoffs. Three approaches implemented by Honeywell, Lincoln Electric, and Recruit Holdings, a

Japanese human resources and advertising media conglomerate, demonstrate how much room there is for creative management during downturns.

During the Great Recession, Cote used furloughs instead of layoffs at Honeywell. Having weathered three recessions when he was at GE, he had developed a sense for when a business cycle might run its course. Two years before any sign that the economy was in trouble, he began to pull back on hiring. Once the recession hit, Honeywell furloughed employees for one to five weeks, providing unpaid or partially compensated leaves, depending on local labor regulations. According to an article by Tom Starner in *Human Resource Executive*, the company's finance department estimated that furloughs saved Honeywell the equivalent of 20,000 jobs.

In a 2013 article he wrote for HBR, Cote explained, "I've never heard a management team talk about how the choices they make during a downturn will affect performance during a recovery.... I kept reiterating that point: There will be a recovery, and we need to be prepared for it." Furloughs allowed Honeywell to retain the talent it needed when demand resurged and helped it stay profitable throughout the recession and achieve strong growth during the five years after the recovery.

In 2000, Recruit Holdings developed an innovative system, Career View, through which it hires employees with nontraditional backgrounds as three-year contractors. The system helps Recruit achieve two goals: expand its reach outside Japan's major cities and increase workforce flexibility—a real feat given that Japanese companies traditionally don't do layoffs. The program targets rural employees who lack the education and experience to land a job at a major Japanese corporation, hiring them as sales associates for regional offices near their hometowns. Six months after joining Recruit, these contractors meet with career counselors to discuss their goals. They also receive detailed performance reviews that lay out the skills they're developing, the skills they need to get their next job—generally at another company—and what they can do to bridge the gap between the two. Approximately 90% of Career View employees are able to get another job at the end of their three-

year stints, and Recruit is able to expand its regional presence and adjust its sales staffing up or down according to the economic cycle.

Lincoln can avoid layoffs because it requires employees to accept flexible assignments. Employees are expected to work extra hours when demand ramps up, and they understand that they'll work shorter hours when it ramps down. In addition, they can be reassigned to any other job, including one with a lower salary, for the duration of a downturn. When orders fell during the Great Recession, for instance, Lincoln moved some factory workers into sales. Those employees developed a deeper understanding of Lincoln, and customers benefited because the factory workers had a thorough knowledge of the firm's products. In addition, during economic lulls, Lincoln's leaders automatically shift their priorities to initiatives they aren't able to fully attend to when business is booming, such as developing quality improvements, scrap-reduction programs, research and development projects, and maintenance tasks—all enabled by the availability of skilled employees who have more time to help out when demand falls.

An uncertain future. Market shifts, new technologies, and new competition can require companies to do major restructuring. Before considering a layoff, they should see if they can take a cue from AT&T's transformation.

Michelin, for one, has embraced transformations as part of its workforce strategy. When Bertrand Ballarin joined the company, in 2003, one of his first jobs was to manage a factory in Bourges, France, that was going to be shut down. He gathered its managers and union reps, explained the situation, and gave them a year to come up with a plan to save the plant. After analyzing how other Michelin plants were producing airplane tires, one of three product lines handled in the factory, the team concluded that the Bourges facility had a better, more consistent industrial process for making them than the other plants did. The team successfully argued that Bourges should specialize in airplane tires and get a new research center to aid product development.

In 2013, Michelin began applying the lessons from Bourges to a factory in

Roanne, France, that was at risk of being shut down. From October 2014 to March 2015, more than 70 individuals, including leaders from headquarters, union representatives, plant managers, and employees, met to develop a transformation strategy for Roanne. Rather than closing the facility and laying off its employees, Michelin agreed to put €80 million into creating a new line of premium tires there; the head count would fall from 850 to 720 employees through natural attrition. Instead of the traditional four teams working Monday to midday Saturday, the plant would reorganize into five teams that kept operations running seven days a week around the clock, and all employees would work six additional days a year. These changes allowed the plant to flex production up or down by 12% according to market conditions. In addition, Michelin dedicated €2 million to programs for improving the quality of management and work-life balance—issues that had emerged during the transformation strategy planning—for the plants' employees.

However, there are times when a transformation isn't possible or the transformation itself results in layoffs. In these cases, companies have to ensure that employees are treated fairly. This isn't just about being a Good Samaritan. Datta found that companies tended to get better financial results after a layoff when employees thought it was handled equitably and done for strategic reasons rather than cost cutting.

Let's look again at what happened at Nokia in 2011, when its senior leaders realized the company needed another restructuring. Then-chairman Jorma Ollila was determined to avoid another Bochum. To help the company do so, a small team of senior leaders developed Nokia's Bridge program, which aimed to see that as many employees as possible had a new opportunity lined up the day their current job ended. Nokia opened Bridge centers in the 13 countries where the layoffs would take place. The program outlined five paths employees could choose from:

1. **Find another job at Nokia.** In order to avoid favoritism, selection committees were formed to determine which employees to retain, instead of having local managers choose.

2. **Find another job outside Nokia.** The centers offered outplacement services, including career coaching, résumé workshops, career fairs, and networking events.
3. **Start a new business.** Individual employees or teams could present business proposals to win grants of up to €25,000. Employees were given two months to develop their plans, as well as support such as coaching and mentoring, networking introductions, and training. Nokia took no stake in any of the funded businesses.
4. **Learn something new.** Nokia offered training grants for business-management and trade-school courses in many areas, including restaurant management, cosmetology, construction, and firefighting.
5. **Build a new path.** The company offered financial support to employees who had personal goals they wanted to accomplish, such as volunteering.

Nokia spent €50 million on Bridge, or about €2,800 per employee. That accounted for just 4% of the €1.35 billion it spent on restructuring from 2011 to 2013. As a result of the program, 60% of the 18,000 affected workers knew their next step the day their jobs ended. Overall, 85% of the Finnish Bridge participants said they were satisfied with the program, while 67% of global employees said they were. Furthermore, the layoff candidates and the remaining employees maintained or improved quality levels throughout the restructuring. Employees at the sites that were targeted for downsizing achieved €3.4 billion in new-product revenues, one-third of new-product sales—the same proportion they had brought in before. Employee engagement scores in all areas of the company held steady throughout the restructuring. And, unlike the situation in Bochum, there were no labor actions of any kind in the 13 countries where the layoffs happened. By all accounts Nokia had indeed found a better approach to workforce change.

In 2017, three years after selling its devices and services business to Microsoft, Nokia used an enhanced version of the Bridge program to handle its latest restructuring. Microsoft Finland has rolled out a similar program.

And Finland's government has even taken cues from Bridge and incorporated ideas from it into legislation outlining what companies that conduct layoffs are required to provide for affected employees.

One of the biggest questions organizations face as they grapple with a constantly shifting economic landscape is whether their current workforce can help them make the transitions necessary to their success. While companies tend to prioritize short-term financial results over the long-term well-being of their employees, employees are the lifeblood that enables a company to keep delivering the products and services that ultimately generate shareholder benefits. Michelin's and Nokia's experiences show that employees can and should be trusted to perform well, even when they know they might lose their jobs. For all companies, planning thoughtful workforce change instead of automatically resorting to layoffs is a better way to address the vicissitudes of technological transformation and intensifying competition.

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Getting Reorgs Right

by Stephen Heidari-Robinson and Suzanne Heywood

CHANCES ARE YOU’VE EXPERIENCED at least one and possibly several company reorganizations. Reorgs can be a great way to unlock value: Two-thirds of them deliver at least some performance improvement, and with change in the business environment accelerating, they are becoming more and more common. As John Ferraro, the former COO of Ernst & Young, told us, “Every company today is being disrupted and so must frequently reorganize to keep up with the incredible pace of change. Those that can do this well will thrive in the current environment and be tomorrow’s winners.”

At the same time, few reorgs are entirely successful. According to a McKinsey survey we conducted, more than 80% fail to deliver the hoped-for value in the time planned, and 10% cause real damage to the company. More important, they can be damned miserable experiences for employees. Research suggests that reorgs—and the uncertainty they provoke about the future—can cause greater stress and anxiety than layoffs, leading in about 60% of cases to noticeably reduced productivity. In our experience, this occurs because the leaders of reorgs don’t specify their objectives clearly enough, miss some of the key actions (for example, forgetting processes and people in their focus on reporting lines), or do things in the wrong order (such as choosing the way forward before assessing the strengths and weaknesses of what they already have). Yet the pitfalls they succumb to are common and entirely predictable. (See the sidebar “Why Reorgs Fail.”)

Why Reorgs Fail

A **MCKINSEY SURVEY OF 1,800 EXECUTIVES** identified the most common pitfalls for reorganizations (in order of frequency).

1. Employees actively resist the changes.
2. Insufficient resources—people, time, money—are devoted to the effort.
3. Employees are distracted from their day-to-day activities, and individual productivity declines.
4. Leaders actively resist the changes.
5. The org chart changes, but the way people work stays the same.
6. Employees leave because of the reorg.
7. Unplanned activities, such as an unforeseen need to change IT systems or to communicate the changes in multiple languages, disrupt implementation.

During our careers we have seen many reorgs, read lots of books and articles about which type of organization companies should adopt, and watched countless fads come and go. But we've found precious little advice on how to actually run a reorg. Many practitioners assert that reorgs are so fluid and dynamic that it would be naive and counterproductive to try to impose a process on them. Our conclusion, based on experience and analysis, is the opposite: *How* you go about your reorg is as important as—and sometimes more important than—*what* you do.

To help maximize the value and minimize the misery of reorgs, we have developed a simple five-step process for running them. We don't claim that this is rocket science; indeed, we're proud to assert that it is not. But we do know that companies need to take a more systematic approach if reorgs are to

deliver on their potential. And we have personally advised companies through the five steps in more than 25 reorganizations—companies with 100,000 employees or a handful, in the Americas, Europe, the Middle East, Asia, and Africa. In fact, survey data shows that companies using this process are three times as likely as others to achieve their desired results.

Step 1: Develop a Profit and Loss Statement

A reorganization is not some esoteric pursuit but a business initiative like any other—similar to a marketing push, a product launch, or a capital project. So you should start by defining the benefits, the costs, and the time to deliver. Remember that the costs are not just those of employees and consultants involved in the reorg; they also include the human cost of change and the disruption it can create in your business. We have accumulated data on these factors for 1,800 reorgs. Previous reorgs in your company, and the experience of employees who have worked elsewhere, can help you estimate the impact.

It may seem like common sense to weigh costs and benefits, but according to McKinsey research, only 15% of executives set detailed business targets for their reorgs, and 17% of reorgs are launched at the whim of an executive or because the leadership team believes the company needs to be shaken up—reasons that typically lead to problems. Both the objective of the reorg and the process for running it should be as fair, transparent, and reasonable as possible. Not only is that right for your employees, but it will make them much more likely to accept, get behind, and improve your ideas. (See the sidebar [“Communicating the Reorg.”](#))

Communicating the Reorg

TO BE CONSIDERATE of your employees and get their buy-in, the process needs to be fair and transparent.

Plan communications across all steps of the reorg

Start with transparent information: what will happen, when, and whom it will affect. Try to excite people only after it's clear what they will be doing (in step 4). If you try earlier, they won't listen, and you'll come across as detached.

Focus your communications on topics that matter to your people, not just to you

Sadly, few of your employees will care as much as you do about ROIC. You have to find something about the change that motivates them. Elon Musk says of the companies he's founded and their organization going forward, "People at Tesla, SolarCity, and SpaceX feel that they are doing things that matter: If we can advance sustainable energy by 10 years, that is 10 years of less carbon."

Make sure communication is in person, not just in e-mail cascades

Too often your carefully crafted e-mails will get no further than your direct reports' in-boxes. Make sure your leaders are spelling out the practicalities of the reorg for their staffs and answering employees' questions.

Communication should be two-way

This is especially true in steps 4 and 5, when you are trying to get the details of the reorg right and ensure that it is working properly. On-the-ground feedback from your staff is essential. Reflecting on his experience of reorganizations, John Browne, the former CEO of BP, told us, "Your people are sometimes aware of what is going on before you are, so you need to listen to them."

Idea in Brief

The Problem

Most reorganizations fail to deliver on their initial promise, for several reasons: They run into employee resistance, they're not given sufficient resources, and they distract people from day-to-day work.

What's Missing

The biggest reason for disappointing results, though, is that few organizations follow a rigorous, disciplined process—even though reorgs are a common occurrence in large companies.

The Solution

The authors propose a five-step process: Begin with a profit and loss estimate, inventory your strengths and weaknesses, consider multiple options for the new organization, focus special attention on execution, and assume you'll need to make course corrections.

Let's consider the case of an international media company. Its reorg started with an exercise to define the revenue-improvement opportunity worldwide. At the time, it was a federation of local businesses with no net growth. Teams of company strategists and business experts estimated that a more integrated global approach could significantly grow flat revenue and set a specific target for the reorg. The cost of internal project support and external consultants was agreed on, and a timeline was proposed: The new organization would ideally be set up and running within a year—in time to deliver results in the latter half of a new three-year business plan. A reorg P&L had been constructed.

Step 2: Understand Current Weaknesses and Strengths

No surgeon would start operating on a patient before conducting tests and reaching a diagnosis. And when excising a tumor, he or she would be careful to avoid removing healthy tissue. So should it be with a reorg. Unfortunately, this step is often skipped, which means that changes at best have no impact

and at worst undermine previous strengths. Those companies that do take the time to self-diagnose before embarking on major surgery typically rely on interviews with senior executives to get input. That's a good place to start, but we would recommend adding an electronic survey, which will enable you to capture a companywide range of input and to see the differences between headquarters and the front line and between levels and geographies. In addition, since reorgs are all about performance improvement, take time to understand how outcomes vary across the business. For example, if you have multiple sales teams, which one is most successful and why? These inputs will help you decide what to retain, what to roll out elsewhere, and what to change.

The media company interviewed 23 leaders across all parts of the business, using a “card sort” in which 40 attributes of the existing organization—such as innovation, local responsiveness, and leadership bench strength—were written on cards, and interviewees were asked to categorize them as “significant issue,” “somewhat of an issue,” or “not an issue.” This process highlighted problems that the company was having finding the right people to fill roles, sharing information across geographies, and incentivizing innovation. Yet the company scored well on P&L accountability and local responsiveness—strengths that needed to be preserved. (Although these interviews were helpful, we realized in retrospect that the responses represented too thin a slice of the organization. In subsequent reorgs elsewhere in the company, we used electronic survey tools that captured a much wider range of opinions across levels, business units, and geographies.)

Step 3: Consider Multiple Options

The next step is to decide on the design of your new organization. You can take one of two approaches. You can change the entire organizational model—for example, organizing by customer segments instead of along geographical lines. That approach is best if your organization is completely broken (although such cases are rare) or is facing a fundamental market shift that cannot be navigated under the current model. Or you can change only those

elements that don't work—for example, altering the executive board process for financial approvals, removing a layer of middle management, or upgrading your frontline leaders while leaving the rest of the organization unchanged. That approach is best when the overall organization works well or the focus is on cutting costs. The analysis you conducted in the first two steps will help you make the choice. If in doubt, choose the second approach.

A common mistake in this step is to focus on *what the organization looks like* (its reporting structure, for instance) and forget about *how it works* (management and business processes and systems; and the numbers, capabilities, mindsets, and behaviors of its people). In our experience, the latter is usually more important than the former.

Finally, you should explicitly choose from a number of options for exactly how to restructure your organization. Any solution has its downsides; only by weighing alternatives will you see what you might gain and what you might lose. Too often leaders realize late in the day that they missed something in the original design. If they insist on adding it later, the company may end up with a push-me-pull-you design that blunts the effectiveness of the new organization and unnecessarily complicates people's lives.

At the media company, the top 12 global business leaders gathered offsite to debate the relative merits of three options. They were assigned to teams—one for each option—and asked to advocate for their given option (no negatives allowed) and to answer questions from the other teams. Leaders who were expected to dislike a particular model were deliberately put on the team for that model: For example, the most autonomous local leaders were put on the team for the most centralized option.

During the debate it became increasingly clear that the most centralized model was the only one that would provide sufficient benefits to justify the disruption and the human cost of the change. At the end of the meeting, nine of the 12 leaders voted for that option, and the specific concerns of the remaining three were accounted for in the detailed design. After the exercise, the CEO reflected, “There is always more than one right answer, so how you

bring people along and get them behind the new organization is really important. Through the workshop, we came to a good answer, and—perhaps more important—we brought our leadership team along with us.”

Step 4: Get the Plumbing and Wiring Right

After step 3, most executives stand back, trusting their teams to handle the details of the new organization and the transition plan. External consultants usually clock off at this point as well. Yet we’ve repeatedly found—and a 2014 McKinsey survey confirmed—that step 4 is the hardest part of the reorg to get right. The secret is knowing all the elements that need to change and planning the changes in the right sequence. For example, you must create new job descriptions before the jobs can be filled, and they must be filled before you start location moves, potentially across countries. Similarly, you need to agree on how your P&L will be managed before you can allocate costs and revenues, and only then can you design the required IT changes, test them, and ultimately implement them. All this takes effort, and if you miss something in any area of the detailed design—structural changes, processes and systems, or people—you may either hold up the whole reorg or find that your new organization has been launched half born. In many cases the organization has changed but the systems (notably the P&L) have not, and leaders are left driving a fast car with no steering wheel.

Executives at the media company put in extra effort at this stage. The CEO continued to spend significant time on the reorganization; leaders were appointed to their new roles before the switchover so that they could begin to own and steer the work; and the reorg project team members moved from managing the process out of HQ to visiting the regional businesses that would be most difficult to transition and working with the local management teams to hammer out the plan. In particular, they took pains to understand how the P&L of each local business broke down and who would be responsible for each revenue or cost lever in the new organization. Of course, this process highlighted previously unappreciated challenges—such as the fact that

customer segmentation, which was clear at the global level, was sometimes less clear in a few countries where customer groups blended together; and the need to account for acquisitions that were midway through integration when the detailed design was developed. This prompted the company to make some tweaks and exceptions to its new structure and processes and to lengthen transition periods for some units. But its leaders stood fast on something we've found to be a fundamental rule for successful reorgs: 80% of the business (by revenue, profit, and people) must make the change, and the exceptions must not be allowed to hold up progress for the rest.

Step 5: Launch, Learn, and Course Correct

No matter how much thought and preparation you put into a reorg, it's unrealistic to expect that it will work perfectly from the beginning. As Nancy McKinstry, the CEO of another client—the information services company Wolters Kluwer—says, “You have to live with and digest it, and rapidly course correct when you find issues.” That doesn't mean you need to do a 180 in the design as soon as you hit a snag. But you do need to encourage everyone to spot and point out the new organization's teething problems, openly debate solutions, and implement the appropriate fixes as soon as possible, in line with the logic of your original plans.

The media company's reorg was altered in several ways after the launch. One activity around developing content, which had been allocated to a new business line, was returned to its original unit, because synergies that had been persuasive on paper turned out to be less impressive in practice. Back-office activities, untouched by the revenue-focused reorg, were further consolidated afterward, bringing cost savings into the mix.

Within three years of the reorg, the company had met its goal: The issue of flat revenue had been addressed and the growth target met.

If you're contemplating a reorg, you owe it to your shareholders and

employees to follow a rigorous process rather than winging it, as so many leaders do. You'll make better decisions, keep your people more involved and engaged, and capture more value.

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Reigniting Growth

by Chris Zook and James Allen

MOST SUCCESSFUL COMPANIES EVENTUALLY FACE a predictable crisis that we call *stall-out*—a sudden large drop in revenue and profit growth or a collapse of once high shareholder returns to well below the cost of capital. Stall-out occurs when the growth engine that powered a company to success stops working. This rarely happens because the business model has suddenly become obsolete—a common misconception. Rather, our research shows that the business has almost always become too complex, most often owing to bureaucracy that slows the company’s metabolism, or internal dysfunction that distorts information and hampers managers’ ability to make rapid decisions and take swift action on them. When we talk to executives about the symptoms of stall-out, their words vary, but the reasons remain the same. *We’ve lost touch with customers. We’re drowning in process and PowerPoint. We have no shortage of opportunities, but somehow we can no longer act decisively. What was once such a high-energy ride now feels like trying to pilot a plane with no thrust and unresponsive controls.*

In an analysis of 8,000 global companies, we found that two-thirds of those successful enough to reach \$500 million in revenue faced stall-out over the 15 years ending in 2013—including notables such as Panasonic, Time Warner, Carrefour, Bristol-Myers Squibb, Alcatel-Lucent, Philips, Sony, and Mazda. More alarming still, for 50 large companies in prolonged stall-out, we found that the onset had usually been sudden: Momentum fell sharply over just a year or two, with growth rates dropping from double digits to low single digits

or even negative numbers—a finding consistent with past research (see “When Growth Stalls,” HBR, March 2008).

To be sure, external forces put pressure on incumbent companies. Strategy—the external chessboard of business—still matters. Yet competitive strategies are more similar than they used to be, more easily copied, and of shorter duration. The roots of success or failure increasingly lie in the ability of companies to remain fast, perceptive, innovative, and adaptable. Internally thriving companies can respond to shifts in their competitive environments, identifying—and executing—strategies that sustain their dominance. When we polled 377 business leaders, 94% of those in companies with revenue of more than \$5 billion told us that internal dysfunction—not lack of opportunity or unmatched competitor capabilities—was now the main barrier to their continued profitable growth.

Yes, stall-out may be predictable, but it can be overcome. We argue in a forthcoming book that most companies with sustainable growth share attitudes and behaviors: (1) They view themselves as business insurgents, fighting in behalf of underserved customers; (2) they have an obsession with the front line, where the business meets the customer; and (3) they foster a mindset that includes a deep sense of responsibility for how resources are used and for long-term results. Because these qualities are most vibrant in companies led by bold, ambitious founders, we call them “the founder’s mentality.” Since 2000, returns to shareholders in large public companies where the founder is still involved have been three times those for other companies. But any leadership team can harness the revitalizing effects of the founder’s mentality. In some cases, a once dominant mindset has been lost over time and may need to be rebuilt from a few vestiges. But these three qualities can help any company restart its growth engine by removing gunk and complexity that has built up over the years, inhibiting the clean execution of strategy.

1. Rediscover Your Insurgent Mission

When stall-out occurs, it is almost always connected to creeping complexity. “No single bad decision or tactic or person was to blame,” Howard Schultz said after returning to the CEO position at Starbucks in 2008 amid shrinking revenue, collapsing margins, and a decline in stock price of more than 75%. Starbucks’s stall-out was sudden and dramatic, he acknowledged, but it resulted from damage that had been “slow and quiet, incremental, like a single loose thread that unravels a sweater inch by inch.”

Idea in Brief

The Problem

Growing companies often face the predictable crisis of stall-out—a sudden large drop in revenue and profit growth. The culprits are usually complexity and bureaucracy.

The Solution

Leaders need to rediscover the “founder’s mentality”—attitudes and behaviors that are strongly associated with founding management teams and can revitalize the business.

The Principles

Stalling companies should drastically reduce complexity and excess cost, refresh the mission, and configure the organization to focus obsessively on the business’s front line. Finally, they should instill an owner’s mindset that eschews bureaucracy and celebrates speed and accountability.

To begin tackling stall-out, companies need to strip away complexity and excess cost in order to liberate resources, narrow focus, and harness the vigor that drove the company’s early growth. We studied 10 successful rescue-and-rebirth operations and found that all of them involved reducing operating costs by at least 8% and sometimes more than 25%.

Successful attacks on complexity are led from the top down and proceed in a sequence. First the company must shed noncore assets and businesses. Next it must develop a simpler strategy for the remaining businesses. Then it can attack complexity in the core processes. Finally, it can focus on reducing product complexity in design, variations, and customization. We've seen leadership teams attempt transformation in the reverse order, only to become trapped in details and wear down the organization before getting to what really makes most transformations successful: reducing high-level complexity and cost.

We have found that as companies grow in size, internal budget processes become democratic, spreading resources evenly across businesses and opportunities. But democratic investment in the face of crisis is a sure path to mediocrity. The opposite is needed to reverse stall-out. At companies where it was avoided, leaders had made bold investment decisions to redifferentiate the company, usually establishing a major new capability that set off waves of growth.

Once back in shape, companies must renew their view of themselves as business insurgents. This does not require promoting a martial culture or abusing the metaphor of "waging war" on competitors. Rather, companies should view their customers as underserved and their industries as setting insufficient standards, and should constantly emphasize what is special about themselves. Bold goals—not just the aim of living to fight another day—will sustain growth. As they become very large, organizations may find maintaining an insurgent mission hard, but it's not impossible. Google's mission to "organize the world's information," for example, is at once specific to Google and nearly infinite in its ambition.

A company should even be prepared to shrink significantly if that's what is needed to regroup, redeploy, and restart profitable growth. Consider the case of Perpetual, the oldest trust company in Australia, which recovered from stall-out by reducing its operating costs by 20%, stripping away noncore businesses, and rejuvenating around its founder's original mission.

Established in 1886 to manage trusts and estates for Australia's scions, Perpetual led the market for most of its history. But as it grew, it diversified into 11 new business areas, and by 2011 the company was struggling. Its share price had fallen from a high of \$84 to \$24 in only four years. Profits were down by nearly 70%, with no bottom in sight. Shareholders were calling publicly for a major overhaul, and the company had hired its third CEO in 12 months, Geoff Lloyd.

When he arrived, he "found an organization that was internally competitive and externally cooperative," Lloyd told us. "We had grown incredibly complex over time by entering more businesses, and we were not the leader in most of them." Lloyd concluded that to save Perpetual, he would have to return the company to its core mission: the protection of Australia's wealth. That, he realized, meant making the company "faster, more confident, and, above all, simpler."

Lloyd began by replacing 10 of the 11 members of the management team with people who had no vested interest in past decisions. With his new staff in place, he launched Transformation 2015, five initiatives designed to bring about swift complexity reduction at all levels. One was the "portfolio" initiative, which reduced the number of businesses from 11 to three (just two businesses were responsible for about 95% of profits), cut real estate holdings by half, and eliminated more than 100 legacy funding structures. Another, the "operating model" initiative, reduced the staff at headquarters by more than 50%. Lloyd and his team found that back-office support, staff functions, and redundant controls accounted for 60% of total costs. In other words, the company was putting only 40% of its money toward sales, customer service, and investment—its core activities. Furthermore, it was relying on more than 3,000 computer systems and applications.

Cutting back—on businesses, staff, computer systems, and more—was central to the transformation plan. But Lloyd and his team also crafted a plan to gain market share by investing in the company's core. He convened town hall meetings, which had never before been held at Perpetual, to discuss the

company's situation and its future and to reignite enthusiasm for its core values. "We labored over the wording of our mission and strategy," Lloyd told us, explaining that he felt it was essential for employees to refocus on the founding principles of the company. In the process, he learned a remarkable thing: Perpetual's original trust business was so strong that it still had its first customer—125 years later.

His strategies brought about a stunning turnaround. Perpetual's stock price has more than doubled since Lloyd took over; employee engagement has measurably increased; the company is gaining share in its core markets; and net profits have tripled.

2. Obsess Over Your Business's Front Line

Companies that sustain growth live and breathe the front line of their business. This obsession, which can often be traced back to a strong founder, shows up in three ways: an elevated status for frontline employees, a preoccupation with individual customers at all levels of the company, and an institutional curiosity about the details of the business. A frontline obsession is most obvious in "high-touch" consumer businesses such as luxury hospitality. But the trait can exist in subtler ways in a range of industries: Consider the product obsession of Steve Jobs and the legendary attention to detail of the wine pioneer Robert Mondavi, who believed in the saying "The best fertilizer for a vineyard is the owner's footsteps."

The Home Depot, the largest home-improvement retailer in the world, provides an example of how losing a frontline obsession can lead to stall-out—and how renewing it can reignite growth. The company's initial success could be traced to its remarkable founders, Bernard Marcus and Arthur Blank, who devoted themselves to building a close advisory relationship with customers. Their corporate mantra was "Whatever it takes." The founders even trained store employees in customer service themselves. Employees, in turn, offered clinics on home improvement projects for customers and were always available in stores to provide knowledgeable advice. The strategy set the

company apart and generated powerful customer loyalty, and for years The Home Depot was a major success story. From its founding, in 1978, until 2000, it consistently eclipsed its 20% annual earnings growth targets. But in December 2000, after missing an earnings target and having become increasingly concerned about antiquated systems—especially IT—in a company that was approaching \$50 billion in revenue, the board of directors hired Robert Nardelli, a senior executive from GE, to introduce some big-company discipline as CEO.

Nardelli created a command-and-control environment. By early 2006, 98% of the company's top 170 executives were new to their jobs, and 56% of the new managers at headquarters had come from the outside. Fresh leadership, especially in the area of systems, was probably needed, but this changing of the guard failed to build on the deep strengths that had once made the company special and beloved by its customers. Nardelli and his team neglected customer relationships and frontline enthusiasm in favor of boosting quarterly profits. Many long-serving full-time employees were replaced by lower-paid part-time workers, and customer service collapsed. "Do it yourself," some people joked, was now "Find it yourself." When the University of Michigan released its 2006 American Customer Satisfaction Index, The Home Depot had slipped to last among major U.S. retailers. The board held meetings in the field and found a consistent pattern: concern for the future, disempowerment of longtime store employees, and a feeling that the social contract between the company, its employees, and its customers was being breached.

Greg Brenneman, the longest-serving board member and a global turnaround expert, told us, "You could see the serious trouble bubbling up under the surface. Store managers were feeling shackled by dozens of financial templates and metrics that took time away from customers and running the stores. The most experienced store employees, the real experts on plumbing or electricity, had been let go and replaced with less experienced and cheaper part-time store workers. Foot traffic, the lifeblood of any retailer, was dropping. New stores were not generating good returns, leading to further

staff cuts. We were stalling out and needed to change course.”

The deterioration of the customer experience was at the root of the company’s woes, and thus it illuminated a path back to sustainable growth. In 2007 the board replaced Nardelli with Frank Blake. On his very first day on the job, Blake spoke to all employees using The Home Depot’s internal television station and quoted extensively from Marcus and Blank’s book, *Built from Scratch*. In particular, he highlighted two of their charts. One listed their core values, and the other gave pride of place, at the top of an inverted triangle, to the company’s front line: its stores, where customers and employees interact.

Many of Blake’s first initiatives focused on restoring the “orange-apron cult”: knowledgeable store employees, easily identifiable by their aprons, who focused on high levels of customer service. Taking advice from Marcus, Blake also began anonymously visiting stores on “undercover missions,” as he called them. These proved so valuable that he instructed his senior executives to adopt a “management by walking about” approach, something most had never done before.

Like Lloyd at Perpetual, Blake then set out to reduce complexity, restructuring the businesses and closing money-losing stores—essentially, shrinking to grow. He also increased the employee bonus pool by a factor of seven, rehired some veterans, and asked store managers to return to the pre-Nardelli policy of giving out honor badges to employees who had been exceptionally attentive to customers.

Eight years ago The Home Depot had stalled out and was facing the prospect of free fall. But as of the end of 2015, thanks to Blake’s renewal of the founders’ mentality, the company has reenergized its employees and repersonalized its customer experience—a return to core principles that has driven the company’s stock from about \$25 a share in 2009 to more than \$130 by December 2015.

3. Instill an Owner’s Mindset

The third factor in reversing stall-out involves a management idea that first came into vogue 40 years ago: the owner's mindset. Designed to instill balance-sheet discipline and accountability by aligning employees and shareholders, this concept is frequently misunderstood. Too often, it implies an incumbent's mindset: a concern with hunkering down and extracting value from the existing business, and a loss of interest in innovating, serving customers uniquely, and fully valuing frontline employees.

At its best, the owner's mindset focuses on the long term, has a strong bias toward speed and action, and embraces personal responsibility for employees' actions and for how resources are used. The power of the owner's mindset is central to the rise of the private equity industry—a reaction against the bureaucracy, poor cost management, and complexity that beset many large companies. When we analyzed the returns of deals within several private equity funds, we found that businesses sold by large public companies in which management had seemingly lost the incentives of ownership subsequently earned nearly 50% more than the others. After private equity firms had restored the owner's mindset, these companies benefited from increased speed, reduced bureaucracy, a more critical evaluation of noncore businesses, and an improved management of costs.

How to Get Started

Here are some ways to prepare your team to reignite growth.

Create a “founder's mentality” scorecard

Manage it as a strategic asset. Does your mission keep you fighting in behalf of your customers? Does your company focus on the front line of the business? Do employees embrace an owner's mindset that eschews bureaucracy, is focused on speed, and demands personal accountability?

Benchmark against your most successful upstart competitors

Are they winning on speed and cost? Commit as a leadership team to closing the gap.

Launch a campaign against bureaucracy

Look for management layers and processes that have outlived their usefulness. Eliminate them.

Get the leadership team out of the office

The front line is where the answer to a growth stall-out is most likely to reside.

Reexamine the precepts and practices of your founders or early leaders

When was the company at its best? What has been lost along the way that needs to be restored?

Look outside for help inside

You might reach out to retired founders or acquire fast-growing, founder-led young companies.

A case in point is Dell, the best-performing large company of the 1990s. It began to stall out a decade later, when some of the advantages of its legendary direct sales model began to narrow, and the company saw its market value decline from \$107 billion in 1999 to just under \$25 billion in 2013—a 77% drop. When Michael Dell returned as CEO to renew the company he'd founded, he concluded that he could more effectively make the changes he wanted if he took the company private, which he did in partnership with Silver Lake in 2013.

“In going private,” he told us, “it’s amazing how we have been able to speed things up. We simplified meeting structures, went to a board of directors with just three members, and increased our appetite for risk. When big committees talk about risk, they talk about risk committees, how risk is

bad, the mitigation procedures of risk, and the reaction of the analysts. For us risk is now about innovation and success. It has been very energizing to our 100,000 employees to feel the long-term focus coming back into the company.”

Customer satisfaction scores have rebounded, and Dell’s employee satisfaction scores are the highest in the company’s history. Its core businesses are outgrowing their industry peers again, and Dell is investing heavily to redefine its model for the long term.

Going private is not for all, of course. An owner’s mindset can be instilled without taking the business off the market. Companies can generate “mini-founder” experiences by, for example, creating franchises with direct ownership stakes or encouraging employees to create internal startups that might later be spun off. They can encourage investors with a more long-term focus and link executive pay more closely to long-term performance measures. They can change the timing of internal meetings to increase the speed of decision making. (Some leadership teams, for instance, hold Monday meetings and Tuesday follow-ups with the aim of removing blockages to important decisions and actions.) They can reach outside the company to partner with insurgents and perhaps eventually acquire them. Or they can bring founders into the company through acquisition and work to retain them and their entrepreneurial energy. This has been the approach of companies such as Cisco, Google, and eBay.

Initially a huge success story, and one of the first dot-coms to radically scale up, eBay stalled out in the late 2000s—a victim of Amazon and other online retail competitors and of its own diversification, which included acquiring Skype. Its aging e-commerce auction model seemed vulnerable to competitors, and its share price had fallen from \$59 in 2004 to a low of \$10 in 2009.

When John Donahoe became the CEO at eBay, he recognized that to get the company moving again, he would have to divest noncore businesses, revamp eBay’s e-commerce platform, and, most important, shift its focus to a hotbed of innovation: mobile commerce. To successfully enter the mobile

space, however, he would have to turbocharge the company's innovation pipeline and capabilities—and the only way he could manage that, he told us, would be “to fill eBay with young entrepreneurs.” In doing so, he was guided by a general truth about transforming stalled-out companies: Often, outside forces need to be brought in.

Not long after he took over, Donahoe began to acquire small, founder-led companies at a rate of about one every three months. He wasn't interested solely in acquisitions and technological innovations. He wanted to retain the founders and their teams, frequently so that he could move them into core-business positions. “Many of these founders like our approach,” Donahoe told us, “because they can innovate at scale in eBay, and they get to expose their innovations to 130 million customers globally.”

One of them was Jack Abraham, the 25-year-old founder of Milo, a shopping engine that searched stores for the best-priced merchandise. At one of the regular Friday meetings that Donahoe held with company leaders under 30, Abraham raised his hand and proposed a major innovation for the home page. Donahoe told him to go figure out what resources he needed to explore the idea. Immediately after the meeting, Abraham found five of the best developers in the company, went out for drinks with them that night, and persuaded them to leave with him the next morning for two weeks in Australia, where they would be as isolated from California headquarters as possible and could work on developing a prototype.

What they came up with blew Donahoe away. “Had we asked a normal product team,” he said, “I would have gotten back hundreds of PowerPoint slides and a two-year time frame and a budget of \$40 million. Yet these guys went away, worked 24/7, and built a prototype. These guys build. They do no PowerPoint. They just build.”

Obviously, Donahoe's approach is best suited to fast-moving markets where incumbents need to constantly add technologies and build new capabilities. Not all these initiatives have been lasting successes. The fivefold increase in eBay's stock price during Donahoe's tenure was driven by many

things, including the success and spin-off of PayPal (whose independent status has enhanced its founder's mentality), yet it is a clear example of the power of pulling in business owners from the outside and harnessing their energy and entrepreneurialism.

Stall-outs are frightening for companies—if ignored or mishandled, they can lead to lasting reversals of fortune. But like any other daunting challenge, they can also be viewed as an opportunity. When we analyzed value swings on the stock market, we found that some of the biggest upturns occur when a company is forced to return to its core and redefine it in the process. Managers need not panic when stall-out occurs. Companies that reignite their mission, renew their obsession with the front line, and instill an owner's mentality throughout the organization can reach new heights.

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Reinvent Your Business Before It's Too Late

by Paul Nunes and Tim Breene

SOONER OR LATER, all businesses, even the most successful, run out of room to grow. Faced with this unpleasant reality, they are compelled to reinvent themselves periodically. The ability to pull off this difficult feat—to jump from the maturity stage of one business to the growth stage of the next—is what separates high performers from those whose time at the top is all too brief.

The potential consequences are dire for any organization that fails to reinvent itself in time. As Matthew S. Olson and Derek van Bever demonstrate in their book *Stall Points*, once a company runs up against a major stall in its growth, it has less than a 10% chance of ever fully recovering. Those odds are certainly daunting, and they do much to explain why two-thirds of stalled companies are later acquired, taken private, or forced into bankruptcy.

There's no shortage of explanations for this stalling—from failure to stick with the core (or sticking with it for too long) to problems with execution, misreading of consumer tastes, or an unhealthy focus on scale for scale's sake. What those theories have in common is the notion that stalling results from a failure to fix what is clearly broken in a company.

Having spent the better part of a decade researching the nature of high performance in business, we realized that those explanations missed something crucial. Companies fail to reinvent themselves not necessarily because they are bad at fixing what's broken, but because they wait much too long before repairing the deteriorating bulwarks of the company. That is, they

invest most of their energy managing to the contours of their existing operations—the financial S curve in which sales of a successful new offering build slowly, then ascend rapidly, and finally taper off—and not nearly enough energy creating the foundations of successful new businesses. Because of that, they are left scrambling when their core markets begin to stagnate.

In our research, we've found that the companies that successfully reinvent themselves have one trait in common. They tend to broaden their focus beyond the financial S curve and manage to three much shorter but vitally important hidden S curves—tracking the basis of competition in their industry, renewing their capabilities, and nurturing a ready supply of talent. In essence, they turn conventional wisdom on its head and learn to focus on fixing what doesn't yet appear to be broken.

Thrown a Curve

Making a commitment to reinvention before the need is glaringly obvious doesn't come naturally. Things often look rosier just before a company heads into decline: Revenues from the current business model are surging, profits are robust, and the company stock commands a hefty premium. But that's exactly when managers need to take action.

To position themselves to jump to the next business S curve, they need to focus on the following.

The hidden competition curve

Long before a successful business hits its revenue peak, the basis of competition on which it was founded expires. Competition in the cell phone industry, for instance, has changed several times—for both manufacturers and service providers—from price to network coverage to the value of services to design, branding, and applications. The first hidden S curve tracks how competition in an industry is shifting. High performers see changes in customer needs and create the next basis of competition in their industry, even as they exploit existing businesses that have not yet peaked.

Idea in Brief

High-performance companies rethink their strategies and reinvent their operating models before debilitating stalls set in.

In order to successfully jump from one financial S curve to the next, they do three things differently from their less-successful peers:

Focus On the Edges

They pay attention to the edge of the company and the edge of the market, to avoid the myopia that long-running success engenders.

Shake Up the Top Team

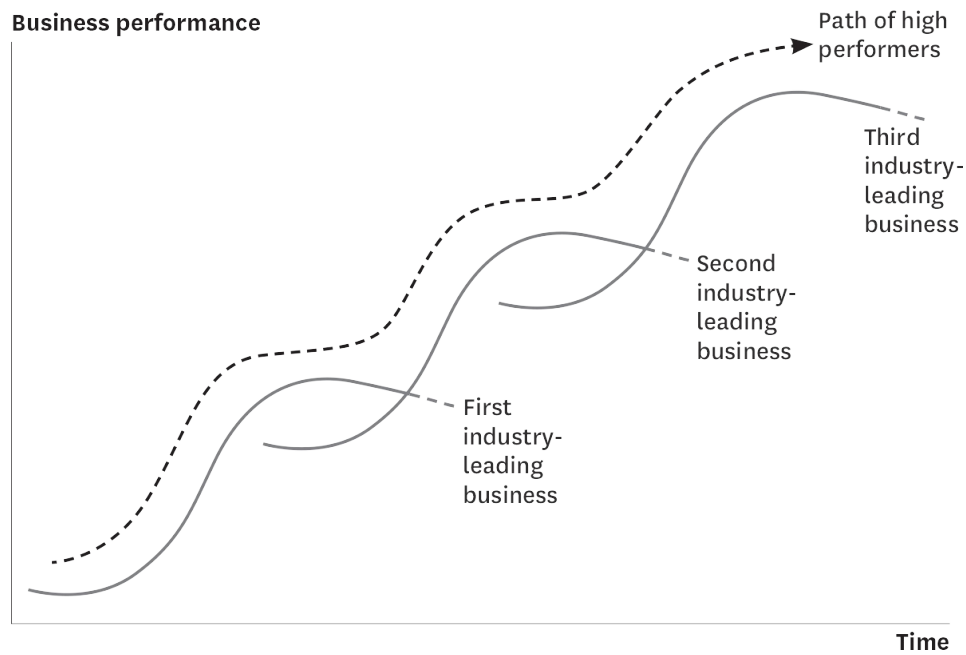
They change the makeup of the senior team earlier, and more radically, than their competitors do.

Maintain Surplus Talent

When other companies are cutting staff to cut costs, they go in the opposite direction: They cultivate serious talent with the capacity to grow new businesses.

Jumping the S curve

High performers are well on their way to new-business success by the time their existing businesses start to stall.



Netflix, for example, radically altered the basis of competition in DVD rentals by introducing a business model that used delivery by mail. At the same time, it almost immediately set out to reinvent itself by capturing the technology that would replace physical copies of films—digital streaming over the internet. Today Netflix is the largest provider of DVDs by mail and a major player in online streaming. In contrast, Blockbuster rode its successful superstore model all the way to the top, tweaking it along the way (no more late fees) but failing to respond quickly enough to changes in the basis of competition.

The hidden capabilities curve

In building the offerings that enable them to climb the financial S curve, high performers invariably create distinctive capabilities. Prominent examples include Dell with its direct model of PC sales, Wal-Mart with its unique supply chain capabilities, and Toyota with not just its production method but also its engineering capabilities, which made possible Lexus's luxury cars and the Prius. But distinctiveness in capabilities—like the basis of competition—is fleeting, so executives must invest in developing new ones in order to jump to the next capabilities S curve. All too often, though, the end of the capabilities

curve does not become apparent to executives until time to develop a new one has run out.

Take the music industry. The major players concentrated on refining current operations; it was a PC maker that developed the capabilities needed to deliver digital music to millions of consumers at an acceptable price. High performers are continually looking for ways to reinvent themselves and their market. P&G long ago recognized the untapped customer market for disposable diapers. The company spent five years perfecting the capabilities that would allow diapers to be priced similarly to what customers were then paying services to launder and deliver cloth diapers. Amazon.com CEO Jeff Bezos notes that it takes five to seven years before the seeds his company plants—things like expanding beyond media products, working with third-party sellers, and going international—grow enough to have a meaningful impact on the economics of the business; this process requires foresight, early commitment, and tenacious faith in the power of R&D.

The hidden talent curve

Companies often lose focus on developing and retaining enough of what we call serious talent—people with both the capabilities and the will to drive new business growth. This is especially true when the business is successfully humming along but has not yet peaked. In such circumstances, companies feel that operations can be leaner (they've moved far down the learning curve by then) and meaner, because they're under pressures to boost margins. They reduce both head count and investments in talent, which has the perverse effect of driving away the very people they could rely on to help them reinvent the business.

The high performers in our study maintain a steady commitment to talent creation. The oil-field services provider Schlumberger is always searching for and developing serious talent, assigning “ambassadors” to dozens of top engineering schools around the world. These ambassadors include high-level executives who manage large budgets and can approve equipment donations and research funding at those universities. Close ties with the schools help

Schlumberger get preference when it is recruiting. Not only does Schlumberger keep its talent pipeline flowing, but it's a leader in employee development. In fact, it is a net producer of talent for its industry, a hallmark of high performers.

By managing to these hidden curves—as well as keeping focused on the revenue growth S curve, it must be emphasized—the high performers in our study had typically started the reinvention process well before their current businesses had begun to slow. So what are the management practices that prepare high performers for reinvention? Let's look first at the response to the hidden competition curve.

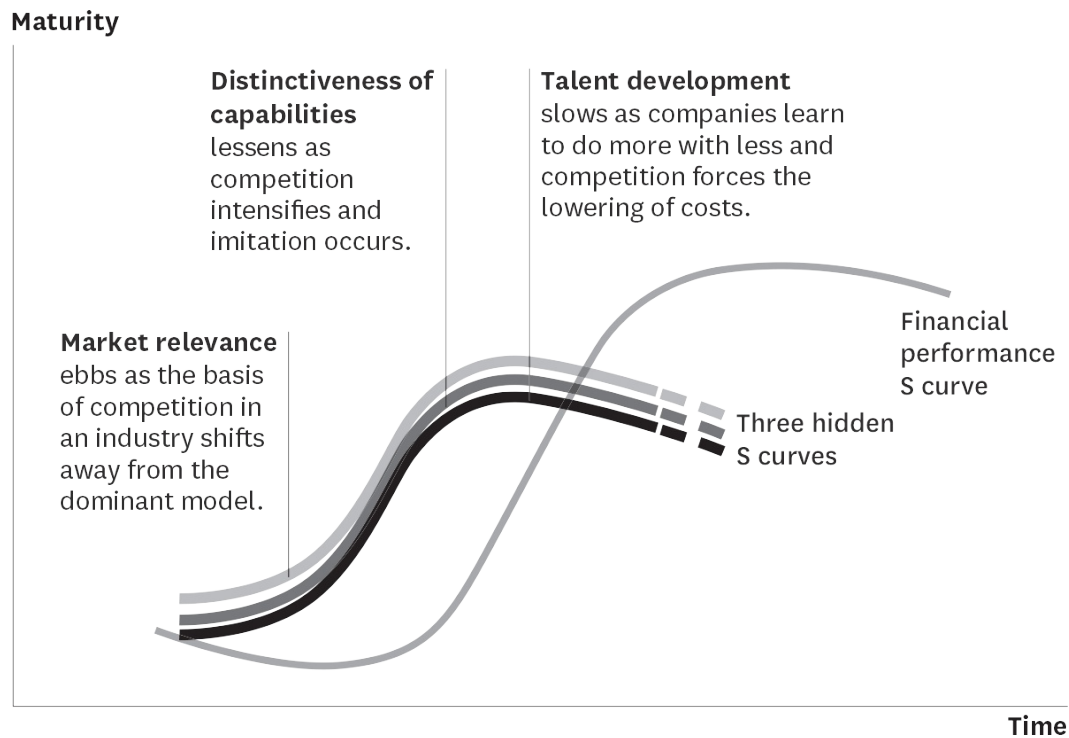
Edge-Centric Strategy

Traditional strategic-planning methods are useful in stretching the revenue S curve of an existing business, but they can't help companies detect how the basis for competition in a market will change.

To make reinvention possible, companies must supplement their traditional approaches with a parallel strategy process that brings the edges of the market and the edges of the organization to the center. In this “edge-centric” approach, strategy making becomes a permanent activity without permanent structures or processes.

The hidden S curves of high performance

Three aspects of a business mature—and start to decline—much faster than financial performance does. They need to be reinvented before you can grow a new business.



Moving the edge of the market to the center

An edge-centric strategy allows companies to continually scan the periphery of the market for untapped customer needs or unsolved problems. Consider how Novo Nordisk gets to the edge of the market to detect changes in the basis of competition as they're occurring. For example, through one critical initiative the pharma giant came to understand that its future businesses would have to address much more than physical health. The initiative—Diabetes Attitudes, Wishes, and Needs (DAWN)—brings together thousands of primary care physicians, nurses, medical specialists, patients, and delegates from major associations like the World Health Organization to put the individual—rather than the disease—at the center of diabetes care.

Research conducted through DAWN has opened Novo's eyes to the psychological and sociological needs of patients. For example, the company learned that more than 40% of people with diabetes also have psychological issues, and about 15% suffer from depression. Because of such insights, the company has begun to reinvent itself early; it focuses less on drug development and manufacturing and more on disease prevention and

treatment, betting that the future of the company lies in concentrating on the person as well as the disease.

Moving the edge of the organization to the center

Frontline employees, far-flung research teams, line managers—all these individuals have a vital role to play in detecting important shifts in the market. High performers find ways to bring these voices into the strategy-making process. Best Buy listens to store managers far from corporate headquarters, such as the New York City manager who created a magnet store for Portuguese visitors coming off cruise ships. Reckitt Benckiser got one of its most successful product ideas, Air Wick Freshmatic, from a brand manager in Korea. The idea was initially met with considerable internal skepticism because it would require the company to incorporate electronics for the first time—but CEO Bart Becht is more impressed by passion than by consensus.

If strategy making is to remain on the edge, it cannot be formalized. We found that although low and average performers tend to make strategy according to the calendar, high performers use many methods and keep the timing dynamic to avoid predictability and to prevent the system from being gamed.

As quickly as competition shifts, the distinctiveness of capabilities may evaporate even faster. By the time a business really takes off, imitators have usually had time to plan and begin their attack, and others, attracted to marketplace success, are sure to follow. How, then, do companies build the capabilities necessary to jump to a new financial S curve?

Change at the Top

Some executives excel at running a business—ramping up manufacturing, expanding into different geographies, or extending a product line. Others are entrepreneurial—their strength is in creating new markets. Neither is inherently better; what matters is that the capabilities of the top team match the firm's organizational needs on the capabilities S curve. Companies run into

trouble when their top teams stay in place to manage the financial S curve rather than evolve to build the next set of distinctive capabilities.

Avoiding that trap runs counter to human nature, of course. What member of a top team wants to leave when business is good? High performers recognize that a key to building the capabilities necessary to jump to a new financial S curve is the early injection of new leadership blood and a continual shake-up of the top team.

Early top-team renewal

Consider how the top team at Intel has evolved. Throughout its history, the semiconductor manufacturer has seen its CEO mantle rest on five executives: Robert Noyce, Gordon Moore, Andy Grove, Craig Barrett, and current CEO Paul Otellini. Not once has the company had to look outside to find this talent, and the transitions have typically been orderly and well orchestrated. “We discuss executive changes 10 years out to identify gaps,” explains David Yoffie, who has served on the Intel board since 1989.

Simple continuity is not Intel’s goal in making changes at the top, however; evolving the business is. For instance, when Grove stepped down from the top spot, in 1998, he was still a highly effective leader. If continuity had been Intel’s overwhelming concern, Grove might have stayed for another three years, until he reached the mandatory retirement age of 65. But instead, he handed the baton to Barrett, who then implemented a strategy for growing Intel’s business through product extensions.

About the Research

AT ACCENTURE, WE HAVE BEEN conducting the High Performance Business research program since 2003. Starting from the premise that all performance is relative, we examined sets of peer companies. Previous research on high performance had compared companies head-to-head across industries, but that approach ignored the differences in average profitability, maturity, and risk from one

industry to another, making it a contest among industries rather than among companies.

We settled on 31 peer sets for our initial study, encompassing more than 800 companies and representing more than 80% of the market capitalization of the Russell 3000 Index at the time. We analyzed performance in terms of 13 financial metrics to assess growth, profitability, consistency, longevity, and positioning for the future. In most cases, we applied the metrics over a 10-year span.

The businesses that performed extraordinarily well over the long term had all made regular transitions from maturing markets to new, vibrant ones. To find out how these organizations were able to maintain a high level of performance, we conducted years of follow-on investigation, creating special teams from our industry and business-function practice areas. Team members' expertise and experience was supplemented by contributions from independent researchers and scholars.

Today, the program includes regional and global studies of high performance, to take into account the explosive success of many emerging-market companies.

Indeed, each of Intel's CEOs has left his mark in a different way. Grove made the bold decision to move Intel away from memory chips in order to focus on microprocessors, a transition that established the company as a global high-tech leader. Since he took the helm, in 2005, Otellini has focused on the Atom mobile chip, which is being developed for use in just about any device that might need to connect to the web, including cell phones, navigation systems, and even sewing machines (for downloading patterns).

Through structured succession planning, Intel ensures that it chooses the CEO who is right for the challenges the company is facing, not simply the person next in line. And by changing CEOs early, the company gives its new leadership time to produce the reinvention needed, well before deteriorating revenues and dwindling options become a crisis.

Balance short-term and long-term thinking

Ensuring that the team is balanced with a focus on both the present and the future is another critical step in developing a new capabilities curve. When Adobe bought Macromedia in 2005, then-CEO Bruce Chizen took a hard look at his senior managers to determine which of them had what it took to grow the company to annual revenues of \$10 billion. What he found was a number of executives who lacked either the skills or the motivation to do what was necessary. Consequently, Chizen tapped more executives from Macromedia than from Adobe for key roles in the new organization. Those choices were based on Adobe's future needs, not on which executives were the most capable at the time.

Chizen wasn't tough-minded just with others. At the relatively young age of 52, and only seven years into his successful tenure, he handed over the reins to Shantanu Narayen, his longtime deputy. The timing might have seemed odd, but it made good sense for Adobe: The company faced a new set of challenges—and the need for new capabilities—as it anticipated going head-to-head against larger competitors like Microsoft.

In other cases, the executive team might need to gather fresh viewpoints from within the organization to balance long-established management thinking. Before Ratan Tata took over at India's Tata Group, in 1991, executives had comfortably ruled their fiefdoms for ages and rarely retired. But the new chairman began easing out those complacent executives (not surprisingly, some of their departures were acrimonious) and instituted a compulsory retirement age to help prevent the future stagnation of his senior leadership. The dramatic change opened dozens of opportunities for rising in-house talent who have helped Tata become India's largest private corporate group.

Organize to avoid overload

Finally, high performers organize their top teams so that responsibilities are more effectively divided and conquered. Three critical tasks of senior leadership are information sharing, consulting on important decisions, and

making those decisions. Although many companies have one group that performs all three functions, this can easily become unwieldy.

An alternative approach, which we observed in many high performers, is to split those tasks—in effect, creating teams nested within teams. At the very top are the primary decision makers—a group of perhaps three to seven people. This group then receives advice from other teams, so hundreds of people may be providing important input.

Surplus Talent

Business reinvention requires not just nimble top teams but also large numbers of people ready to take on the considerable challenge of getting new businesses off the ground and making them thrive. High performers take an approach that is, in its way, as difficult as changing out top leadership before the company's main business has crested: They create much more talent than they need to run the current business effectively—particularly talent of the kind that can start and grow a business, not just manage one. This can be a hard sell in the best of times, which is probably why so many avoid it.

One of the signs that a company has surplus talent is that employees have time to think on the job. Many of our high performers make time to explore a regular component of their employees' workweek. (Think Google and 3M.) Another is a deep bench—one that allows promising managers to take on developmental assignments and not just get plugged in where there is an urgent need. High performance companies aggressively search out the right type of candidate and then take action to strengthen individuals for the challenges ahead.

Hire for cultural fit

High performance companies begin with the expectation that they are hiring people for the long term—a perspective that fundamentally alters the nature of their hiring and development practices. They don't just look for the best people for the current openings; they recognize that cultural fit is what helps

ensure that someone will perform exceptionally well over time.

One company that gets this right is the Four Seasons Hotels and Resorts. It specifically looks for people who will thrive in a business that treats customers like kings—because, quite literally, some guests could be. “I can teach anyone to be a waiter,” says Isadore Sharp, CEO of the luxury hotel chain in his book *Four Seasons: The Story of a Business Philosophy*. “But you can’t change an ingrained poor attitude. We look for people who say, ‘I’d be proud to be a doorman.’”

Reckitt Benckiser also puts cultural fit at the top of its hiring priorities. Before candidates begin the application process, they can complete an online simulation that determines whether they are likely to be a good match with the firm’s exceptionally driven culture. The candidates are presented with business scenarios and asked how they would respond. After reviewing their “fit” score, they can decide for themselves whether they want to continue pursuing employment with the company.

Prepare for challenges ahead

Making sure that new employees are fit to successfully navigate the tough stretches in a long career requires something we call stressing for strength. At low-performer companies, employees may find themselves wilting when faced with unexpected or harsh terrain. High performers create environments—often challenging ones—in which employees acquire the skills and experience they will need to start the company’s next S curve. The goal is partly to create what our Accenture colleague Bob Thomas, in his book on the topic, calls “crucible” experiences. These are life-changing events, whether on the job or not, whose lessons help transform someone into a leader.

Crucible experiences can—and should—be created intentionally. When Jeff Immelt was still in his early 30s and relatively new in his career at GE, he was tapped by then-CEO Jack Welch and HR chief Bill Conaty to deal with the problem of millions of faulty refrigerator compressors—despite his lack of familiarity with appliances or recalls. Immelt later said he would never have become CEO without that trial-by-fire experience.

Give employees room to grow

After choosing and testing the right employees, companies must give them a chance to develop. To truly enable them to excel in their work, companies should take a hard look at exactly what people are required to do day by day.

UPS has long known that its truck drivers are crucial to its success. Experienced drivers know the fastest routes, taking into account the time of day, the weather, and various other factors. But the turnover rate for drivers was high, partly because of the hard physical labor required to load packages onto the trucks. So UPS separated out that task and gave it to part-time workers, who were more affordable and easier to find, allowing a valuable group of employees to concentrate on their capabilities and excel at their jobs.

Companies can also use organizational structure to provide employees with ample opportunities to grow. Illinois Tool Works, a global manufacturer of industrial products and equipment, is organized into more than 800 business units. Whenever one of those units becomes too large (the maximum size is around \$50 million in sales), ITW splits that business, thus opening up managerial positions for young talent. In fact, it's not uncommon for ITW managers to start running a business while they're still in their 20s.

And high performance businesses aren't afraid to leapfrog talented employees over those with longer tenure. After A.G. Lafley took over at P&G, for example, he needed someone to run the North American baby-care division, which was struggling. Instead of choosing one of the 78 general managers with seniority, he reached lower in the organization and tapped Deborah Henretta. Lafley's move paid off. Henretta reversed 20 years' worth of losses in the division and was later promoted to group president of Asia, overseeing a \$4 billion-plus operation.

Breaking the mold in one way or another—as leaders have done at UPS, ITW, and P&G—is critical to building surplus talent in the organization. It not only keeps key individuals (or groups, in the case of UPS's drivers) on board; it also signals to the organization as a whole that no compromises on talent will be made in order to achieve short-sighted cost savings.

Even top organizations are vulnerable to slowdowns. In fact, an economic downturn can exacerbate problems for companies already nearing the end of their financial S curve. (See the sidebar “Why Now?”) Even in the best of times, business crises—whether they are caused by hungry new competitors, transformational technology, or simply the aging of an industry or a company—come with regularity. Companies in other industries may be feeling great, while your business (or industry) faces its own great depression.

Why Now?

WHY DO ECONOMIC SLOWDOWNS call for innovation and reinvention? Reduced sales and increased discounting tend to squash companies’ revenue S curves. Worse, the S curves do not stretch back out as conditions improve. Companies lose ground in four key areas:

Intellectual Property

Patent offices don’t put years back on the clock just because a company’s sales tapered off in a bad economy. This can have a devastating effect on, for instance, pharmaceuticals, where generics constantly challenge proprietary drugs as patents expire.

Technology

Economic downturns can slow the introduction of new technologies, but not for long. Witness the fate of some manufacturers of plasma televisions, which have been forced to exit the business under the double whammy of the downturn and steady improvements in LCD and LED sets.

Competition

Companies looking to grow sales in a recession must take market share from competitors. As they press advantage, already weakened companies face possible extinction. In the movie-viewing market, for

instance, companies that dominate newer channels have driven bricks-and-mortar retailers into bankruptcy.

Consumer Tastes

Novelty wears off, regardless of the economy. Even though they've bought less during the downturn, consumers accustomed to the idea of "fast fashion," for example, will not be interested in last year's styles.

In the face of all these challenges, companies that manage themselves according to the three hidden S curves—the basis of competition, the distinctiveness of their capabilities, and a ready supply of talent—will be in a much better position to reinvent themselves, jumping to the next S curve with relative ease. Those that do not are likely to respond to a stall in growth by creating an urgent and drastic reinvention program—with little likelihood of success.

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How to Protect Your Job in a Recession

by Janet Banks and Diane Coutu

IN A TROUBLED ECONOMY, job eliminations and hiring freezes seem almost routine, but when your own company's woes start to make headlines, it all hits home. Intellectually, you understand that downsizing isn't personal; it's just a law of commerce, but your heart sinks at the prospect of losing your position. While you know that passivity is a mistake, it's hard to be proactive when your boss's door is always closed, new projects are put on hold, and your direct reports look to you for reassurance. Don't panic. Even though layoff decisions may be beyond your control, there's plenty you can do.

That's what we've observed in numerous layoffs over the years and in research on how people respond to stressful work conditions. (Author Janet Banks oversaw a dozen downsizings as a vice president in human resources at Chase Manhattan Bank and a managing director at FleetBoston Financial. Author Diane Coutu studied resilience during her time as an affiliate scholar at the Boston Psychoanalytic Society and Institute.) We've seen that while luck plays an important role, survival is most often the result of staring reality in the face and making concrete plans to shape the future. Machiavellian as it may seem, holding on to your job when the economy softens is a matter of cool strategic planning. In our experience, however, even the savviest executives are ill-prepared to deal with job threats. Here's what you can do to keep your career moving and minimize the chances that you'll become a casualty.

Act Like a Survivor

A popular partner in the Brussels office of McKinsey & Company mentored hosts of junior consultants. When asked for advice on getting ahead, he always gave the same reply: “If you want to be a partner, start acting like one.” The corollary of this advice is even more important: During a recession, you have to start acting like a survivor if you hope to escape the ax.

Studying the thinking of survivors reveals a surprising paradox. Though creating a plan to weather layoffs requires an almost pessimistic realism, the best thing you can do in a recession is lighten up. Keep your eye firmly on the eight ball, but act confident and cheerful. Research shows that being fun to be around really matters. Work by Tiziana Casciaro and Miguel Sousa Lobo, published in a June 2005 HBR article, “Competent Jerks, Lovable Fools, and the Formation of Social Networks,” shows that while everyone prefers working with a personable superstar to an incompetent jerk, when people need help getting a job done, they’ll choose a congenial colleague over one who is more capable but less lovable. We’re not suggesting that you morph into Jerry Seinfeld; being congenial and fun isn’t about bringing down the house. Just don’t be the guy who’s always in a bad mood, reminding colleagues how vulnerable everyone is. Who wants to be in the trenches with him?

Of course, putting on a good face can be psychologically exhausting when rumors of downsizing spread. Change always stirs up fears of the unknown. Will you land another job? How will you pay the mortgage? Can you find affordable health insurance? Those are all valid concerns, but if you stay positive, you’ll have more influence on how things play out.

Survivors are also forward looking. Studies of concentration camp victims show that people made it through by imagining a future for themselves. The power of focusing on the times ahead is evident even among people suffering the blows of everyday life. As Freud wrote in “Mourning and Melancholia,” a critical difference between ordinary grief and acute depression is that mourners can successfully anticipate a life where there will once again be joy and meaning.

Idea in Brief

Your company has a strategy for surviving hard times. But do you? In a troubled economy, layoffs can hit with frightening regularity. Sure, these decisions may be beyond your control. Yet you *can* take steps to protect your job, say Banks and Coutu.

Three practices can help you minimize the chances of becoming a casualty: 1) Act like a survivor by demonstrating confidence and staying focused on the future. 2) Give your boss hope by empathizing with him or her and inspiring your team to pull together. 3) Become a corporate citizen by taking part in meetings, outings, and new projects designed to support a reorganization.

In your job, there's no better way to look forward than to stay focused on customers, for without them no one will have a job in the future. Anticipating the needs of your customers, both external and internal, should be your top priority. Prove your value to the firm by showing your relevance to the work at hand, which may have shifted since the economy softened. Your job is less likely to be eliminated if customers find that your contribution is indispensable.

Being ambidextrous will increase your chances of survival as well. In one company we know of, senior staff members were often expected to play more than one role to keep expenses in check. When the organization's new chief operating officer decided he needed a chief of staff, he chose a person who continued to manage a human resources team, thereby eliminating the need for additional head count. Reorganizations and consolidations involve great change, so they demand versatile executives. If you're not already wearing multiple hats, start imagining how you can support your company by leveraging experience your boss may know nothing about. A marketing manager who taught school before moving into industry might volunteer to take on sales and service training responsibilities, for example. A recession can

offer you plenty of opportunities to display your capabilities. Layoffs typically occur at all levels of an organization and can create vacuums above and below you.

Idea in Practice

Banks and Coutu recommend three strategies for recession-proofing your job.

Act Like a Survivor

If you want to *be* a layoff survivor, it helps to act like one:

- **Demonstrate confidence and cheerfulness.** When people need help getting jobs done, they'll choose a congenial colleague over an unlikeable one. No one wants to be in the trenches with someone who's always gloomy.
- **Keep your eye on the future.** There's no better way to look forward than to sharpen your focus on customers. Without them, no one will have a job in the future. Make anticipating customers' needs your top priority. And show how your work is relevant to meeting those needs.
- **Wear multiple hats.** To keep expenses in check, look for opportunities to play more than one role and leverage your diverse experiences. For instance, a marketing manager who had previously taught school volunteered to take on sales training responsibilities.

Give Your Boss Hope

The better your relationship with your manager, the less likely it is that you'll be cut. Strengthen that bond through these practices:

- **Empathize.** Most leaders find layoffs agonizing. By empathizing with your manager, you deepen your bond. You also demonstrate a maturity that's invaluable—because it models good behavior for

others.

- **Unite and inspire your colleagues.** This ability can prove crucial during the worst of times.

Example:

At an international financial services company that had endured a 20% staff reduction, morale had plummeted. Isaac, a learning and development VP, assembled a team of volunteers who created a live radio show that engaged even cynical employees. It included a soap opera that kept staff laughing and waiting for the next episode. And it gave executives a platform to share key information, such as the company's performance and structural changes. Morale improved, and Isaac eventually became head of management and leadership development.

Become a Corporate Citizen

Eighty percent of success is showing up. To become a corporate citizen:

- Attend all voluntary and informal meetings and corporate outings.
- Get out of your office and walk the floor to see how people are doing.
- Get on board with new initiatives; for example, by volunteering to lead a newly formed team crucial to your company's recovery strategy.

Finally, survivors are willing to swallow a little pride. Take the case of Anne, a manager at a large New England insurance company. (We've changed her name, as well as those of the other individuals cited in this article.) During a reorganization, Anne found herself vying for a position with a colleague who had far less industry experience than she did. When she learned that she and her department would be folded under this colleague's department, Anne realized that she had one choice if she wanted to keep her job—use her

significant influence to support her new manager. So she publicly threw herself behind the colleague. In turn, he gave her the respect and the loyalty she felt she deserved. Anne's attitude demonstrated commitment to the company—something that was noticed by the management. A year later Anne got new responsibilities that led to a prestigious board appointment.

Give Your Leaders Hope

It's important to recognize that times of uncertainty are also tough for leaders. They don't enjoy having to lay off their people; most find that task agonizing. It can be stressful and time-consuming for them to sort through the various change mandates they've been given and then decide what to do. Obviously, this isn't the time to push for a promotion or to argue for a new job title. Instead, try to help the leader defend your department. If the boss is working on a restructuring plan and asks for ideas, offer some realistic solutions. Don't fight change; energize your colleagues around it.

It may sound like what Karl Marx called *false consciousness*—thinking that disempowers you because it is not in your best interest—to empathize with your boss when he or she is considering cutting your job. However, there's science to support the idea that showing empathy for people more powerful than you can be worthwhile. For example, recent mother-infant research shows that the more an infant smiles and interacts with the environment, the more active the caretaker becomes in the infant's development and survival. Although the mother-infant research has not, to our knowledge, been replicated in the workplace, psychologists have shown that so-called attachment behavior—emotional bonding—can be learned, just as emotional intelligence skills can be honed. That's good news. The better your relationship with your manager, the less likely you are to be cut, all things being equal. Your ability to empathize can demonstrate a maturity that is invaluable to the company, not least because it models good behavior for others.

The ability to unite and inspire colleagues goes a long way in the best of

times; in the worst it's crucial. This was true at an international financial services company that had endured a staff reduction of 20%. In the face of low morale, the head of human resources asked Isaac, a learning and development VP, to help revive people's spirits, improve communications, and stir up some fun. Isaac quickly pulled together a small team of volunteers and created a live radio show that engaged even the most cynical members of the organization. It included a soap opera that kept staff at all levels laughing and waiting for the next episode. The show gave executives a unique platform to share information such as quarterly financial results and changes in the organization's structure. It did so much to improve morale that as a result Isaac landed the job he wanted—head of management and leadership development for the company.

Become a Corporate Citizen

Remember Woody Allen's remark that 80% of success is showing up? That is especially useful advice in a downturn. Start going to all those voluntary and informal meetings you used to skip. Be visible. Get out of your office and walk the floor to see how folks are doing. Take part in company outings; if the firm is gathering for the annual golf tournament and you can't tell a wood from an iron, then go along just for fun. In tough times, leaders look for employees who are enthusiastic participants. It's not the score that counts.

Preparing for the Worst: You May Still Need a Plan B

FOLLOWING THE BEST ADVICE is no guarantee that you won't get laid off. That's why you need a plan for handling a job loss.

The first key to moving on successfully is self-awareness. You'll have better luck finding a new job if you know what you're good at and what you'd really like to do, so it's wise to invest mental energy now in

figuring those things out. If you have results from a Myers-Briggs test or a 360-degree assessment, revisit them to understand your strengths and weaknesses. Read self-help books to inspire your thinking, or perhaps even hire an executive coach. (Just make sure to get references and agree on fees before you start with any coach.)

Don't wait till you get laid off to update your résumé. Revise it now, so that you'll have it ready when you start approaching headhunters, former bosses and colleagues, and industry contacts for job referrals and advice. It's a good idea to begin networking with those folks now, in fact, but don't stop there. Reach out to the neighbor who's the CFO of a successful company, and dig out the old business cards from your drawer and add those names to the list of those you'll call.

Finally, think creatively about your future. Perhaps you want to go back to school, start your own business, join a smaller firm, or become a minister. That may require some downsizing of your own, but as Ellen, a consultant, told us: "Now that the kids are grown, my husband looks at the house and says it's too big for the two of us. I'm willing to scale back. Both of us want to do different things." Who knows, maybe plan B will actually be more attractive than plan A.

Corporate citizens are quick to get on board. Consider Linda, a VP in operations, who worked in a large company that needed to cut costs. Management came up with the idea of shared service centers to avoid duplication of effort in staff functions in areas such as compensation, management training, and strategic planning. The decision was universally unpopular. Service center jobs had none of the cachet of working in small business units, where customized solutions could be developed. Headquarters staff objected to losing the elite status they'd enjoyed as corporate experts. When service center jobs were posted, many high-profile people refused to put their names forward, misjudging their own importance and hoping management would relent. But Linda saw the opportunity and applied for a service center job. The new position gave her immense visibility and was an

immediate promotion. Meanwhile, many of the resisters found themselves standing without a chair when the music stopped. In contrast, Linda kept her career on track; six years later she reported directly to the president of the company.

Of course, changing your behavior or personality to survive may rub against your need for authenticity, and you may decide that it's time to move on. In that case, you can be both true to yourself and the ultimate corporate citizen by volunteering to leave the organization. Despite what the policy may be, companies will cut deals. Deals are even welcomed. It's much less painful for managers if they can help someone out the door who wants to leave rather than give bad news to someone who depends on the job. If you're a couple of years away from retirement eligibility and want to go, ask the company if it would be willing to bridge the time. Float a few balloons, but don't get greedy. Keep in mind that even if you choose to go, you may need to get another job and you'll want good references and referrals. If you've exited gracefully, odds are, your boss and others will do whatever they can to help you land on your feet.

Many forces are beyond your control in a recession, but if you direct your energy toward developing a strategy, you'll have a better chance of riding out the storm. You have to be extremely competent to make it through, but your attitude, your willingness to help the boss get the job done, and your contribution as a corporate citizen have a big impact on whether you are asked to stick around. The economy will bounce back; your job is to make sure that you do, too.

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Learning from the Future

by J. Peter Scoblic

HOW CAN WE FORMULATE strategy in the face of uncertainty?

That's the fundamental question leaders must ask as they prepare for the future. And in the midst of a global pandemic, answering it has never felt more urgent.

Even before the Covid-19 crisis, rapid technological change, growing economic interdependence, and mounting political instability had conspired to make the future increasingly murky. Uncertainty was so all-encompassing that to fully capture the dimensions of the problem, researchers had devised elaborate acronyms such as VUCA (volatility, uncertainty, complexity, and ambiguity) and TUNA (turbulent, uncertain, novel, and ambiguous).

In response, many leaders sought refuge in the more predictable short term—a mechanism for coping with uncertainty that research has shown leaves billions of dollars of earnings on the table and millions of people needlessly unemployed. By the start of 2020, the sense of uncertainty was so pervasive that many executives were doubling down on efficiency at the expense of innovation, favoring the present at the expense of the future.

And then the pandemic hit.

Now the tyranny of the present is supreme. A lot of organizations have had no choice but to focus on surviving immediate threats. (There are no futurists in foxholes.) But many business and political discussions still demand farsightedness. The stakes are high, and decisions that leaders make now may have ramifications for years—or even decades. As they try to manage their

way through the crisis, they need a way to link current moves to future outcomes.

So how best to proceed?

Strategic foresight—the history, theory, and practice of which I have spent years researching—offers a way forward. Its aim is not to predict the future but rather to make it possible to imagine multiple futures in creative ways that heighten our ability to sense, shape, and adapt to what happens in the years ahead. Strategic foresight doesn't help us figure out *what* to think about the future. It helps us figure out *how* to think about it.

To be sure, a growing body of research has demonstrated that it is possible to make more-accurate predictions, even in chaotic fields like geopolitics. We should use those techniques to the extent we can. But when predictive tools reach their limits, we need to turn to strategic foresight, which takes the irreducible uncertainty of the future as a starting point. In that distinctive context, it helps leaders make better decisions.

The most recognizable tool of strategic foresight is scenario planning. It involves several stages: identifying forces that will shape future market and operating conditions; exploring how those drivers may interact; imagining a variety of plausible futures; revising mental models of the present on the basis of those futures; and then using those new models to devise strategies that prepare organizations for whatever the future actually brings.

Today the use of scenarios is widespread. But all too often, organizations conduct just a single exercise and then set whatever they learn from it on the shelf. If companies want to make effective strategy in the face of uncertainty, they need to set up a process of constant exploration—one that allows top managers to build permanent but flexible bridges between their actions in the present and their thinking about the future. What's necessary, in short, is not just imagination but the *institutionalization* of imagination. That is the essence of strategic foresight.

Idea in Brief

The challenge

Good strategy creates competitive advantage over time, but the uncertainty of the future makes it difficult to identify effective courses of action, particularly in the midst of a crisis. As a leader, how can you prepare for an unpredictable future while managing the urgent demands of the present?

The promise

The practice of strategic foresight provides the capacity to sense, shape, and adapt to change as it happens. One important element of the practice is scenario planning, which helps leaders navigate uncertainty by teaching them how to anticipate possible futures while still operating in the present.

The way forward

To make effective strategy in the face of uncertainty, leaders need to institutionalize strategic foresight, harnessing the power of imagination to build a dynamic link between planning and operations.

The Limits of Experience

Uncertainty stems from our inability to compare the present to anything we've previously experienced. When situations lack analogies to the past, we have trouble envisioning how they will play out in the future.

The economist Frank Knight famously argued that uncertainty is best understood in contrast with risk. In situations of risk, Knight wrote, we can calculate the probability of particular outcomes, because we have seen many similar situations before. (A life insurance company, for example, has data on enough 45-year-old, nonsmoking white men to estimate how long one of them is going to live.) But in situations of uncertainty—and Knight put most business decisions in this category—we can only guess what might happen, because we lack the experience to gauge the most likely outcome. In fact, we

might not even be able to imagine the range of potential outcomes.

The key in those situations, Knight felt, was judgment. Managers with good judgment can successfully chart a course through uncertainty despite a lack of reference points. Unfortunately, Knight had no idea where good judgment came from. He called it an “unfathomable mystery.”

Of course, in something of a catch-22, conventional wisdom holds that to a large extent good judgment is based on experience. And in many uncertain situations managers do, in fact, turn to historical analogy to anticipate the future. This is why business schools use the case teaching method: It’s a way of exposing students to a range of analogies—and thus ostensibly helping them develop judgment—much more quickly than is possible in the normal course of life.

But Knight’s point was that uncertainty is marked by novelty, which, by definition, lacks antecedents. At the very moment when the present least resembles the past, it makes little sense to look back in time for clues about the future. In times of uncertainty, we run up against the limits of experience, so we must look elsewhere for judgment.

That’s where strategic foresight comes in.

“Strange Aids to Thought”

In the United States, strategic foresight can be traced back to the RAND Corporation, a think tank that the U.S. Air Force set up after World War II. Rather than plumbing the mystery of judgment, RAND scholars hoped to replace it with the “rational” tools of quantitative analysis. But as they grappled with the military demands of the postwar world, they could not escape the fact that nuclear weapons had fundamentally changed the nature of warfare. Two countries, the United States and the Soviet Union, had acquired the ability to destroy each other as functioning civilizations. And because no one had ever fought a nuclear war before, no one knew how best to fight (or avoid) one.

One RAND analyst, who approached the problem of a potential apocalypse with a glee that made him a model for Stanley Kubrick’s *Dr. Strangelove*, was

a mathematician named Herman Kahn. In the atomic age, Kahn realized, military strategists faced uncertainty to an absolutely unprecedented degree. “Nuclear war is still (and hopefully will remain) so far from our experience,” he wrote, “that it is difficult to reason from, or illustrate arguments by, analogies from history.”

How, then, Kahn asked, could military strategists develop the judgment crucial to making decisions about an uncertain future? It was the very question Knight had posed, but unlike Knight, Kahn had an answer: “ersatz experience.” What strategists needed, he suggested, were “strange aids to thought,” in the form of multiple imagined futures that could be developed through simulations such as war games and scenarios.

In 1961, Kahn left RAND to help found the Hudson Institute, where he eventually shared his ideas with Pierre Wack, an executive from Royal Dutch Shell. In the early 1970s Wack famously applied Kahn’s ideas in the business world, by devising scenarios to help Shell prepare for what might take place as the oil-rich nations of the Middle East began to assert themselves on the world stage. When change did come, in the form of the price shocks induced by the 1973 OPEC oil embargo, Shell was able to ride the crisis out much better than its competitors. (In 1985, Wack chronicled Shell’s efforts in two articles for this magazine: “Scenarios: Uncharted Waters Ahead” and “Scenarios: Shooting the Rapids.”)

The Shell exercises marked the birth of scenario planning as a strategic tool for business managers. In subsequent years, Wack’s successors at the company refined his method, and scenario planners from Shell went on to become some of the most prominent scholars and practitioners in the field. Nonetheless, few of the organizations that have conducted scenario-planning exercises in recent decades have institutionalized them as part of a broader effort to achieve strategic foresight.

One of the rare exceptions is the U.S. Coast Guard, which describes its work with scenario planning as part of a “cycle of strategic renewal.” As such, it offers a model that many organizations can learn from.

One might ask how relevant the Coast Guard's experience is for businesses, but in fact it constitutes what social scientists call a "crucial-case test." As a military service, the Coast Guard has less organizational flexibility than most private firms, with a mission mandated by statute and a budget determined by Congress. What's more, for a long time its need to react daily to numerous emerging situations—from ships in distress to drug interdictions—forced it to focus almost exclusively on the short term, leaving it with little bandwidth to formulate strategy for the long term. Nevertheless, in recent years it has managed to leverage scenario planning to its advantage, reorienting the organization in an ongoing way toward the future. And that, in turn, has allowed it to respond and adapt to disruptive changes, such as those that followed the September 11 terrorist attacks.

Future-Proofing the Coast Guard

On that tragic morning, hundreds of thousands of people found themselves trapped in Lower Manhattan, desperate to escape the burning chaos that was Ground Zero. While some were able to walk uptown or across bridges, which officials had closed to vehicles, for many the best way off the island was by water. So over the next hours, an impromptu flotilla—of ferries, tugs, private craft, and fire and police boats—took clusters of people away from the wreckage of the World Trade Center and across the water to safety.

Although many vessels operated on their own initiative, a significant part of the evacuation was directed by the Coast Guard, which had issued a call for "all available boats" and coordinated the chaotic debarkation with remarkable poise, creativity, and efficiency. The effort reminded many of the storied British evacuation across the English Channel of several hundred thousand troops that Nazi forces had trapped in Dunkirk, on the coast of France.

That the Coast Guard rose to the challenge is no surprise. Although it has a broad set of responsibilities, ranging from search-and-rescue to environmental protection to port security, the organization's motto is *Semper paratus*, or "Always ready," and it prides itself on responding to emergencies. As one

retired captain told me, “Our whole idea is, when the alarm goes off, to be able to fly into action.”

But September 11 ended up being more than a short-term challenge. In its aftermath, the Coast Guard found its mission quickly expanding. Within a day it was tasked with implementing radically heightened port-security measures around the country: Port security had previously accounted for 1% to 2% of its daily operational load, but it soon consumed 50% to 60%. In March 2003 the Coast Guard was integrated into the new Department of Homeland Security, and that same month it was given the job of securing ports and waterways all over Iraq, following the U.S.-led invasion. In subsequent years the service’s budget would double and its ranks would swell. A new future had arrived.

The Coast Guard adapted to this future nimbly—and did so in part because in the late 1990s it had conducted a scenario-planning exercise called Project Long View, which was designed to help the organization contend with “a startlingly complex future operating environment characterized by new or unfamiliar security threats.” Its aim, in effect, was to future-proof the Coast Guard.

The service ran Long View in 1998 and 1999—and then, in 2003, in response to the shocks of September 11, renamed it Project Evergreen and began running it every four years. Ever since, the organization has relied on Evergreen to help its leaders think and act strategically.

Robust Strategy—No Matter What the Future Holds

When the Coast Guard decided to launch Long View, it enlisted the help of the Futures Strategy Group (FSG), a consultancy specializing in scenario planning. FSG maintains that uncertainty precludes prediction but demands anticipation—and that imaginatively and rigorously exploring plausible futures can facilitate decision-making.

Working with FSG, the Coast Guard identified four forces for change that

would have a significant impact on its future: the role of the federal government, the strength of the U.S. economy, the seriousness of threats to U.S. society, and the demand for maritime services. By exploring them and looking forward some 20 years, the team came up with 16 possible “far-future worlds” in which the Coast Guard might have to operate. Of those, Coast Guard leaders selected five that were as distinct as possible from one another (while remaining plausible) and represented the range of environments the service might face. FSG then wrote detailed descriptions of those futures and the fictional events that led to them.

Each future world was given a name intended to capture its essence. “Taking on Water” described a future in which the U.S. economy struggled amid significant environmental degradation. In “Pax Americana,” a humbled United States had to contend with a world rent by political instability and economic catastrophe. “Planet Enterprise” was dominated by giant transnational corporations. “Pan-American Highway” featured regional trade blocs oriented around the dollar and the euro. And “Balkanized America” presciently warned of a divided world in which “terrorism strikes with frightening frequency, and increasingly close to home.”

Using those scenarios, the Coast Guard convened a three-day workshop, which FSG facilitated. Teams of civilians and officers were assigned to different future worlds and charged with devising strategies that would enable the Coast Guard to operate effectively in them. At the end of the workshop the teams compared notes on what they had come up with. Strategies that appeared again and again, across different teams, were deemed “robust.” In their final report the organizers of Long View listed 10 of these strategies, ranging from the creation of a more unified command structure to the development of a more flexible human-resources system to the establishment of “full maritime domain awareness”—which the Coast Guard defines as the “ability to acquire, track, and identify in real time any vessel or aircraft entering America’s maritime domain.” All of these strategies, they argued, would help the Coast Guard carry out its mission, no matter what the future held.

Many of the strategies weren't novel. But Long View allowed participants to think about them in new ways that proved crucial in the post-September 11 world. In effect, Long View allowed the Coast Guard to pressure-test strategies under a range of plausible futures, prioritize the most-promising ones, and socialize them among the leadership—which meant that after the attacks, when the organization found its mission changing dramatically, it was able to respond quickly.

Launching Long View and subsequently establishing Evergreen as a continuous process wasn't easy. It took exceptionally strong leadership—in particular from admirals James Loy and Thad Allen. The program has also faced challenges in implementing ideas; there is a difference between strategic foresight and strategic execution. But once established, the program developed significant momentum, fueled in part by a growing cadre of alumni who saw the value of a dynamic relationship between the present and the future. The Coast Guard had institutionalized imagination.

Exploration Enables Exploitation

Long View and Evergreen weren't designed to bring about a wholesale organizational shift from the operational to the strategic or to train the Coast Guard's attention primarily on the long term. Instead, the goal was to get its personnel thinking about the future in a way that would inform and improve their ability to operate in the present.

That was no small challenge. Management scholars have long noted that, in order to survive and thrive over time, organizations need to both exploit existing competencies and explore new ones. They need to be “ambidextrous.”

The problem is that those two imperatives compete for resources, demand distinct ways of thinking, and require different organizational structures. Doing one makes it harder to do the other. Ambidexterity requires managers to somehow resolve this paradox.

Long View and Evergreen helped the service's leaders do that. The

programs didn't reduce the organization's ability to attend to the present. If anything, the opposite occurred. Exploration *enabled* exploitation.

The Coast Guard members I interviewed for my research reported that Long View and Evergreen accomplished this in several ways. At the most explicit level, they identified strategies that the Coast Guard then pursued. Take maritime domain awareness. The scenarios made it clear to Coast Guard leaders that in any plausible future, they would want the ability to identify and track every vessel in U.S. waters. Although this may seem like an obvious need, it's not a capability that the service had in the 1990s. As one retired admiral explained, "Ships could come in 10 miles off or even three miles off the United States' coast, and we might not know it." That was in part because U.S. agencies had no integrated system for gathering and disseminating information.

Even though the Coast Guard didn't have the organizational and technological infrastructure to establish full maritime domain awareness immediately, Long View built consensus about its value among top leadership, which helped the service implement it more quickly after 9/11. In fact, the Coast Guard captain who had managed Evergreen led the interagency effort to develop the first National Strategy for Maritime Security, which ultimately prompted the creation of the Nationwide Automatic Identification System—a sort of transponder system for ships.

The strategies that emerged from the scenario-planning exercises also enabled personnel who participated in them to act with a greater awareness of the service's future needs. For example, the first iteration of Evergreen stressed the importance of building strategic partnerships at home and abroad. With this in mind, one senior Coast Guard leader prepared for threats that might emerge in the Pacific by developing bilateral relationships with island nations there; sharing information, coordinating patrols, and holding joint exercises with counterparts in China, Russia, Canada, South Korea, and Japan; and finding ways to work more closely with other U.S. agencies, from the FBI to the National Oceanic and Atmospheric Administration.

At the most basic level, Long View and Evergreen simply got the service's people to think more about the future. The master chief petty officer of the Coast Guard Reserve described how Evergreen had changed his thinking, citing a recent conversation with a colleague: "He and I were here in my office this morning, talking about, 'Twenty-five years from now, what is the Coast Guard Reserve component going to look like?'" Before taking part in Evergreen, he added, "I just wouldn't understand how to think that way."

Perhaps most interesting, however—and most important in resolving the supposed paradox between exploration and exploitation—is the way that Long View and Evergreen helped participants understand the demands of the past and the future not as competing but as complementary. The exercises changed the very way in which participants thought about time.

Humans tend to conceive of time as linear and unidirectional, as moving from past to present to future, with each time frame discrete. We remember yesterday; we experience today; we anticipate tomorrow. But the best scenario planning embraces a decidedly nonlinear conception of time. That's what Long View and Evergreen did: They took stock of trends in the present, jumped many years into the future, described plausible worlds created by those drivers, worked backward to develop stories about how those worlds had come to pass, and then worked forward again to develop robust strategies. In this model, time circles around on itself, in a constantly evolving feedback cycle between present and future. In a word, it is a loop.

Once participants began to view time as a loop, they understood *thinking about the future* as an essential component of *taking action in the present*. The scenarios gave them a structure that strengthened their ability to be strategic, despite tremendous uncertainty. It became clear that in making decisions, Coast Guard personnel should learn not only from past experience but also from imagined futures.

Getting Started

The prospect of organizing a scenario exercise can intimidate the uninitiated.

There are distinct benefits to enlisting one of the individuals, boutique consultancies, or even large firms that specialize in scenarios to provide helpful direction. However, regardless of who runs the process, managers should follow these key guidelines:

Invite the right people to participate

One of the chief purposes of a scenario exercise is to challenge mental models of how the world works. To create the conditions for success, you'll need to bring together participants who have significantly different organizational roles, points of view, and personal experiences. You'll also need people who represent what Kees van der Heijden, one of Wack's successors at Shell, has described as the three powers necessary for any effective conversation about strategy: the power to perceive, the power to think, and the power to act.

Identify assumptions, drivers, and uncertainties

It's important to explicitly articulate the assumptions in your current strategy and what future you expect will result from its implementation. Think of this scenario as your projected scenario—but recognize that it's just one of many possible futures, and focus on determining which assumptions it would be helpful to revisit. Rafael Ramirez, who leads the Oxford Scenarios Programme, advises that in doing this you disaggregate *transactional actors*, which you can influence or control, from *environmental forces*, which you cannot. How might those forces combine to create different possible futures?

Imagine plausible, but dramatically different, futures

This can be the most difficult part of the exercise, particularly for those used to more analytical modes of thinking. Push yourself to imagine what the future will look like in five, 10, or even 20 years—without simply extrapolating from trends in the present. This takes a high degree of creativity and also requires the judgment to distinguish a scenario that, as the Coast Guard puts it, pushes the envelope of plausibility from one that tears it—an inherently subjective task. Good facilitators can both prime the imagination and maintain the

guardrails of reality.

Inhabit those futures

Scenario planning is most effective when it's an immersive experience.

Creating “artifacts from the future,” such as fictional newspaper articles or even video clips, often helps challenge existing mental models. It's also a good idea to disconnect participants from the present, so hold workshops off-site and discourage the use of phones at them.

Isolate strategies that will be useful across multiple possible futures

Form teams to inhabit each of your far-future worlds, and give them this challenge: What should we be doing *now* that would enable us to operate better in that particular future? Create an atmosphere in which even junior participants can put forward ideas without hesitation. Once the groups develop strategies for their worlds, bring them together to compare notes. Look for commonalities, single them out, and identify plans and investments that will make sense across a range of futures.

Implement those strategies

This may sound obvious, but it is the place where most companies fall down. Using scenario planning to devise strategies isn't resource-intensive, but implementing them requires commitment. To couple foresight with action, leaders should set up a formal system in which managers have to explain explicitly how their plans will advance the firm's new strategies. Realistically, foresight will not drive every initiative, but scenario exercises can still be valuable in several ways. First, they can provide participants with a common language to talk about the future. Second, they can build support for an idea within an organization so that when the need for implementation becomes clear, it can move faster. Finally, they can enable participants to act at the unit level, even if the organization as a whole fails to link the present and future as tightly as it should.

Ingrain the process

In the long run you'll reap the greatest value from scenario exercises by establishing an iterative cycle—that is, a process that continually orients your organization toward the future while keeping an eye on the present, and vice versa. This ambidexterity will allow you to thrive under the best of conditions—and it's essential for survival under the worst. Moving in a loop between the present and multiple imagined futures helps you to adjust and update your strategies continually.

This last point is critical. As the current pandemic has made clear, needs and assumptions can change quickly and unpredictably. Preparing for the future demands constant reappraisal. Strategic foresight—the capacity to sense, shape, and adapt to what happens—requires iterative exploration, whether through scenario planning or another method. (See “The Future: A Glossary,” page 136.) Only by institutionalizing the imaginative process can organizations establish a continual give-and-take between the present and the future. Used dynamically in this way, scenario planning and other tools of strategic foresight allow us to map ever-shifting territory.

The Future: A Glossary

MANAGING THE UNCERTAINTY of the future requires many tools, some of which have similar or even overlapping functions. To cut through the confusion, here's a brief guide.

- **Backcasting** asks participants to work backward in time from a particular future to ascertain what in the present caused its emergence. The practice is most often used to identify a path to a preferred future but can also be used to avoid steps toward a negative future. “Premortems,” for example, aim to identify the causes of a hypothetical future failure.
- **Contingency Planning** aids decision-making by preparing

participants for specific events that are considered possible or even likely. A contingency plan provides a playbook in case of emergency.

- **Crisis Simulations and Tabletop Exercises** have participants respond to specific scenarios and then analyze their actions, to help people prepare for real-life situations. They differ from war games in that they involve a specific possible future rather than a range of plausible futures.
- **Forecasting** involves making probabilistic predictions about the future and, as such, is a tool that practitioners of strategic foresight tend to avoid. But it, too, has its place in helping strategists manage uncertainty, adding a quantitative angle to the qualitative methods preferred by, say, scenario planners. The best approach is this: Predict what you can; imagine what you cannot; and develop the judgment to know the difference.
- **Horizon Scanning** asks participants to search for “weak signals” of change in the present with an eye toward monitoring their development and assessing their potential impact. The practice is guided by the idea that the future often first comes into view in places that most of us are not paying attention to, such as specialized scientific journals.
- **Scenario Planning** uses stories about alternative futures to challenge assumptions and reframe perceptions of the present. The process does not attempt to predict the future but instead aims to explore plausible futures to inform strategy.
- **Trend Analysis** asks participants to consider the potential influence of patterns of change that are already visible. A popular structured approach is the STEEP framework, which disaggregates patterns of change into five categories: social, technological, economic, environmental, and political.
- **War Games** ask participants to engage an opponent in simulated conflict, often to explore reactions to novel circumstances. Like

scenario planning, war games do not attempt to predict what will happen; rather, they project what could happen, thereby providing insight into decision-making. Despite the name, war games can address far more than just the military aspects of conflict.

Of course, strategic foresight also enables us to identify opportunities and amplifies our ability to seize them. Organizations don't just prepare for the future. They make it. Moments of uncertainty hold great entrepreneurial potential. As Wack once wrote in these pages, "It is precisely in these contexts—not in stable times—that the real opportunities lie to gain competitive advantage through strategy."

It takes strength to stand up against the tyranny of the present and invest in imagination. Strategic foresight makes both possible—and offers leaders a chance for legacy. After all, they will be judged not only by what they do today but by how well they chart a course toward tomorrow.

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5 Ways to Stimulate Cash Flow in a Downturn

by Eddie Yoon and Christopher Lochhead

HISTORY TEACHES US VALUABLE LESSONS for managing cash during a nasty downturn. Companies that successfully navigated prior crises pursued cash-flow strategies that were both radically generous with customers and partners—and thoughtfully aggressive with near-term revenue and expense management.

These may seem like opposing ideas, but in reality they perfectly balance the empathy required to persuade customers to help while ensuring the economics of the business remain sound.

To achieve this balance, leaders can take five complementary actions:

1. Secure Sales by Taking Risks with Warranties, Guarantees, and Return Policies

Companies can secure near-term revenue by reassuring customers who are navigating a ton of uncertainty. Taking a risk with generous warranties and return policies can both calm nerves and close sales.

Hyundai demonstrated this successfully during the 2008 recession with its Assurance return program. The marketing campaign promised that if you lost your job soon after buying a Hyundai, the company would buy it back from you. Hyundai's market share grew from 3.1% to 4.3% in the first 10 months of 2009, and its sales grew nearly 24% the following year. It has introduced a similar version of the program during the current crisis.

2. Implement New Revenue and Pricing Models

Companies should test new revenue and pricing models with their most loyal customers, many of whom will jump at the chance to secure goods and services they know they will want and need at a meaningful discount.¹ This may require alternative pricing strategies like gift cards and subscriptions, as opposed to traditional transaction-based models.

Blaze Pizza, one of the market leaders in fast-casual pizza, recently launched a #BlazingItForward gift card campaign on social media and via its 2.4-million-member email list. During this promotion, someone who buys a \$20 gift card gets a free pizza on their next purchase. Daniela Simpson, general manager of digital growth and head of marketing at Blaze, noted gift card sales have exceeded expectations. Gift cards can be tricky from an accounting and go-to-market standpoint, but note that Starbucks has 25 million mobile users who preload cash onto their rewards cards as an interest-free, negative working capital loan. In aggregate, this provides Starbucks with more than \$1 billion in working capital.

Gift cards may seem like a retail-specific idea, but they are a tactic more companies should try. The travel and leisure segment, for example, could offer its best customers a way to secure their elite status for next year by forward-buying travel in bulk at a discount.

Remember that your “superconsumers” have a shared interest in your survival. While the revenue from these methods must be recognized over time, it does have meaningful benefits for your cash flow and balance sheet, as well as for forecasting. If you’re a category or company that has toyed with the idea of migrating to subscription pricing, now is the time to try it. Companies that make the transition to subscription pricing may see their valuation multiples increase once the market stabilizes, given Wall Street’s current affinity for subscription and “X as a service” business models.

3. Accelerate Innovation

Launch near-ready innovations in the pipeline now. Most companies are risk-averse regarding innovation, but just as generosity begets generosity, empathy begets empathy. Customers who typically may nitpick new innovations will be grateful for new and improved products or services—even if they’re released before all the kinks are worked out. Those customers likely will help you identify problems and fix them before a broader rollout.

This is what Tesla is doing effectively with its autopilot software. The software is not finished, but Tesla knows that the best way to improve it is to gather actual data from drivers using it in the wild.

Other companies are simply moving up launch dates to help consumers hungry for distractions. ESPN, for example, accelerated the launch of *The Last Dance*, its highly anticipated Michael Jordan documentary, from June to April. Many Hollywood studios, on the other hand, are making the mistake of delaying launches to maximize mass market revenue, missing the opportunity to launch their movies as high-priced, pay-per-view events.

4. Cut “Sacred Cow” Marketing Costs

Take a swing at marketing costs that are suspected to not pay back but are too politically difficult to cut during better times. Often these are hard-to-measure marketing costs, or they’re geared toward motivating distributors or channel partners more than consumers.

A good example of this is when, back in 2009, Anheuser-Busch InBev cut a number of sports sponsorships (including Manchester United and exclusivity on the Winter Olympics) that motivated distributors but had little evidence of customer awareness or impact.

5. Engage in New Kinds of Customer Acquisition

Finally, companies should seek to proactively acquire customers during this crisis. One of the best ways to do it is through strategic sampling. This is especially true of companies that sell intellectual property, like software,

training, and services, which have low marginal costs. Zoom has generated a lot of attention by offering its services to K-12 education for free.² These investments enhance its brand over the long term, and may convert people into paying customers six to 12 months down the line.

Another way to drive customer acquisition is via M&A. Valuations are as low as they've been in a while, so companies with the means should be aggressively shopping for acquisitions that bring over new customers, cross-selling opportunities, or new business models and categories. Consider the New York Times Company, which just acquired Audm, a subscription-based audio app that offers long-form journalism read aloud by celebrated audiobook narrators.³ Given that print is migrating toward podcasts, this is a great time to make a bet for the future on the cheap.

Companies need to resist the temptation to stay hunkered down on defense during these difficult times. Instead, go on the offense by using radical generosity and thoughtful aggressiveness as guiding principles. Dark times are when legendary companies and leaders are forged.

Originally published April 4, 2020. Reprint H05JEH

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The Case for M&A in a Downturn

by Brian Salsberg

DURING A CRISIS, BUSINESSES should be examining their existing lists of potential acquisition targets and should be preparing to act, as deal premiums are likely to come down and assets that companies had been reluctant to sell may become available.

But the window for maximizing value could be relatively short, if history is any indication.

Learning from the Global Financial Crisis

Evidence from the global financial crisis (GFC) of late 2007 through early 2009 shows that companies that made significant acquisitions during the economic downturn outperformed those that did not.

There are some caveats: The GFC was, as its name indicates, a financial crisis, and was somewhat limited to the financial services and real estate sectors. Governments needed to bail out banks as many companies were overextended. Consumers were crunched as the value of their homes dropped dramatically and some found their mortgages underwater.

Today almost the entire services sector of the economy is immobilized and unemployment is at a much higher level after the 2008 recession. The Covid-19 crisis is first and foremost a health crisis, and the spread of the disease is likely to be the key factor in determining the length of the downturn, and thus the optimal M&A window. Still, the GFC is the best modern example we can

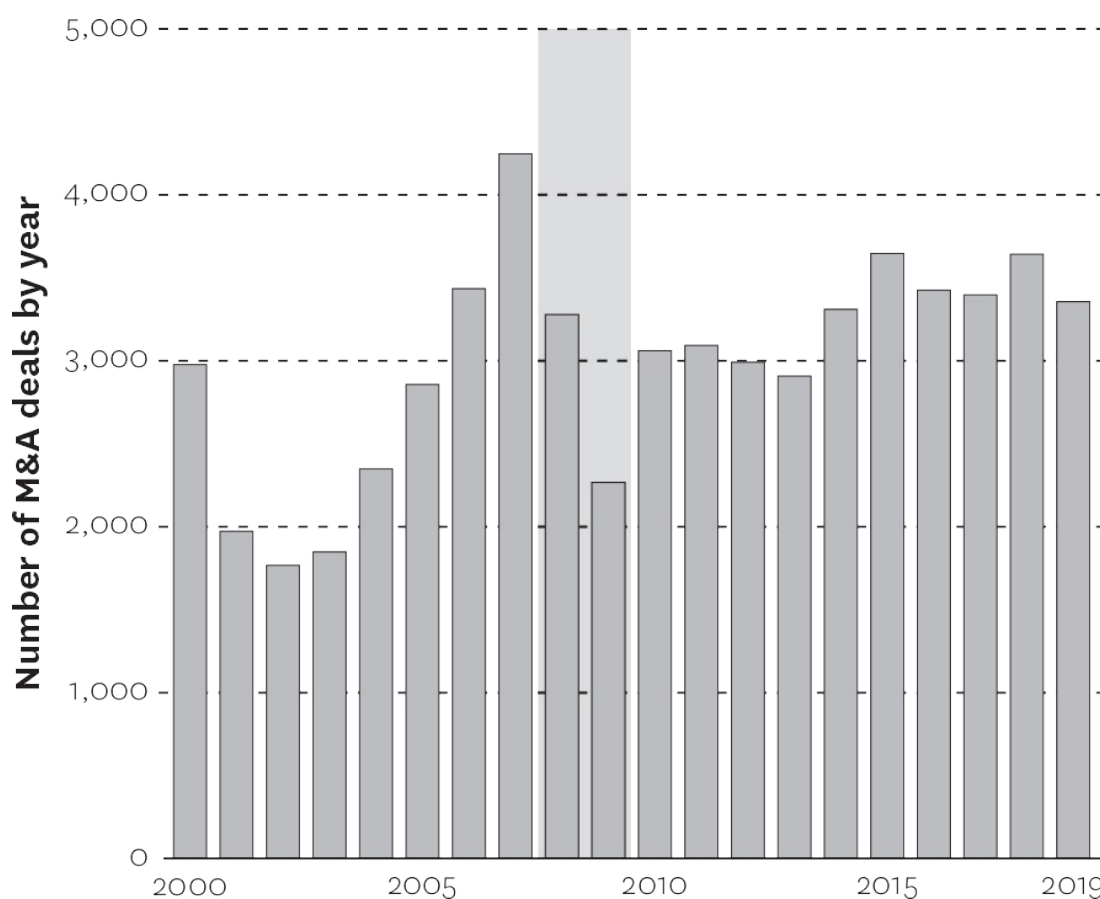
look to when predicting the ultimate shape of the recovery from an M&A perspective.

With regard to deal making, the recovery beginning in 2009 was very much U-shaped. That is, it took more than five years for deal volume to recover to average pre-crisis levels, and deal value never quite recovered. (See [figure 13-1](#).)

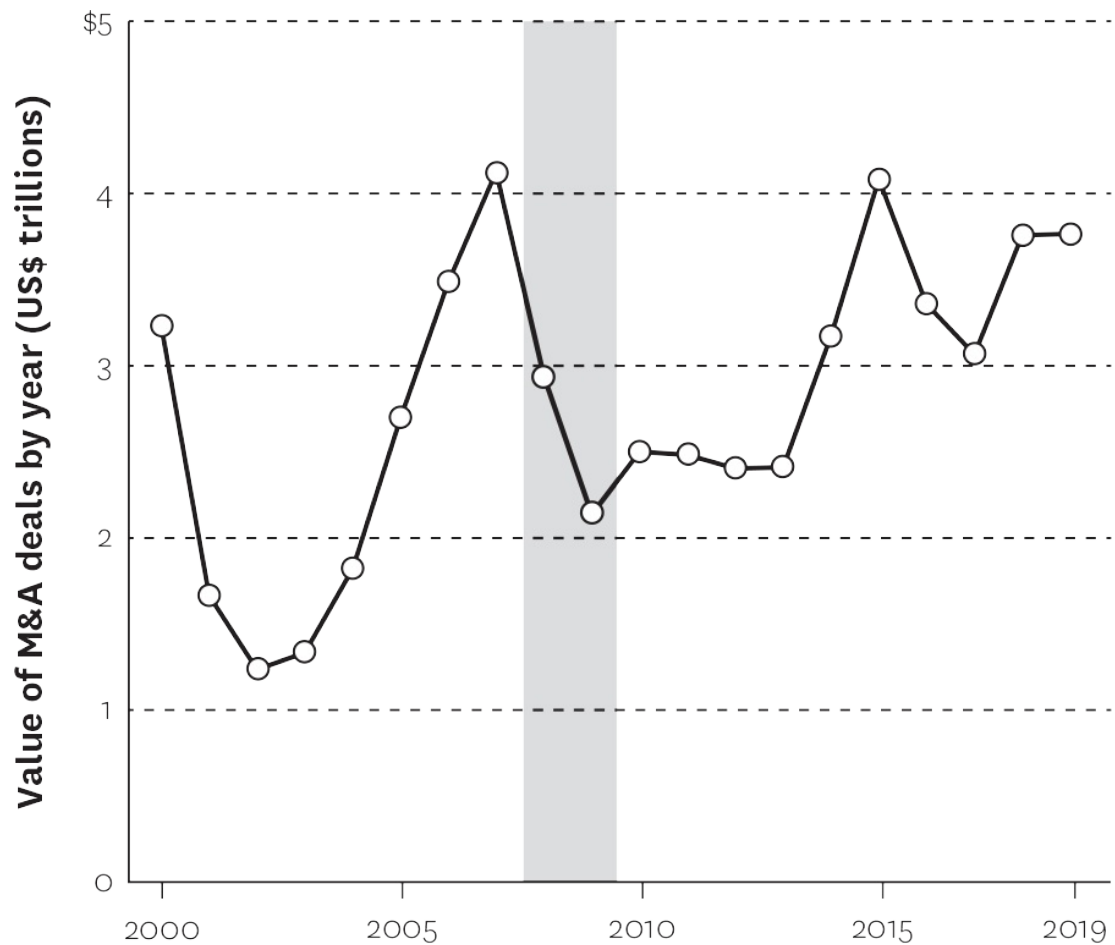
FIGURE 13-1

Global M&A deals, 2000–2019

During the 2008 financial crisis, the number of M&A deals dipped by almost 31% year-over-year ...



... and the value of those deals fell by about 27% in the same time period. Similar drops are possible due to Covid-19.



Source: EY analysis and Dealogic.

Note: Excludes real estate acquisitions. Volume based on deals of US\$100 million or more.

The story regarding deal multiples—defined as enterprise value divided by EBITDA (earnings before interest, taxes, depreciation, and amortization)—was somewhat different, with much more of a V-shaped recovery. Deal values plummeted from an average of 10.8x in the three years before the 2008 crisis to as low as 6.5x in 2009, before rebounding to the 10-year average of 11.6x by 2019. (See figure 13-2.)

FIGURE 13-2

Deal multiples, 2000–2020

An examination of deal multiples—the ratio of enterprise value divided by EBITDA that is used to determine a company's value—during the 2008 financial crisis suggests that valuations that have or will decline during the current downturn are likely to bounce back somewhat quickly.



Source: EY analysis and Dealogic.

Note: EBITDA—short for “earnings before interest, taxes, depreciation, and amortization”—is a measure of a company’s financial performance.

History suggests, therefore, that there will be a relatively short M&A window that opens as the Covid-19 crisis ends, during which bargains will be had by those who have the liquidity and the risk tolerance to move quickly, and who have done their homework in advance.

Active Acquirers May Outperform

There are some qualifiers to consider when examining the data.

First, there can never be a true control in the M&A world to measure against—a company either does a deal or does not. Additionally, company performance as measured by total shareholder return (TSR) is the result of a mix of inorganic and organic activities, as well as any number of external factors, none of which can be totally isolated.

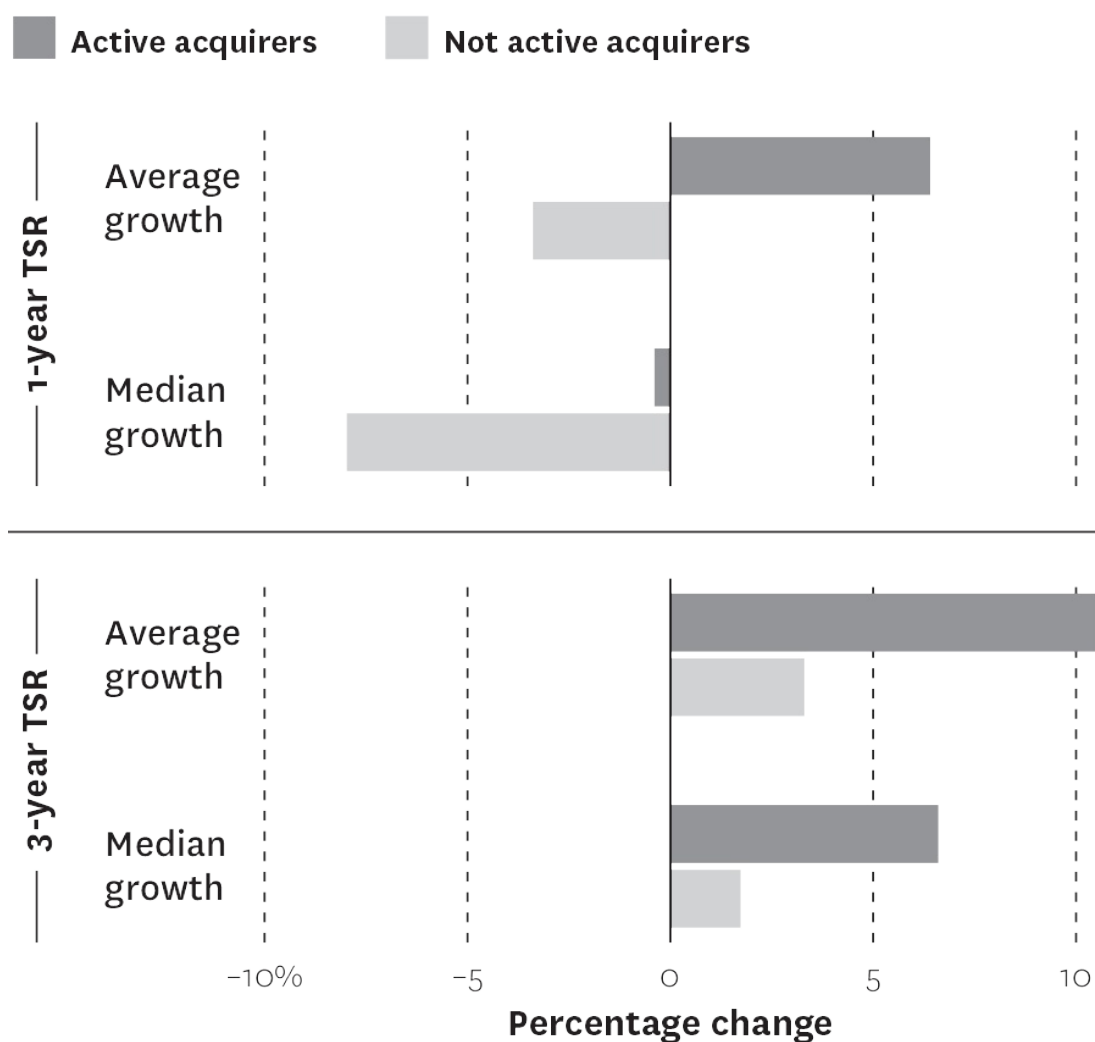
That said, we nevertheless can conclude the following:

- Those companies that made acquisitions totaling at least 10% of their market cap from 2008 through 2010 (active acquirers) had an average TSR of 6.4% from January 2007 through January 2008, compared with a TSR of -3.4% for less active companies. (See figure 13-3.) A similar difference was seen in median TSR.

FIGURE 13-3

Total shareholder return (TSR) growth by acquirer type, 2007–2010

Firms that made significant acquisitions during the 2008 financial crisis outperformed those that did not.



Source: EY analysis, Capital IQ, *Fortune*.

Note: Analysis of companies on the 2008 *Fortune* 1,000 list; excludes financial services, real estate, and companies where the share price was unavailable on January 1, 2007, and January 1, 2012.

- The trend continued over the period of January 2007 through January 2010, when average TSR was 10.5% for active acquirers and 3.3% for less active companies.

TSR for active acquirers with strong liquidity positions (cash and short-term investments to revenue of at least 7.0% in 2007) increased by an average of 5%. In contrast, other companies saw an average increase of 1.7% over the period from January 2007 through January 2010. This gap continued in the long term (five years), with active acquirers' TSR growing at an average of 16.9% versus 4.9% for other companies.

Deal Activity May Be the Best Option for Excess Liquidity

Companies with excess liquidity may find that shareholders and boards are more conservative about how this liquidity is used. Specifically, share buybacks and possibly dividend payments may be curtailed for several years and companies will need to keep a higher level of cash on hand. These factors will require them to use any excess cash to generate long-term shareholder value.

At the same time, with a focus on preserving jobs and the health of the economy, governments and regulators are likely to be much more tolerant of larger acquisitions in many industries.

EY analysis suggests it is not too soon to consider M&A opportunities and prepare to act. CEOs, CFOs, and heads of strategy and corporate development need to think carefully about the “new normal” and which acquisitions would be accretive to their current business models. There are a few areas in the deal process that will no longer operate as usual, particularly during this period of social distancing. Companies thinking about M&A will need to consider these unique aspects of getting a deal done, including:

- **Transaction diligence.** Even if the majority of diligence can be performed remotely, it is likely to take longer. Diligence requiring on-site visits, such as to physical plants, is much more difficult to do via video. Boards may be reluctant to approve an asset or operations-heavy transaction without an actual site visit. Pressure-testing the strength of the balance sheet and forecasting expected cash flows for the next 12 to 24 months will be more critical than ever. Additionally, cyber diligence (that is, assessing the strength of the target’s IT vulnerability) will increasingly become a focus area due to the accelerating reliance on technology.
- **Synergy modeling.** This process will need to be conducted with an eye toward the new normal. For instance, resilient supply chains have more redundancies than efficient supply chains, meaning they are more

expensive and have fewer opportunities to cut costs and achieve synergies.

- **Business models.** In our new normal, companies' business models are likely to change, and not just in obvious ways. For example, that hot new kombucha beverage with all the social media hype may struggle to find a space on retail shelves when grocery channels begin prioritizing established brands and safety stock.
- **Post-acquisition integration.** Maintaining employee morale and engagement is critical, especially in this environment. Many people will be focused on their job security, so asking them to put their energy toward onboarding target employees may be difficult. While it is possible to work your way through much of the integration playbook remotely, culture and change management aspects can be tricky to communicate over videoconference. Being considerate of working hours, ensuring various integration meetings stick to a reasonable time frame, and infusing the process with the appropriate amount of ice-breaker activities (such as virtual happy hours) are some ways to ease the burden of the work-from-home context.

Ultimately, planning for M&A in the near future will require significant rigor. Companies must understand the recovery curve scenarios that target firms are likely to experience coming out of the crisis, in addition to understanding the true liquidity situation of the target and any of the target's near-term CAPEX or similar needs.

Note

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In a Downturn, Include Your Employees in Cost-Cutting Decisions

by Patrick Daoust and Paul Simon

ALMOST EVERY BUSINESS IS REORGANIZING its operations in response to the economic slowdown caused by the Covid-19 pandemic. Often, companies take a top-down approach to resizing based on a limited set of data such as earnings forecasts and competitive benchmarking. But following this playbook usually results in “wrong sizing” and demoralized employees.

Instead, leaders should redesign their operations based on data provided by their most valuable sources of proprietary insights—their employees. Democratizing the collection of data and recommendations allows leadership teams to gain a much clearer picture of activities and initiatives underway within their organizations. It also offers a clearer lens for evaluating which activities are the most valuable to strategic objectives and which can be automated or managed in a shared services environment—or ceased.

When leaders take this bottom-up approach, we have found they not only cut costs significantly but also realize their goals more rapidly because managers and employees are motivated to help. Changes are then more likely to stick.

One fast-food restaurant chain supplemented its leadership team’s top-down analysis with qualitative and quantitative data from vice presidents, directors, and employees, which allowed it to reduce its sales, general, and administration costs by more than one-third and refocus on core strategic

areas, such as marketing, product innovation, and new franchises. Likewise, a hospital group uncovered ways to improve clinical and administrative team interactions, making it possible to treat more patients across specialties while reducing operating costs by more than 20%.

In both cases, leadership teams were able to transform their companies because they based decisions on more accurate information. But how can leaders be sure they are collecting the data they need?

Below, we recommend focusing on four types of information:

1. Key Routines and Projects

The first step in redesigning a company is for the leadership team to ask each division or function head to create a list of 20 to 30 routines and projects that are fundamentally important to the company. Routines are repetitive by nature and can range from the daily to the quarterly. Projects, such as the deployment of a new support system or the launch of a new service line, have a specified beginning and end.

Gathering this data can enable a company's leadership team to see the activities and projects underway at a more granular level, making it possible to spot gaps and redundancies quickly. For example, one company we worked with discovered several hundred of its global sales and marketing employees attended conferences to sell products despite low success rates. Another found salespeople repeatedly visited the same client because sales forces were not coordinated. Yet another leadership team uncovered that three times as many IT projects were underway than had been budgeted for. And on and on.

2. Effort Required

To help a leadership team better understand the effort required for every routine and project, division heads should hold workshops with their managers to discuss the volume and nature of the work involved.

Operational data supplied by employees permits leadership teams to

precisely evaluate which routines require more or less support. One leadership team may discover armies of people are executing the same basic support tasks after a series of acquisitions—like IT, human resources, legal, finance, and government relations. Or, at the other end of the spectrum, more people may be needed to carry out critical responsibilities. For example, food and pharmacy retailers may have to ramp up staff to fill and deliver online orders, which have soared from 5% to nearly 40% of many companies' sales during the pandemic.

3. Strategic Priorities

After this exercise, division heads should ask managers to work with employees to tag identified routines and projects based on the strategic priorities of the company and their own division. These tags should be sorted into three categories: *core*, *context*, and *cease*.

Core routines and projects are a company's top priorities. These are capabilities that companies may want to invest in to differentiate themselves from the competition and to spur future growth. They might include research and development in the pharmaceutical industry, design in the fashion industry, customer experience in retail, and capital expenditure management in heavy industries like transportation and manufacturing.

By contrast, context routines are standard services and activities that can be deprioritized and optimized to be more efficient, often by sharing or automating services. For example, managers at one retailer pointed out that a single team could scout the world for new fashion trends in men's shoes, women's shoes, and accessories—instead of sending a separate team for each product. One HR department's recruiting function suggested a chatbot could handle basic questions and answers from online job applicants, freeing up employees to focus on the interview and hiring process and speeding up the pace of hiring.

Other routines should be categorized as cease if they are adding little value or are no longer relevant to the company's strategy. For example, one retailer

halted the preparation and distribution of most of its management reports by the finance function. Only a few managers found them useful, yet they took up most of the team's time and effort. A pharmaceutical company identified unprofitable product lines that could be retired, freeing up about 40% of the research team's time to develop new products.

4. New Operating Model Ideas

Next, leadership teams should empower division heads to work with managers and employees to redesign their operations. This should start with pinpointing which capabilities need be built up in order for the company to bounce back and grow. Managers should crowdsource not just the operational data they think they need to achieve new efficiencies, but also innovative ideas for reinventing their operations and their offerings for the future.

By including this data from employees in the process, leadership teams can pursue more ambitious visions, since they will have both the significant savings and the talent they need to execute their plans. Retailers will be able to pivot and offer much more elaborate shopping experiences online, complete with “magic mirrors” that let customers virtually try on shoes or apparel and details about which store has the product in stock. Grocers and pharmacies can invest in digital networks that allow them to nimbly redeploy their workforces by sending alerts when there is an opening for someone to work in a different store, branch, or stockroom. Transportation companies can reallocate their scarce resources toward developing more efficient ways to deliver packages from warehouses to customers' homes. And pharmaceutical companies can ensure a brighter future by developing new products and services at a faster pace, transforming innovations like new vaccines or treatments into the bread-and-butter products of tomorrow.

By tapping into data provided by managers and employees to redesign a company, leadership teams will not only be able to make better decisions—they will also be able to improve their operations, and still have workforces engaged and motivated to continuously improve them.

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Preparing Your Business for a Post-Pandemic World

by Carsten Lund Pedersen and Thomas Ritter

ALONG WITH THE SEVERE HEALTH and humanitarian crisis caused by the coronavirus pandemic, executives around the world face enormous business challenges: the collapse of customer demand, significant regulatory modifications, supply chain interruptions, unemployment, economic recession, and increased uncertainty. And like the health and humanitarian sides of the crisis, the business side needs ways to recover. Ad hoc responses won't work; organizations must lay the groundwork for their recoveries now.

The management theorist Henry Mintzberg famously defined strategy as 5 Ps: plan, ploy, pattern, position, and perspective. We have adapted his framework to propose our own 5 Ps for responding to the crisis: position, plan, perspective, projects, and preparedness. The following questions can guide you as you work to bounce back.

1. What Position Can You Attain During and After the Pandemic?

To make smart strategic decisions, you must understand your organization's *position* in your environment. Who are you in your market, what role do you play in your ecosystem, and who are your main competitors? You must also understand where you are headed. Can you shut down your operations and reopen unchanged after the pandemic? Can you regain lost ground? Will you

be bankrupt, or can you emerge as a market leader fueled by developments during the lockdown?

We hear of many firms that are questioning their post-pandemic viability, including those in the travel, hospitality, and events industries. We also hear of firms accelerating their growth because their value propositions are in high demand; think of home office equipment, internet-enabled communication and collaboration tools, and home delivery services. Because of such factors, firms will differ in their resilience. You should take steps now to map your probable position when the pandemic eases.

2. What Is Your Plan for Bouncing Back?

A *plan* is a course of action pointing the way to the position you hope to attain. It should explicate what you need to do *today* to achieve your objectives *tomorrow*. In the current context, the question is what you must do to get through the crisis and return to business as usual when it ends.

The lack of a plan will only exacerbate your company's disorientation in an already confusing situation. When drawing up the steps you intend to follow, think broadly and deeply, and take a long view.

3. How Will Your Culture and Identity Change?

Perspective means the way an organization sees the world and itself. In all likelihood, your culture and identity will change as a result of the pandemic. A crisis can bring people together and facilitate a collective spirit of endurance—but it can also push people apart, with individuals distrusting one another and predominantly looking after themselves. It's crucial to consider how your perspective might evolve. How culturally prepared was your organization to deal with the crisis? Will the ongoing situation bring your employees together or drive them apart? Will they see the organization differently when this is over? Your answers will inform what you can achieve when the pandemic ends.

4. What New Projects Do You Need to Launch, Run, and Coordinate?

Your answer to this question should point you toward a set of *projects* for tackling your coronavirus-related problems. The challenge is to prioritize and coordinate initiatives that will future-proof the organization. Beware of starting numerous projects that all depend on the same critical resources, which might be specific individuals, such as top managers, or specific departments, such as IT. If you have too many new initiatives, you could end up with a war over resources that delays or derails your strategic response.

5. How Prepared Are You to Execute Your Plans and Projects?

Finally, you need to assess your organization's *preparedness*. Are you ready and able to accomplish the projects you've outlined, particularly if much of your organization has shifted to remote work? We see big differences in preparedness at the individual, team, organization, and national levels. The resources at hand, along with the speed and quality of decision-making processes, vary greatly, and the differences will determine who achieves success and who falls short of it.

Be aware that consumers will remember how you reacted during the crisis. Raising prices during a shortage, for example, could have a significant effect on your customer relationships going forward.

The coronavirus has had unprecedented impacts on the world—and the worst is yet to come. Companies must act today if they are to bounce back in the future. Doing so will help the world as a whole recover—and, we hope, become more resilient in the process.

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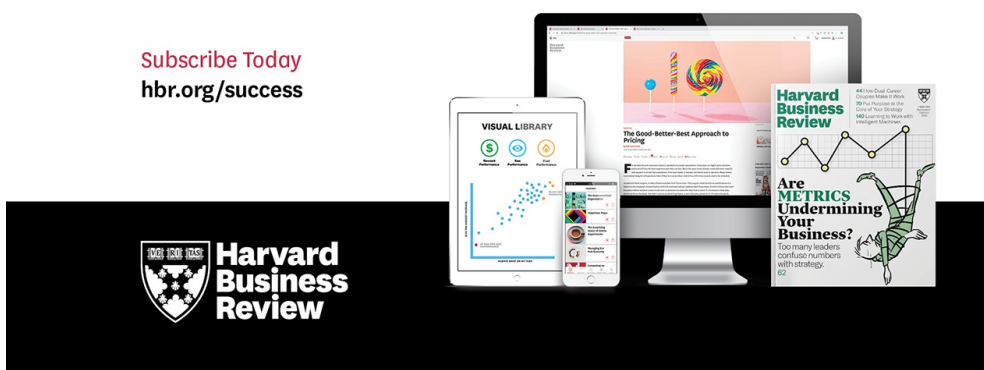
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On Innovation

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The Innovation Catalysts

by Roger L. Martin

ONE DAY IN 2007, midway through a five-hour PowerPoint presentation, Scott Cook realized that he wasn't another Steve Jobs. At first it was a bitter disappointment. Like many entrepreneurs, Cook wanted the company he had cofounded to be like Apple—design driven, innovation intensive, wowing consumers year in and year out with fantastic offerings. But that kind of success always seemed to need a powerful visionary at the top.

This article is about how Cook and his colleagues at the software development company Intuit found an alternative to the Steve Jobs model: one that has enabled Intuit to become a design-driven innovation machine. Any corporation—no matter how small or prosaic its business—can make the same grassroots transformation if it really wants to.

The Birth of the Idea

Intuit's transformation arguably began in 2004, with its adoption of the famous Net Promoter Score. Developed by Fred Reichheld, of Bain & Company, NPS depends on one simple question for customers: How likely are you, on a scale of 0 (not at all likely) to 10 (extremely likely), to recommend this product or service to a colleague or friend? "Detractors" answer from 0 to 6, "passives" answer 7 or 8, and "promoters" answer 9 or 10. A company's Net Promoter Score is the percentage of promoters less the percentage of detractors.

For the first couple of years, Intuit saw its NPS rise significantly, owing to a

number of marketing initiatives. But by 2007 NPS growth had stalled. It was not hard to see why. Although Intuit had lowered its detractor percentage substantially, it had made little headway with promoters. Customer recommendations of new products were especially disappointing.

Clearly, Intuit needed to figure out how to galvanize its customers. Cook, a member of Procter & Gamble's board of directors, approached Claudia Kotchka, then P&G's vice president of design innovation and strategy, for advice. Following their discussions, Cook and Steve Bennett, then Intuit's CEO, decided to focus on the role of design in innovation at a two-day off-site for the company's top 300 managers. Cook created a one-day program on what he called Design for Delight (D4D)—an event aimed at launching Intuit's reinvention as a design-driven company.

The centerpiece of the day was that five-hour PowerPoint presentation, in which Cook laid out the wonders of design and how it could entice Intuit's customers. The managers listened dutifully and clapped appreciatively at the end, as they were supposed to; Cook was, after all, a company founder. Nevertheless, he was disappointed by his reception. Despite some interest in the ideas presented, there was little energy in the room.

But although the main event fell flat, the one that followed did not. Cook had met a young consulting associate professor at Stanford named Alex Kazaks, whom he'd invited to present for an hour at the off-site. Like Cook, Kazaks began with a PowerPoint presentation, but he ended his after 10 minutes and used the rest of the time for a participatory exercise: The managers worked through a design challenge, creating prototypes, getting feedback, iterating, and refining.

The group was mesmerized. Afterward Cook informally polled the participants, asking what takeaways they'd gotten from the daylong session. Two-thirds of the lessons they reported came from the hands-on exercise. This reaction made Cook think: He might not be the next Steve Jobs, but perhaps his company didn't need one. Given a few tools, coaching, and practice, could the grass roots of the company drive success in innovation and

customer delight?

Idea in Brief

A few years ago the software development company Intuit realized that it needed a new approach to galvanizing customers. The company's Net Promoter Score was faltering, and customer recommendations of new products were especially disappointing. Intuit decided to hold a two-day, off-site meeting for the company's top 300 managers with a focus on the role of design in innovation. One of the days was dedicated to a program called Design for Delight. The centerpiece of the day was a PowerPoint presentation by Intuit founder Scott Cook, who realized midway through that he was no Steve Jobs: The managers listened dutifully, but there was little energy in the room. By contrast, a subsequent exercise in which the participants worked through a design challenge by creating prototypes, getting feedback, iterating, and refining, had them mesmerized. The eventual result was the creation of a team of nine design-thinking coaches—"innovation catalysts"—from across Intuit who were made available to help any work group create prototypes, run experiments, and learn from customers. The process includes a "painstorm" (to determine the customer's greatest pain point), a "sol-jam" (to generate and then winnow possible solutions), and a "code-jam" (to write code "good enough" to take to customers within two weeks). Design for Delight has enabled employees throughout Intuit to move from satisfying customers to delighting them.

From Idea to Initiative

Like most Silicon Valley tech companies, Intuit had user-interface designers, graphic designers, and others buried relatively deep in the organization. Cook turned to a particularly talented young design director, Kaaren Hanson, and asked her what she would do to promote design at Intuit.

Hanson realized that the company needed an organized program for

moving from talking about D4D to doing it. She persuaded Cook to let her create a team of design-thinking coaches—“innovation catalysts”—who could help Intuit managers work on initiatives throughout the organization. Hanson selected nine colleagues to join her in this role. Their training and deployment was her central agenda for FY 2009.

In selecting the nine, Hanson looked first for people with a broad perspective on what it meant to be a designer: Beyond creating a graphic user interface that was both appealing and intuitive, it included thinking about whether the software solved the user’s problem in a delightful way. She wanted her coaches to be interested in talking to users and solving problems with colleagues rather than depending solely on their own genius. If they were to successfully coach others in design thinking, they’d need an outgoing personality and good people skills.

She invited two direct reports from her own business unit and seven people from other units across the company. The group included six women and four men. They came from a variety of fields within Intuit—design, research, product management—and had titles such as user-interface architect, principal researcher, staff designer, and product manager. Hanson chose people who were influential even though they were all one or two levels below director, meaning closer to the bottom of the organization than the top. All nine signed up enthusiastically.

To begin building design thinking into the DNA of the company, Cook and Hanson organized a series of Design for Delight forums. These were typically attended by more than 1,000 employees and featured a speaker who’d had exemplary success in creating customer delight. Half the featured speakers came from inside Intuit; the other half included the founding CEO of Flip Video, Facebook’s top data scientist, and the head of Apple Stores. The forums also showcased D4D successes to date and shared best practices. People who worked together were encouraged to attend together and were asked as a team to identify the one thing they would do differently after the forum.

To ensure that managers who were thinking design didn't become too intimidated to begin the process, or frustrated trying to do something with which they had little experience, or delayed by needing to hire an outside design consultant, Hanson's innovation catalysts were available to help any work group create prototypes, run experiments, and learn from customers. Of course, there was a risk that this would stretch the catalysts too thin, so Hanson placed some constraints on their availability. They were expected to spend 25% of their time on big-payoff projects for Intuit overall. Hanson kept in close contact with general managers who had catalysts working with them to make sure that the catalysts were addressing the managers' biggest problems. She realized that if design momentum was to be maintained, her coaches had to be seen as responsible for three or four visible and high-impact wins a year.

Some enabling came from the very bottom of the organization. In 2008 two employees who had been at Intuit only four months designed an online social network for the D4D initiative, which they rolled out the following year with management's consent but without its direct support. In its first year the new platform, named Brainstorm, generated 32 ideas that made it to market.

From Presentations to Experiments

Traditionally, decisions at Intuit had been made on the basis of PowerPoint presentations. Managers would work to produce both (what they saw as) a great product and a great presentation for selling the concept to their bosses. Under this system Intuit managers voted on ideas and then tried to sell them to customers. A key component of D4D, therefore, was shifting the focus away from managerial presentations. It would be far better, Hanson and Cook realized, to learn directly from customers through experiments.

Today D4D innovations begin with what Intuit calls the painstorm—a process developed by two innovation catalysts, Rachel Evans and Kim McNealy. It is aimed at figuring out customers' greatest pain point for which Intuit can provide relief. In a painstorm, team members talk to and observe

customers in their offices or homes rather than sit in Intuit offices and imagine what they want. This exercise often shatters preconceptions. Going into one painstorm for a sales-oriented product, the team was convinced that the product concept should be “Grow your business.” But the painstorm showed that “Grow your business” sounded very ambiguous to customers—it could refer to growing revenues from their existing customers (not a pain point for them) or to acquiring similar small businesses (also not a pain point, but expensive). The true pain point was acquiring entirely new customers through organic sales efforts. “Get customers” was a winning concept that focused laserlike on that.

Recruiting the Innovation Catalysts

IN 2008 KAAREN HANSON sent this e-mail to some Intuit colleagues:

Subject: Phase II of Design for Delight—we need YOU

You have been nominated (and your participation has been approved by your manager) to help us drive Phase II of Design for Delight at Intuit. You are a critical leader who can enable Intuit to become one of the principal design-thinking cultures. We have a number of levers at our disposal but we need your help to develop even better ideas to drive design thinking deeper into the organization.

Here's what you'll be committing to:

- **Actively participate in a one-day brainstorm/workshop** in early August to work through what we (as a force of design thinking and as a larger company) might do to take Design for Delight to its next level. Scott will come by and respond to our ideas/plan towards the end of the day
- **Commit to the execution of initiatives** generated through the August workshop
- **Become a more visible Design for Delight leader** across Intuit (e.g., help teach a Design for Delight 101 session/workshop to FastPath or some other such leadership session, contribute to the D4D body of knowledge through existing and future contribution systems, be a sounding board for Intuit execs)
- **Be a D4D coach/facilitator** that the larger company can draw upon (e.g., coach key teams across Intuit in brainstorming,

design reviews, etc.)

In total, your commitment will be about 2 days/month—and we'll be able to work around your schedule.

Let me know if you are in for FY09—and I'll get the August date on everyone's calendars. Right now, we're looking at an in-person workshop on August 4th, 5th, or 6th in Mountain View.

Next, within two weeks, the group holds a “sol-jam,” in which people generate concepts for as many product or service solutions as possible to address the pain points they've identified and then weed the concepts down to a short list for prototyping and testing. In the early days of prototyping, these high-potential solutions were integrated into Intuit's software development process. But the innovation catalysts realized that the best way to maintain momentum would be to get code into users' hands as quickly as possible. This would help determine whether the solution had potential and, if so, what needed to be done to enhance it. So the third step became moving immediately to “code-jam,” with the goal of writing code that wasn't airtight but was good enough to take to customers within two weeks of the sol-jam. Thus, proceeding from the painstorm to the first user feedback on a new product usually takes only four weeks.

Let's look at a couple of examples. When Intuit's tax group began to think about mobile apps, Carol Howe, a project manager and innovation catalyst, started with the customer. Her five-person team went “out in the wild,” she says, to observe dozens of smart-phone users. It quickly narrowed in on millennials, whose income range made them likely candidates for the simplest tax experience. The team created multiple concepts and iterated with customers on a weekly basis. They brought customers in each Friday, distilled what they'd learned on Monday, brainstormed concepts on Tuesday, designed them on Wednesday, and coded them on Thursday, before bringing the customers in again. Through these iterations the team uncovered multiple “delighters.” They launched a pilot in California in January 2010 and expanded nationwide in January 2011. The resulting application, SnapTax, has 4.5 stars

in both the Apple and Android stores and a Net Promoter Score in the high 80s.

An even better example comes from India. In 2008 members of the India team came up with an idea remote from tax preparation and other core Intuit North America products, none of which were likely to succeed in India. The idea, a service for poor Indian farmers, was interesting enough for Intuit to give Deepa Bachu, a longtime development manager, the green light to explore it. Bachu and an engineer spent weeks following subsistence farmers through their daily lives—in the fields, in their villages, and at the markets where they sold their produce. The two came to appreciate the farmers' greatest pain point—perishable inventory that either went unsold or got a suboptimal price. If Intuit could enable the farmers to consistently sell their produce before spoilage and at a decent price, their pain would be reduced or eliminated.

After the painstorm and the sol-jam, the team went into rapid experimentation. Within seven weeks it was running a test of what was eventually launched as Mobile Bazaar, a simple text-messaging-based marketplace connecting buyers and sellers. To get there so fast, the team had cleverly faked parts of the product that would have been costly and slow to code and build. These came to be known as “fako backends.” What the user saw looked real, but behind the user interface was a human being—like the Wizard of Oz behind the curtain—rather than thousands of lines of code that would have taken months to write.

The initial trials showed that half the farmers were able to increase their prices by more than 10%; some of them earned as much as 50% more. Within a year of launch, Mobile Bazaar had 180,000 subscribing farmers, most of them acquired by word of mouth. They report that, on average, the service boosts their prices by 16%.

From Breakthroughs to Culture

Hanson was pleased with the progress of the 10 original innovation catalysts in

their first year and with the organization's receptivity, but she knew that Intuit would have to scale up to make the transformation complete. Brad Smith, the new CEO, was raising innovation expectations for the whole company, focusing particularly on new arenas that he described as "mobile, social, and global." Hanson set a goal for FY 2010 to select, train, and deploy another 65 catalysts. This meant sourcing from a broader pool of talent—going deeper into product management and engineering—and creating a small dedicated team to support the catalysts and increase D4D pull from midlevel managers.

She appointed Suzanne Pellican, one of the original 10, to expand the catalysts' number and capabilities. Hanson had learned from the initial work that the strongest design thinkers didn't necessarily make the best catalysts. She says, "We not only needed people who were design thinkers—we also needed people with passion to give D4D away and help others to do great work, versus coming up with a great idea and bringing it to others."

The catalysts also needed mutual support. Hanson's team had found that they did their best work when they worked together. They learned new ideas and techniques from one another and provided moral support in tough situations. So as Pellican scaled up the catalyst corps, she made sure that each catalyst was part of an organized "posse" that typically extended across business units, allowing new methods to travel quickly from one end of the organization to the other.

To increase the catalysts' effectiveness, Hanson established a second small team—led by Joseph O'Sullivan, another of the original 10—to help middle management embrace both design thinking as a concept and the innovation catalysts as enablers. For example, after several catalysts reported encountering resistance at the director level, Hanson and O'Sullivan worked to integrate design thinking into Intuit's leadership training programs, applying it directly to problems that leaders faced. In one training program an IT director was challenged to lead a team tasked with reducing company spending on employees' mobile devices by \$500,000. O'Sullivan's group held a one-day session on painstorming and sol-jamming for the team. The IT director

achieved the desired saving and won much appreciation from the members of her team for having made their task so much easier than expected. She and the other participants in that leadership training program became fervent D4D advocates.

Encouraging experimentation rather than PowerPoint has enabled employees throughout Intuit to move from satisfying customers to delighting them. Design for Delight has stuck because people see that it is an obviously better and more enjoyable way of innovating.

Innovation activity has increased dramatically in the organization. Take TurboTax, Intuit's single biggest product. In the 2006 tax year the TurboTax unit ran just one customer experiment. In 2010 it ran 600. Experiments in the QuickBooks unit went from a few each year to 40 last year. Intuit now seizes new opportunities more quickly. Brad Smith pushed for D4D-led innovation in the fast-growing arena of mobile apps, and within 24 months the company went from zero to 18, with a number of them, including SnapTax, off to a very successful start. Net Promoter Scores are up across the company, and growth in revenue and income has increased over the past three years.

Scott Cook may not have been another Steve Jobs, but it turned out that Intuit didn't need one.

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Stop the Innovation Wars

by Vijay Govindarajan and Chris Trimble

IT WAS JUST AN INNOCENT COMMENT. While working with a client at a *Fortune* 500 company, we proposed the formation of a special group to execute a new growth strategy. “For now, let’s just refer to the group as the innovation team,” we suggested.

The client rolled his eyes. “Let’s call it anything but that,” he said. “What is this so-called innovation team going to do? Brainstorm? Sit around being creative all day? Talk condescendingly about a superior organizational culture? All of this while operating with neither discipline nor accountability? All of this while the rest of us get the real work done?”

Wow. All it took was two words: *innovation team*.

In our experience, innovation teams feel a hostility toward the people responsible for day-to-day operations that is just as biting. The rich vocabulary of disdain includes *bureaucratic, robotic, rigid, ossified, staid, dull, decaying, controlling, patronizing* . . . and just plain *old*. Such animosity explains why most executives believe that any significant innovation initiative requires a team that is separate and isolated from the rest of the company.

But that conventional wisdom is worse than simpleminded. It is flat wrong. Isolation may neutralize infighting, but it also neuters innovation.

The reality is that an innovation initiative must be executed by a partnership that somehow bridges the hostilities—a partnership between a dedicated team and what we call the *performance engine*, the unit responsible for sustaining excellence in ongoing operations. Granted, such an arrangement seems, at first

glance, improbable. But to give up on it is to give up on innovation itself. Almost all innovation initiatives build directly upon a company's existing resources and know-how—brands, customer relationships, manufacturing capabilities, technical expertise, and so forth. So when a large corporation asks a group to innovate in isolation, it not only ends up duplicating things it already has but also forfeits its primary advantage over smaller, nimbler rivals—its mammoth asset base.

Over the past decade, we have examined dozens of innovation initiatives and identified some best practices. In the process we built upon foundational management theories such as Jim March's ideas about balancing exploration with exploitation, and Paul Lawrence and Jay Lorsch's argument that firms need to both integrate and differentiate corporate units. We came to the conclusion that the organizational model we prescribe—a partnership between a dedicated team and the performance engine—is surprisingly versatile. It can be adapted to initiatives that span many innovation categories—sustaining and disruptive; incremental and radical; competence enhancing and competence destroying; new processes, new products, new businesses, and high-risk new ventures.

This article will show how to make the unlikeliest partnership work. There are three steps. First, decide which tasks the performance engine can handle and which you'll need to hand off to a dedicated team. Second, assemble the right dedicated team. Third, anticipate and mitigate strains in the partnership. Once you have taken these steps, you'll be in a good position to actually execute on your great ideas.

How One Company Organized for Growth

In most law offices, even in the internet era, you'll find libraries full of weighty and majestic-looking books. The books contain rulings from past cases. With each verdict, judges contribute to a massive body of precedents that shape future decisions. (This is the system, at least, in the United States and many other countries.) Law students spend countless hours mastering the intricacies

and subtleties of researching precedents.

Idea in Brief

Special teams dedicated to innovation initiatives inevitably run into conflict with the rest of the organization. The people responsible for ongoing operations view the innovators as undisciplined upstarts. The innovators dismiss the operations people as bureaucratic dinosaurs. It's natural to separate the two warring groups. But it's also dead wrong, say Tuck Business School's Govindarajan and Trimble. Nearly all innovation initiatives build on a firm's existing resources and know-how. When a group is asked to innovate in isolation, the corporation forfeits its main advantage over smaller, nimbler rivals—its mammoth asset base. The best approach is to set up a partnership between the dedicated team and the people who maintain excellence in ongoing operations, the company's performance engine. Such partnerships were key to the successful launch of new offerings by legal publisher Westlaw, Lucent Technologies, and WD-40. There are three steps to making the partnership work: First, decide which tasks the performance engine can handle, assigning it only those that flow along the same path as ongoing operations. Next, assemble a dedicated team to carry out the rest, being careful to bring in outside perspectives and create new norms. Last, proactively manage conflicts. The key here is having an innovation leader who can collaborate well with the performance engine and a senior executive who supports the dedicated team, prioritizes the company's long-term interests, and adjudicates contests for resources.

West, a 135-year-old business, is one of several publishing houses whose mission is to make legal research easier. After it was acquired by the Thomson Corporation, now Thomson Reuters, in 1996, West experienced five years of double-digit growth, as the industry made a rapid transition from printed books to online databases. But in 2001 a major problem arose. Once nearly all

of West's customers had converted to Westlaw, the company's online offering, West's growth plummeted to near zero.

To restart growth, West set its sights on expanding its product line. By studying its customers—law firms, corporate law offices, and law schools, among others—and how they worked, West saw that lawyers had no convenient access to many key sources of information. For example, to examine legal strategies in past cases, law firms were sending runners to courthouses to dig through dusty archives and photocopy old briefs—documents written by lawyers for judges, often to summarize their arguments.

Questions to Ask

When Dividing the Labor

1. Does my company already have the needed skills for all aspects of the project?
2. What portions of the innovation initiative are consistent with the existing work relationships in the performance engine?

When Assembling the Dedicated Team

1. What is the right mix of insiders and outsiders?
2. How should the team be structured differently from the performance engine?
3. How should the team be measured and incentivized?

As You Manage the Strains on the Partnership

1. Is there a tone of mutual respect?
2. Are resource conflicts resolved proactively?
3. Is the shared staff giving sufficient attention to the innovation initiative?

Starting with an online database of briefs, West proceeded to launch a series of new digital products. By 2007, West had restored its organic growth to nearly 7% annually—quite an accomplishment since its customer base was growing much more slowly.

An expansion into databases for different kinds of documents does not

seem, at first glance, as if it would have been a stretch for West. But Mike Wilens, then the CEO, and his head of product development, Erv Barbre, immediately saw that the briefs project, because of its size, complexity, and unfamiliarity, was beyond the capabilities of West's performance engine. Some kind of special team was needed. At the same time, Wilens and Barbre were confident that portions of the project could be tackled by West's existing staff. They just had to make sure the two groups worked well together. Ultimately, the new briefs offering succeeded because Wilens and Barbre built an effective partnership between a dedicated team and the performance engine, following the three steps we've outlined.

Divide the Labor

Step one in forming the partnership is to define the responsibilities of each partner. Naturally, you want to assign as much as you can to the performance engine. It already exists and works well. But caution is due. You need to realistically assess what the performance engine can handle while it maintains excellence in ongoing operations.

The proper division of labor can span a wide range—from 10/90, to 50/50, to 90/10 splits. It depends on the nature of the initiative and the performance engine's capabilities. So how do you decide?

The performance engine has two essential limitations. The first is straightforward. Any task that is beyond the capabilities of the individuals within the performance engine must be assigned to the dedicated team. The second limitation is less obvious. It involves work relationships. What Person A and Person B can do together is not just a function of A's skills and B's skills. It is also a function of the way A and B are accustomed to working together. As long as A and B are working inside the performance engine, their work relationship is extremely difficult to change. It is reinforced daily by the demands of ongoing operations. BMW was confronted with this second limitation when it designed its first hybrid vehicle. (See the sidebar [“Why BMW Didn't Reinvent the Wheel.”](#))

Therefore, the performance engine should take on only tasks that flow along the same path from person to person that ongoing operations do—at the same pace and with the same people in charge. To ask more of the performance engine is too disruptive. It embeds conflicts between innovation and ongoing operations so deeply within the performance engine that they become impossible to manage.

Case Study: Why BMW Didn't Reinvent the Wheel

AT THE HEART OF EVERY HYBRID automobile lies a regenerative brake. Traditional brakes dissipate the energy produced by a vehicle's motion, generating friction and useless heat. Regenerative brakes, by contrast, capture the energy and put it back to work. An electrical generator built into the brake recharges the hybrid's massive batteries as the car slows.

Chris Bangle, then chief of design at BMW, was discouraged by slow progress early in the company's first effort to design a hybrid vehicle, launched in 2007. The source of the problem, Bangle saw, had nothing to do with engineering prowess; BMW employed the right experts. The problem lay in the company's formal structure and processes. Under its well-established design procedures, there was no reason for battery specialists to speak with brake specialists. There was no routine work flow between them.

Bangle ultimately decided to create a dedicated team to enable the deep collaboration that was necessary among all component specialists involved in the regenerative brake design. He named it the "energy chain" team, and it succeeded in moving the project forward quickly. Although a dedicated team was required for this one aspect of vehicle design, all other aspects of BMW's first hybrid launch—design, engineering, sales, marketing, distribution, and so forth—were handled by its performance engine.

At West, Wilens and Barbre recognized that although product development staffers had deep expertise in judicial decisions—such as *Miranda v. Arizona*, *Brown v. Board of Education*, *Roe v. Wade*, and thousands more—they had no experience in gathering briefs, which were scattered throughout countless courthouses and were much harder to track and organize than decisions were. A complicating factor was scale. There can be dozens of briefs for every

judicial decision. The dedicated team, at the very least, had to take responsibility for locating and acquiring the briefs—and would need a few outside experts to be effective.

More critically, Wilens and Barbre saw that the briefs project as a whole would be inconsistent with the work relationships within West's product development group. Composed of about 50 legal experts, the group worked on a few dozen small initiatives at a time. The typical project was an improvement to the Westlaw database that involved only two or three people for up to a few weeks. The group was nonhierarchical, and the individuals within it did not depend heavily on one another. In fact, during a given project, a product developer's most important work relationship was likely to be cross-functional, with a peer in the information technology group.

The briefs project was much larger. At its peak, it involved 30 people full-time. The product developers needed to work together in an unfamiliar manner. Each needed to take on a specialized role as part of a tightly structured, close-knit project team. Asking the developers to operate in both modes at once would have been disruptive and confusing for all involved. Therefore Wilens and Barbre assigned nearly the entire product development task to a dedicated team.

However, they assigned the marketing and sales tasks to the performance engine. Marketing and selling briefs was not much different from marketing and selling Westlaw. The buyers were the same, and the value proposition was easy to explain. The work could simply be added to West's existing marketing and sales processes. It would flow along the same path, at the same pace, and with the same people in charge. The sales and marketing teams were a component of the performance engine that could do double duty—a subset we refer to as the *shared staff*.

Assemble the Dedicated Team

Once the labor has been divided and the required skill sets have been identified, the principles for assembling the dedicated team are uncomplicated.

First, choose the best people you can get, from any source (internal transfers, external hires, even small acquisitions). Then, organize the team in a way that makes the most sense for the task at hand. Tackle the process as if you were building a new company from the ground up. This was the approach Lucent took in launching a new unit that quickly grew to \$2 billion in annual revenues. (See the sidebar “Why Lucent Engineered a Service Business from Scratch.”)

Alas, these principles are easy to state but extremely difficult to follow. Companies have a pernicious habit of creating subunits that behave just like the rest of the company, as though a genetic code has been passed from parent to offspring. We think of such subunits as *little performance engines*, and they quickly bring innovation initiatives to a standstill.

Case Study: Why Lucent Engineered a Service Business from Scratch

IN 2006, LUCENT SIGNED a deal to help a major telecommunications company transform its network. Four years earlier, such a huge service deal would have been hard to imagine.

Lucent’s historical strength was in products and in making technological breakthroughs in telecommunications hardware. But after the dot-com bust, Lucent needed a new source of growth and looked to services.

While the company had the necessary technical skills for services, it hardly had the organizational DNA. Technologists, not client relationship managers, held most of the power. And the pace of service operations was week to week, a stark departure from telecom hardware purchasing cycles, which lasted years. As such, Lucent recognized that nearly the entire project needed to be executed by a dedicated team.

Lucent assembled that team as if it were building a new company. It hired an outside leader, a veteran of services from EDS, and several experienced service executives. It adopted new HR policies that mimicked those of service companies. And it created a new performance scorecard, one that emphasized workforce utilization, not product line ROI. It even tied compensation for service deliverers directly to their utilization rates. The result? In four years’ time, Lucent’s service group was generating more than \$2 billion in revenues.

The most frequent source of the problem is the instinct to populate dedicated teams entirely with insiders. This is understandable. It's natural to think about who you know before thinking about skills you need. Insiders are easy to find, often cheaper to "hire," and seem less risky because they're known commodities. They also offer a critical benefit: Because of their familiarity with the organization and credibility within it, they can help mitigate conflicts between the dedicated team and the performance engine.

The trouble is that a dedicated team composed entirely of insiders is practically guaranteed to act like a little performance engine. For one thing, everyone has the same biases and instincts, grounded in the history of a single company. Furthermore, work relationships are sticky. As noted earlier, employees who have worked together for years have a hard time altering the way they interact.

Building an effective dedicated team requires breaking down existing work relationships and creating new ones. Including some outsiders, even just one in three, is a powerful expedient. Outsiders have no existing work relationships to break down. They must form new ones from scratch. As a bonus, outsiders naturally challenge assumptions because their biases and instincts are rooted in the experiences of other companies.

Managers can also accelerate the process of breaking down and re-creating work relationships by writing new job descriptions, inventing new and unfamiliar titles, and explicitly shifting the balance of power within the team. Shifting that balance is important because it is rarely the case that a company's traditional power center (say, engineering) should also dominate the dedicated team (if, for example, customers for the innovation initiative will care more about a new product's look than its performance).

Selecting the right people and forming new work relationships are the foundational steps in building an effective dedicated team, but it is also important to pay attention to other forces that shape behaviors. Beyond new work relationships, dedicated teams frequently require performance metrics, incentives, and cultural norms that differ from those of the performance

engine.

West built a dedicated team that was distinct from its existing product development staff, choosing a roughly 50/50 mix of insiders and outsiders. The company acquired a small business that had assembled on microfiche a collection of valuable briefs, including the very first brief filed before the U.S. Supreme Court. With it, West brought on board about a dozen people who knew a great deal about briefs and had no work relationships with the West team.

The leader of the briefs effort, Steve Anderson, treated the process of turning the mix of insiders and outsiders into a structured team as a zero-based effort. Rather than drawing on any of West's norms for how work gets done (who's responsible for what, who has what decision rights, and so forth), he simply gathered everyone and said, "Here we are. This is our task. How should we make it happen?" Of course, the way to organize the effort was not obvious on day one. Innovation initiatives are ambiguous. As Anderson's team gained experience, its structure evolved. It's not essential that the dedicated team's structure be perfectly clear at the outset—only that it be unconstrained by the parent company's past.

Working on Anderson's dedicated team felt much different to the insiders who were part of it. They had less autonomy. They had to collaborate with peers much more closely. And they knew that if they stumbled, they would be letting down not just themselves but their teammates and their company. Some struggled with the transition and chose to return to the performance engine. While this may seem unfortunate, it was actually a mark of Anderson's success. As a general rule, if all the insiders on the dedicated team are comfortable, it must be a little performance engine. (Note that it's also important for insiders to have a clear path to get back to the performance engine. Innovation initiatives frequently fail, and the individuals working on them sometimes don't succeed in their assignments. Companies that create an out for insiders will find that they can more easily motivate people to join a dedicated team.)

To further shape his dedicated team, Anderson drew clear distinctions between its standards and cultural values and those of the performance engine. West had long maintained extremely high quality standards. For judicial decisions—literally, the law itself—customers demanded infallible information. Therefore, West had implemented multistep checks and safeguards in loading documents into its database, a process that often started with scanning a physical document. With briefs, however, West needed to relax, slightly, from being obsessive about quality to being diligent. The dauntingly high number of briefs made exhaustive precautions impractical. Besides, customers cared more about convenience and availability than perfection.

Anticipate and Mitigate the Strains

Make no mistake, nurturing a healthy partnership is challenging. Conflicts between innovation initiatives and ongoing operations are normal and can easily escalate. Tensions become rivalries, rivalries become hostilities, and hostilities become all-out wars in which the company's long-term viability is the clearest loser.

Differences between the two groups run deep. Managers of the performance engine seek to be efficient, accountable, on time, on budget, and on spec. In every company, their basic approach is the same. It is to make every task, process, and activity as repeatable and predictable as possible. An innovation initiative, of course, is exactly the opposite. It is, by nature, nonroutine and uncertain. These incompatibilities create a natural us-versus-them dynamic.

Leaders must counter conflicts by constantly reinforcing a relationship of mutual respect. Dedicated team leaders must remember that profits from the performance engine pay for innovation, and that their success depends on their ability to leverage its assets. They must also remember that pushback from the performance engine does not arise from laziness or from an instinctive resistance to change. Quite the contrary—it arises from the efforts

of good people doing good work, trying to run ongoing operations as effectively as possible. For their part, performance engine leaders must recognize that no performance engine lasts forever. To dismiss innovation leaders as reckless rebels intent on undermining discipline in the pursuit of an esoteric dream is to write off the company's future.

For the partnership to work, the leader of the innovation initiative must set the right tone—positive and collaborative. Antagonizing the performance engine is a *really bad* idea. The performance engine always wins in an all-out fight. It is, quite simply, bigger and stronger.

In fact, for precisely that reason, even the best innovation leaders need help from high places. They must be directly supported by an executive senior enough to act in the long-term interests of the company, overriding the performance engine's short-term demands when necessary. This typically means that the innovation leader must report two or more levels higher up than managers with budgets of a similar size. At WD-40, for example, an innovation initiative relied on the direct involvement of the CEO. (See “How WD-40 Minimized Frictions.”)

The senior executive to whom the innovation leader reports must be careful not to be a cheerleader only for innovation. He or she must also extol the virtues and importance of the performance engine and emphasize that a long-run victory for the company requires that both sides win.

Case Study: How WD-40 Minimized Frictions

TO SPUR ORGANIC GROWTH, Garry Ridge, CEO of WD-40, created a team to develop breakthrough products. He called it Team Tomorrow. It included newly hired research scientists and new outside partners. One of its first endeavors was developing the No-Mess Pen, which made it easy to dispense small quantities of WD-40 in tight spaces. Though it doesn't sound like a radical innovation, the technological challenges were steep, and the product took months to develop.

Historically, WD-40's marketing team had handled product development, which generally entailed routine efforts to improve, renew, or repackage existing products. Now marketing took on the responsibility of partnering with Team Tomorrow to commercialize

its offerings.

The sources of conflict in this partnership are not hard to identify. First, some marketing staffers felt that the attractive challenge of developing breakthrough products should have been theirs. Then there was a resource constraint. Would the marketing team expend its limited time and resources on experimental products or proven performers? Finally, marketing worried that Team Tomorrow's new offerings would cannibalize existing products.

Graham Milner and Stephanie Barry, the leaders of Team Tomorrow, overcame these conflicts by taking a collaborative approach, particularly with the head of marketing. They shared information, established an open-door policy, and coordinated plans carefully with marketing, anticipating bottlenecks and resource conflicts. Knowing that such conflicts could be resolved only by the CEO, Milner and Barry made sure Ridge was aware of them early, so that he could set priorities. When Ridge saw that it was necessary, he added staff to the marketing team to make sure that it had sufficient bandwidth.

To signal the importance of the long term, Ridge carried a prototype of the pen with him wherever he went. This gave Team Tomorrow the attention it needed, but it also, at least initially, exacerbated feelings among some in the marketing team that they had been left out. Ridge, Milner, and Barry all quickly saw just how important it was to celebrate the accomplishments of the core business's team as well.

Ridge took other steps that contributed to WD-40's success. He made it clear that he would evaluate all involved employees on their effectiveness in collaborating across organizational boundaries. And he was able to lessen the anxiety about cannibalization by collecting data and sharing analyses that showed that the No-Mess Pen generated purely incremental sales.

Together, the innovation leader and the senior executive must anticipate and proactively resolve conflicts. The clashes can be intense, but if the labor is properly divided between the performance engine and the dedicated team, they'll be manageable. The most common conflict is over scarce resources. When the sum of activities, innovation plus ongoing operations, pushes the performance engine beyond its resource constraints, choices must be made.

Sometimes, this competition for scarce resources takes place through formal budgeting processes. Innovation leaders often find themselves seeking

explicit commitments from multiple performance engine leaders. These negotiations are best resolved through a single plan and budgeting process for the entire innovation initiative, with conflicts directly adjudicated by the senior executive.

In other cases, the competition is for the attention of the shared staff. It's tempting for the innovation leader to think that once the budget for an initiative is approved, the fight for resources is over. It is not. Each shared staff member chooses how much energy to devote to the new initiative every day. The innovation leader's powers of persuasion are critical but may not be adequate. Some companies create special incentives and targets for shared staff members to spur them to keep up with the demands of both innovation and ongoing operations. Others charge the innovation initiative for the shared staff's time. That way, the shared staff treats the innovation leader more like a customer than a distraction.

Emotional conflicts must also be managed. Sometimes resentments are grounded in substantive business conflicts, like the possibility that the innovation initiative may cannibalize the existing business. Senior executives must argue clearly and consistently that the innovation initiative is nonetheless in the company's long-term best interest and do as much as possible to allay fears about job security.

At other times, resentments amount to simple jealousy. The performance engine may feel disenfranchised if the innovation initiative is viewed as the company's most critical project. Or the dedicated team may feel marginalized as pursuers of a quirky experiment. Some companies have countered the effects of envy by making "ability to work productively with internal partners" a key assessment in individual performance reviews.

The briefs project at West faced multiple kinds of conflict but overcame them. Steve Anderson provided the right type of leadership. He viewed the performance engine as his partner, not his enemy. And he received constant support from two senior leaders, Mike Wilens and Erv Barbre.

Wilens and Barbre paid close attention to resource conflicts. When Barbre

asked members of the shared staff to make contributions to the briefs effort, he also explicitly discussed what was on their plates and what could be deferred. In some cases, he hired contract labor to help with routine tasks, such as loading documents, to ensure that the priorities of both innovation and ongoing operations could be met.

Meanwhile, Anderson recognized the importance of galvanizing the shared staff. He and his team got people on board by, among other things, creating a skit based on the *Perry Mason* television series. It showed what a lawyer's life was really like and why a product like a briefs database would be enormously valuable. Wilens and Barbre backed up his effort, in part by creating a special incentive for the sales force to push the new offering. All three leaders monitored emotional tensions. As the briefs project started to show signs of success, they saw that some in the performance engine felt as though they had been left out of a real "glamour project." The leaders countered by reinforcing the importance of the core business and by holding events at which they spread credit as widely as possible, within both the dedicated team and the performance engine.

The Unlikeliest Partnership Is Manageable

The reception of West's briefs database exceeded expectations. In fact, the company was deluged with queries about how quickly the database would be expanded to include additional legal specialties and jurisdictions. The company followed with many more initiatives like it, such as new databases of expert testimony and court dockets.

The organizational formula was not always the same for those initiatives. For example, when West pursued a product called PeerMonitor, it assigned almost the entire job—development and commercialization—to the dedicated team. PeerMonitor provided data that enabled law firms to benchmark their business performance against that of rivals. West chose to assign sales and marketing to the dedicated team because selling PeerMonitor required a different skill set and a longer cycle. The target customer was also different:

West sold most of its offerings to law librarians, but PeerMonitor was sold directly to managing partners. The PeerMonitor sales force collaborated with the performance engine's sales force to coordinate an overall approach.

West's example is one worthy of study. The company succeeded where others have stumbled because it saw that innovation is not something that happens either inside or outside the existing organization, and that innovation does not require that an upstart fight the establishment. Instead, innovation requires a partnership between a newly formed team and the long-standing one.

While such partnerships are challenging, they are manageable. And they are indispensable. Indeed, without them, innovation goes nowhere.

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Discovery-Driven Planning

*by Rita Gunther McGrath and Ian C. MacMillan**

BUSINESS LORE IS FULL of stories about smart companies that incur huge losses when they enter unknown territory—new alliances, new markets, new products, new technologies. The Walt Disney Company's 1992 foray into Europe with its theme park had accumulated losses of more than \$1 billion by 1994. Zapmail, a fax product, cost Federal Express Corporation \$600 million before it was dropped. Polaroid lost \$200 million when it ventured into instant movies. Why do such efforts often defeat even experienced, smart companies? One obvious answer is that strategic ventures are inherently risky: The probability of failure simply comes with the territory. But many failures could be prevented or their cost contained if senior managers approached innovative ventures with the right planning and control tools.

Discovery-driven planning is a practical tool that acknowledges the difference between planning for a new venture and planning for a more conventional line of business. Conventional planning operates on the premise that managers can extrapolate future results from a well-understood and predictable platform of past experience. One expects predictions to be accurate because they are based on solid knowledge rather than on assumptions. In platform-based planning, a venture's deviations from plan are a bad thing.

The platform-based approach may make sense for ongoing businesses, but it is sheer folly when applied to new ventures. By definition, new ventures call for a company to envision what is unknown, uncertain, and not yet obvious to

the competition. The safe, reliable, predictable knowledge of the well-understood business has not yet emerged. Instead, managers must make do with assumptions about the possible futures on which new businesses are based. New ventures are undertaken with a high ratio of assumption to knowledge. With ongoing businesses, one expects the ratio to be the exact opposite. Because assumptions about the unknown generally turn out to be wrong, new ventures inevitably experience deviations—often huge ones—from their original planned targets. Indeed, new ventures frequently require fundamental redirection.

Rather than trying to force startups into the planning methodologies for existing predictable and well-understood businesses, discovery-driven planning acknowledges that at the start of a new venture, little is known and much is assumed. When platform-based planning is used, assumptions underlying a plan are treated as facts—givens to be baked into the plan—rather than as best-guess estimates to be tested and questioned. Companies then forge ahead on the basis of those buried assumptions. In contrast, discovery-driven planning systematically converts assumptions into knowledge as a strategic venture unfolds. When new data are uncovered, they are incorporated into the evolving plan. The real potential of the venture is discovered as it develops—hence the term discovery-driven planning. The approach imposes disciplines different from, but no less precise than, the disciplines used in conventional planning.

Euro Disney and the Platform-Based Approach

Even the best companies can run into serious trouble if they don't recognize the assumptions buried in their plans. The Walt Disney Company, a 49% owner of Euro Disney (now called Disneyland Paris), is known as an astute manager of theme parks. Its success has not been confined to the United States: Tokyo Disneyland has been a financial and public relations success almost from its opening in 1983. Euro Disney is another story, however. By 1993, attendance approached 1 million visitors each month, making the park

Europe's most popular paid tourist destination. Then why did it lose so much money?

Idea in Brief

You're weighing a major strategic venture—a first-time alliance, a new market, an innovative product. Beware: business history is littered with stories about smart companies that hemorrhaged multiple millions from ventures gone bad.

Why such massive losses? Too many firms use conventional planning to manage their ventures, say McGrath and MacMillan. They make predictions about a venture's potential based on their established businesses. And they treat the assumptions underlying those predictions—"The product will sell itself," "We'll have no competitors"—as facts. By the time they realize a key assumption was flawed, it's too late to stanch the bleeding.

How to avoid this scenario? As your venture unfolds, use a disciplined process to systematically uncover, test, and (if necessary) revise the assumptions behind your venture's plan. You'll expose the make-or-break uncertainties common to ventures. And you'll address those uncertainties at the lowest possible cost—so you don't set your venture on the path to ruin.

In planning Euro Disney in 1986, Disney made projections that drew on its experience from its other parks. The company expected half of the revenue to come from admissions, the other half from hotels, food, and merchandise. Although by 1993, Euro Disney had succeeded in reaching its target of 11 million admissions, to do so it had been forced to drop adult ticket prices drastically. The average spending per visit was far below plan and added to the red ink.

The point is not to play Monday-morning quarterback with Disney's experience but to demonstrate an approach that could have revealed flawed

assumptions and mitigated the resulting losses. The discipline of systematically identifying key assumptions would have highlighted the business plan's vulnerabilities. Let us look at each source of revenue in turn.

Admissions price

In Japan and the United States, Disney found its price by raising it over time, letting early visitors go back home and talk up the park to their neighbors. But the planners of Euro Disney assumed that they could hit their target number of visitors even if they started out with an admission price of more than \$40 per adult. A major recession in Europe and the determination of the French government to keep the franc strong exacerbated the problem and led to low attendance. Although companies cannot control macroeconomic events, they can highlight and test their pricing assumptions. Euro Disney's prices were very high compared with those of other theme attractions in Europe, such as the aqua palaces, which charged low entry fees and allowed visitors to build their own menus by paying for each attraction individually. By 1993, Euro Disney not only had been forced to make a sharp price reduction to secure its target visitors, it had also lost the benefits of early-stage word of mouth. The talking-up phenomenon is especially important in Europe, as Disney could have gauged from the way word of mouth had benefited Club Med.

Idea in Practice

McGrath and MacMillan suggest this five-step process for successful venture planning:

1. Bake Profitability into Your Venture's Plan

Instead of estimating the venture's revenues and then assuming profits will come, create a "reverse income statement" for the project: Determine the profit required to make the venture worthwhile—it should be at least 10%. Then calculate the revenues needed to deliver that profit.

2. Calculate Allowable Costs

Lay out all the activities required to produce, sell,

service, and deliver the new product or service to customers. Together, these activities comprise the venture's **allowable costs**. Ask, "If we subtract allowable costs from required revenues, will the venture deliver significant returns?" If not, it may not be worth the risk.

3. Identify Your Assumptions

If you still think the venture *is* worth the risk, work with other managers on the venture team to list all the assumptions behind your profit, revenue, and allowable costs calculations. Use disagreement over assumptions to trigger discussion, and be open to adjusting your list.

Example: A company has determined that it needs to sell 250 million units of a proposed new product at a particular price to generate the revenue required to meet the venture's profit goal. It decides how many orders it'll need to sell the 250 million units, how many sales calls it'll take to secure those orders, how many salespeople will be required to make those calls, and how much this will cost in sales-force compensation.

4. Determine If the Venture Still Makes Sense

Check your assumptions against your reverse income statement for the venture. Can you still make the required profit, given your latest estimates of revenues and allowable costs? If not, the venture should be scrapped.

5. Test Assumptions at Milestones

If you've decided to move ahead with the venture, use milestone events to test—and, if necessary, further update—your assumptions. Postpone major commitments of resources until evidence from a previous milestone signals that taking the next step is justified.

Hotel accommodations

Based on its experience in other markets, Disney assumed that people would stay an average of four days in the park's five hotels. The average stay in 1993 was only two days. Had the assumption been highlighted, it might have been

challenged: Since Euro Disney opened with only 15 rides, compared with 45 at Disney World, people could do them all in a single day.

Food

Park visitors in the United States and Japan “graze” all day. At Euro Disney, the buried assumption was that Europeans would do the same. Euro Disney’s restaurants, therefore, were designed for all-day streams of grazers. When floods of visitors tried to follow the European custom of dining at noon, Disney was unable to seat them. Angry visitors left the park to eat, and they conveyed their anger to their friends and neighbors back home.

Merchandise

Although Disney did forecast lower sales per visitor in Europe than in the United States and Japan, the company assumed that Europeans would buy a similar mix of cloth goods and print items. Instead, Euro Disney fell short of plan when visitors bought a far smaller proportion of high-margin items such as T-shirts and hats than expected. Disney could have tested the buried assumption before forecasting sales: Disney’s retail stores in European cities sell many fewer of the high-margin cloth items and far more of the low-margin print items.

Disney is not alone. Other companies have paid a significant price for pursuing platform-based ventures built on implicit assumptions that turn out to be faulty. Such ventures are usually undertaken without careful up-front identification and validation of those assumptions, which often are unconscious. We have repeatedly observed that the following four planning errors are characteristic of this approach.

Companies don’t have hard data but, once a few key decisions are made, proceed as though their assumptions were facts. Euro Disney’s implicit assumptions regarding the way visitors would use hotels and restaurants are good examples.

Companies have all the hard data they need to check assumptions but fail to see the implications. After making assumptions based on a subset of the available data, they proceed without ever testing those assumptions. Federal Express based

Zapmail on the assumption that there would be a substantial demand for four-hour delivery of documents faxed from FedEx center to FedEx center. What went unchallenged was the implicit assumption that customers would not be able to afford their own fax machines before long. If that assumption had been unearthed, FedEx would have been more likely to take into account the plunging prices and increasing sales of fax machines for the office and, later, for the home.

Companies possess all the data necessary to determine that a real opportunity exists but make implicit and inappropriate assumptions about their ability to implement their plan. Exxon lost \$200 million on its office automation business by implicitly assuming that it could build a direct sales and service support capability to compete head-to-head with IBM and Xerox.

Companies start off with the right data, but they implicitly assume a static environment and thus fail to notice until too late that a key variable has changed. Polaroid lost \$200 million from Polavision instant movies by assuming that a three minute cassette costing \$7 would compete effectively against a half-hour videotape costing \$20. Polaroid implicitly assumed that the high cost of equipment for videotaping and playback would remain prohibitive for most consumers. Meanwhile, companies pursuing those technologies steadily drove down costs. (See the exhibit “Some dangerous implicit assumptions.”)

Some dangerous implicit assumptions

1. Customers will buy our product because we think it's a good product.
2. Customers will buy our product because it's technically superior.
3. Customers will agree with our perception that the product is “great.”
4. Customers run no risk in buying from us instead of continuing to buy from their past suppliers.
5. The product will sell itself.
6. Distributors are desperate to stock and service the product.
7. We can develop the product on time and on budget.
8. We will have no trouble attracting the right staff.
9. Competitors will respond rationally.
10. We can insulate our product from competition.

11. We will be able to hold down prices while gaining share rapidly.

12. The rest of our company will gladly support our strategy and provide help as needed.

Discovery-Driven Planning: An Illustrative Case

Discovery-driven planning offers a systematic way to uncover the dangerous implicit assumptions that would otherwise slip unnoticed and thus unchallenged into the plan. The process imposes a strict discipline that is captured in four related documents: a *reverse income statement*, which models the basic economics of the business; *pro forma operations specs*, which lay out the operations needed to run the business; a *key assumptions checklist*, which is used to ensure that assumptions are checked; and a *milestone planning chart*, which specifies the assumptions to be tested at each project milestone. As the venture unfolds and new data are uncovered, each of the documents is updated.

To demonstrate how this tool works, we will apply it retrospectively to Kao Corporation's highly successful entry into the floppy disk business in 1988. We deliberately draw on no inside information about Kao or its planning process but instead use the kind of limited public knowledge that often is all that any company would have at the start of a new venture.

The company

Japan's Kao Corporation was a successful supplier of surfactants to the magnetic-media (floppy disk) industry. In 1981, the company began to study the potential for becoming a player in floppy disks by leveraging the surfactant technology it had developed in its core businesses, soap and cosmetics. Kao's managers realized that they had learned enough process knowledge from their floppy disk customers to supplement their own skills in surface chemistry. They believed they could produce floppy disks at a much lower cost and higher quality than other companies offered at that time. Kao's surfactant competencies were particularly valuable because the quality of the floppy

disk's surface is crucial for its reliability. For a company in a mature industry, the opportunity to move current product into a growth industry was highly attractive.

The market

By the end of 1986, the demand for floppy disks was 500 million in the United States, 100 million in Europe, and 50 million in Japan, with growth estimated at 40% per year, compounded. This meant that by 1993, the global market would be approaching 3 billion disks, of which about a third would be in the original equipment manufacturer (OEM) market, namely such big-volume purchasers of disks as IBM, Apple, and Microsoft, which use disks to distribute their software. OEM industry prices were expected to be about 180 yen per disk by 1993. Quality and reliability have always been important product characteristics for OEMs such as software houses because defective disks have a devastating impact on customers' perceptions of the company's overall quality.

The reverse income statement

Discovery-driven planning starts with the bottom line. For Kao, back when it began to consider its options, the question was whether the floppy disk venture had the potential to enhance the company's competitive position and financial performance significantly. If not, why should Kao incur the risk and uncertainty of a major strategic venture?

Here, we impose the first discipline, which is to plan the venture using a reverse income statement, which runs from the bottom line up. (See the exhibit, "First, start with a reverse income statement." The four exhibits referred to in the article are located in the sidebar, "How Kao Might Have Tackled Its New Venture.") Instead of starting with estimates of revenues and working down the income statement to derive profits, we start with *required profits*. We then work our way up the profit and loss to determine how much revenue it will take to deliver the level of profits we require and how much cost can be allowed. The underlying philosophy is to impose revenue and cost

disciplines by baking profitability into the plan at the outset: Required profits equal necessary revenues minus allowable costs.

At Kao in 1988, management might have started with these figures: net sales, about 500 billion yen; income before taxes, about 40 billion yen; and return on sales (ROS), 7.5%. Given such figures, how big must the floppy disk opportunity be to justify Kao's attention? Every company will set its own hurdles. We believe that a strategic venture should have the potential to enhance total profits by at least 10%. Moreover, to compensate for the increased risk, it should deliver greater profitability than reinvesting in the existing businesses would. Again, for purposes of illustration, assume that Kao demands a risk premium of 33% greater profitability. Since Kao's return on sales is 7.5%, it will require 10%.

If we use the Kao data, we find that the required profit for the floppy disk venture would be 4 billion yen ($10\% \times 40$ billion). To deliver 4 billion yen in profit with a 10% return on sales implies a business with 40 billion yen in sales.

Assuming that, despite its superior quality, Kao will have to price competitively to gain share as a new entrant, it should set a target price of 160 yen per disk. That translates into unit sales of 250 million disks (40 billion yen in sales divided by 160 yen per disk). By imposing these simple performance measures at the start (1988), we quickly establish both the scale and scope of the venture: Kao would need to capture 25% of the total world OEM market (25% of 1 billion disks) by 1993. Given what is known about the size of the market, Kao clearly must be prepared to compete globally from the outset, making major commitments not only to manufacturing but also to selling.

How Kao Might Have Tackled Its New Venture: Discovery-Driven Planning in Action

THE GOAL HERE is to determine the value of success quickly. If the venture can't deliver significant returns, it may not be worth the risk.

First, start with a reverse income statement

Total figures

Required profits to add 10% to total profits = 4 billion yen
Necessary revenues to deliver 10% sales margin = 40 billion yen
Allowable costs to deliver 10% sales margin = 36 billion yen

Per unit figures

Required unit sales at 160 yen per unit = 250 million units
Necessary percentage of world market share of OEM unit sales = 25%
Allowable costs per unit for 10% sales margin = 144 yen

Second, lay out all the activities needed to run the venture

Pro forma operations specs

1. Sales

Required disk sales = 250 million disks
Average order size (Assumption 8) = 10,000 disks
Orders required (250 million/10,000) = 25,000
Number of calls to make a sale (Assumption 9) = 4
Sales calls required (4 x 25,000) = 100,000 per year
Calls per day per salesperson (Assumption 10) = 2
Annual salesperson days (100,000/2) = 50,000

Sales force for 250 days per year (Assumption 11) 50,000 salesperson days/250 = 200 people

Salary per salesperson = 10 million yen (Assumption 12) Total sales-force salary cost (10 million yen x 200) = 2 billion yen

2. Manufacturing

Quality specification of disk surface: 50% fewer flaws than best competitor (Assumption 15)

Annual production capacity per line = 25 per minute x 1440 minutes per day x 348 days (Assumption 16) = 12.5 million disks

Production lines needed (250 million disks/12.5 million disks per line) = 20 lines

Production staffing (30 per line [Assumption 17] x 20 lines) = 600 workers

Salary per worker = 5 million yen (Assumption 18)
Total production salaries (600 x 5 million yen) = 3 billion yen
Materials costs per disk = 20 yen (Assumption 19)
Total materials cost (20 x 250 million disks) = 5 billion yen
Packaging per 10 disks = 40 yen (Assumption 20)

Total packaging costs (40 x 25 million packages) = 1 billion yen

3. Shipping

Containers needed per order of 10,000 disks = 1 (Assumption 13)

Shipping cost per container = 100,000 yen (Assumption 14)

Total shipping costs (25,000 orders x 100,000 yen) = 2.5 billion yen

4. Equipment and depreciation

Fixed asset investment to sales = 1:1 (Assumption 5) = 40 billion yen

Equipment life = 3 years (Assumption 7)

Annual depreciation (40 billion yen/3 years) = 13.3 billion yen

Keeping a checklist is an important discipline to ensure that each assumption is flagged and tested as a venture unfolds.

Third, track all assumptions

Assumption	Measurement
1. Profit margin	10% of sales
2. Revenues	40 billion yen
3. Unit selling price	160 yen
4. 1993 world OEM market	1 billion disks
5. Fixed asset investment to sales	1:1
6. Effective production capacity per line	25 disks per minute
7. Effective life of equipment	3 years
8. Average OEM order size	10,000 disks
9. Sales calls per OEM order	4 calls per order
10. Sales calls per salesperson per day	2 calls per day
11. Selling days per year	250 days
12. Annual salesperson's salary	10 million yen
13. Containers required per order	1 container
14. Shipping cost per container	100,000 yen
15. Quality level needed to get customers to switch: % fewer flaws per disk than top competitor	50%
16. Production days per year	348 days
17. Workers per production line per day (10 per line for 3 shifts)	30 per line
18. Annual manufacturing worker's salary	5 million yen
19. Materials costs per disk	20 yen
20. Packaging costs per 10 disks	40 yen
21. Allowable administration costs (See revised reverse income statement, below)	9.2 billion yen

Now, with better data, one can see if the entire business proposition

hangs together.

Fourth, revise the reverse income statement

Required margin	10% return on sales
Required profit	4 billion yen
Necessary revenues	40 billion yen
Allowable costs	36 billion yen
Sales-force salaries	2.0 billion yen
Manufacturing salaries	3.0 billion yen
Disk materials	5.0 billion yen
Packaging	1.0 billion yen
Shipping	2.5 billion yen
Depreciation	13.3 billion yen
Allowable administration and overhead costs	9.2 billion yen (Assumption 21)
Per-unit figures	
Selling price	160 yen
Total costs	144 yen
Disk materials costs	20 yen

Finally, plan to test assumptions at milestones

Milestone event—namely, the completion of:

1. Initial data search and preliminary feasibility analysis
2. Prototype batches produced
3. Technical testing by customers
4. Subcontracted production
5. Sales of subcontracted production
6. Purchase of an existing plant
7. Pilot production at purchased plant
8. Competitor reaction
9. Product redesign
10. Major repricing analysis
11. Plant redesign

Assumptions to be tested

- 4: 1993 world OEM market
- 8: Average OEM order size
- 9: Sales calls per OEM order
- 10: Sales calls per salesperson per day
- 11: Salespeople needed for 250 selling days per year
- 12: Annual salesperson's salary
- 13: Containers required per order
- 14: Shipping cost per container
- 16: Production days per year
- 18: Annual manufacturing worker's salary
- 15: Quality to get customers to switch
- 19: Materials costs per disk
- 3: Unit selling price
- 15: Quality to get customers to switch
- 19: Materials costs per disk
- 1: Profit margin
- 2: Revenues
- 3: Unit selling price
- 8: Average OEM order size
- 9: Sales calls per OEM order
- 10: Sales calls per salesperson per day
- 12: Annual salesperson's salary
- 15: Quality to get customers to switch
- 5: Fixed asset investment to sales
- 7: Effective life of equipment
- 6: Effective production capacity per line
- 16: Production days per year
- 17: Workers per production line per day
- 18: Annual manufacturing worker's salary
- 19: Materials costs per disk
- 20: Packaging costs per 10 disks
- 1: Profit margin
- 2: Revenues
- 3: Unit selling price
- 19: Materials costs per disk
- 20: Packaging costs per 10 disks
- 1: Profit margin
- 2: Revenues
- 3: Unit selling price
- 4: 1993 world OEM market
- 5: Fixed asset investment to sales
- 6: Effective production capacity per line
- 19: Materials costs per disk

Continuing up the profit and loss, we next calculate allowable costs: If Kao is to capture 10% margin on a price of 160 yen per disk, the total cost to manufacture, sell, and distribute the disks worldwide cannot exceed 144 yen

per disk. The reverse income statement makes clear immediately that the challenge for the floppy disk venture will be to keep a lid on expenses.

The pro forma operations specs and the assumptions checklist

The second discipline in the process is to construct pro forma operations specs laying out the activities required to produce, sell, service, and deliver the product or service to the customer. Together, those activities comprise the venture's allowable costs. At first, the operations specs can be modeled on a simple spreadsheet without investing in more than a few telephone calls or on-line searches to get basic data. If an idea holds together, it is possible to identify and test underlying assumptions, constantly fleshing out and correcting the model in light of new information. When a company uses this cumulative approach, major flaws in the business concept soon become obvious, and poor concepts can be abandoned long before significant investments are made.

We believe it is essential to use industry standards for building a realistic picture of what the business has to look like to be competitive. Every industry has its own pressures—which determine normal rates of return in that industry—as well as standard performance measures such as asset-to-sales ratios, industry profit margins, plant utilization, and so on. In a globally competitive environment, no sane manager should expect to escape the competitive discipline that is captured and measured in industry standards. These standards are readily available from investment analysts and business information services. In countries with information sources that are less well developed than those in the United States, key industry parameters are still used by investment bankers and, more specifically, by those commercial bankers who specialize in loans to the particular industry. For those getting into a new industry, the best approach is to adapt standards from similar industries.

Note that we do not begin with an elaborate analysis of product or service attributes or an in-depth market study. That comes later. Initially, we are simply trying to capture the venture's embedded assumptions. The basic

discipline is to spell out clearly and realistically where the venture will have to match existing industry standards and in what one or two places managers expect to excel and how they expect to do so.

Kao's managers in 1988 might have considered performance standards for the floppy disk industry. Because there would be no reason to believe that Kao could use standard production equipment any better than established competitors could, it would want to plan to match industry performance on measures relating to equipment use. Kao would ascertain, for example, that the effective production capacity per line was 25 disks per minute in the industry; and the effective life of production equipment was three years. Kao's advantage was in surface chemistry and surface physics, which could improve quality and reduce the cost of materials, thus improving margins. When Kao planned its materials cost, it would want to turn that advantage into a specific challenge for manufacturing: Beat the industry standard for materials cost by 25%. The formal framing of operational challenges is an important step in discovery-driven planning. In our experience, people who are good in design and operations can be galvanized by clearly articulated challenges. That was the case at Canon, for example, when Keizo Yamaji challenged the engineers to develop a personal copier that required minimal service and cost less than \$1,000, and the Canon engineers rose to the occasion.

A company can test the initial assumptions against experience with similar situations, the advice of experts in the industry, or published information sources. The point is not to demand the highest degree of accuracy but to build a reasonable model of the economics and logistics of the venture and to assess the order of magnitude of the challenges. Later, the company can analyze where the plan is most sensitive to wrong assumptions and do more formal checks. Consultants to the industry—bankers, suppliers, potential customers, and distributors—often can provide low-cost and surprisingly accurate information.

The company must build a picture of the activities that are needed to carry out the business and the costs. Hence in the pro forma operations specs, we

ask how many orders are needed to deliver 250 million units in sales; then how many sales calls it will take to secure those orders; then how many salespeople it will take to make the sales calls, given the fact that they are selling to a global OEM market; then how much it will cost in sales-force compensation. (See the exhibit “Second, lay out all the activities needed to run the venture” located on the sidebar “How Kao Might Have Tackled Its New Venture.”) Each assumption can be checked, at first somewhat roughly and then with increasing precision. Readers might disagree with our first-cut estimates. That is fine—so might Kao Corporation. Reasonable disagreement triggers discussion and, perhaps, adjustments to the spreadsheet. The evolving document is doing its job if it becomes the catalyst for such discussion.

The third discipline of discovery-driven planning is to compile an assumption checklist to ensure that each assumption is flagged, discussed, and checked as the venture unfolds. (See the exhibit “Third, track all assumptions.”)

The entire process is looped back into a revised reverse income statement, in which one can see if the entire business proposition hangs together. (See the exhibit, “Fourth, revise the reverse income statement.”) If it doesn’t, the process must be repeated until the performance requirements and industry standards can be met; otherwise, the venture should be scrapped.

Milestone planning

Conventional planning approaches tend to focus managers on meeting plan, usually an impossible goal for a venture rife with assumptions. It is also counterproductive—insistence on meeting plan actually prevents learning. Managers can formally plan to learn by using milestone events to test assumptions.

Milestone planning is by now a familiar technique for monitoring the progress of new ventures. The basic idea, as described by Zenas Block and Ian C. MacMillan in the book *Corporate Venturing* (Harvard Business School Press, 1993), is to postpone major commitments of resources until the evidence from the previous milestone event signals that the risk of taking the next step is

justified. What we are proposing here is an expanded use of the tool to support the discipline of transforming assumptions into knowledge.

Going back to what Kao might have been thinking in 1988, recall that the floppy disk venture would require a 40-billion-yen investment in fixed assets alone. Before investing such a large sum, Kao would certainly have wanted to find ways to test the most critical assumptions underlying the three major challenges of the venture:

- capturing 25% global market share with a 20-yen-per-disk discount and superior quality;
- maintaining at least the same asset productivity as the average competitor and producing a floppy disk at 90% of the estimated total costs of existing competitors; and
- using superior raw materials and applied surface technology to produce superior-quality disks for 20 yen per unit instead of the industry standard of 27 yen per unit.

For serious challenges like those, it may be worth spending resources to create specific milestone events to test the assumptions before launching a 40-billion-yen venture. For instance, Kao might subcontract prototype production so that sophisticated OEM customers could conduct technical tests on the proposed disk. If the prototypes survive the tests, then, rather than rest on the assumption that it can capture significant business at the target price, Kao might subcontract production of a large batch of floppy disks for resale to customers. It could thus test the appetite of the OEM market for price discounting from a newcomer.

Similarly, for testing its ability to cope with the second and third challenges once the Kao prototype has been developed, it might be worthwhile to buy out a small existing floppy disk manufacturer and apply the technology in an established plant rather than try to start up a greenfield operation. Once Kao can demonstrate its ability to produce disks at the required quality and cost in the small plant, it can move ahead with its own full-scale plants.

Deliberate assumption-testing milestones are depicted in the exhibit “Finally, Plan to Test Assumptions at Milestones,” which also shows some of the other typical milestones that occur in most major ventures. The assumptions that should be tested at each milestone are listed with appropriate numbers from the assumption checklist.

In practice, it is wise to designate a *keeper of the assumptions*—someone whose formal task is to ensure that assumptions are checked and updated as each milestone is reached and that the revised assumptions are incorporated into successive iterations of the four discovery-driven planning documents. Without a specific person dedicated to following up, it is highly unlikely that individuals, up to their armpits in project pressures, will be able to coordinate the updating independently.

Discovery-driven planning is a powerful tool for any significant strategic undertaking that is fraught with uncertainty—new-product or market ventures, technology development, joint ventures, strategic alliances, even major systems redevelopment. Unlike platform-based planning, in which much is known, discovery-driven planning forces managers to articulate what they don’t know, and it forces a discipline for learning. As a planning tool, it thus raises the visibility of the make-or-break uncertainties common to new ventures and helps managers address them at the lowest possible cost.

Note

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How GE Is Disrupting Itself

by Jeffrey R. Immelt, Vijay Govindarajan, and Chris Trimble

IN MAY 2009, General Electric announced that over the next six years it would spend \$3 billion to create at least 100 health-care innovations that would substantially lower costs, increase access, and improve quality. Two products it highlighted at the time—a \$1,000 handheld electrocardiogram device and a portable, PC-based ultrasound machine that sells for as little as \$15,000—are revolutionary, and not just because of their small size and low price. They’re also extraordinary because they originally were developed for markets in emerging economies (the ECG device for rural India and the ultrasound machine for rural China) and are now being sold in the United States, where they’re pioneering new uses for such machines.

We call the process used to develop the two machines and take them global *reverse innovation*, because it’s the opposite of the *glocalization* approach that many industrial-goods manufacturers based in rich countries have employed for decades. With glocalization, companies develop great products at home and then distribute them worldwide, with some adaptations to local conditions. It allows multinationals to make the optimal trade-off between the global scale so crucial to minimizing costs and the local customization required to maximize market share. Glocalization worked fine in an era when rich countries accounted for the vast majority of the market and other countries didn’t offer much opportunity. But those days are over—thanks to the rapid development of populous countries like China and India and the slowing growth of wealthy nations.

GE badly needs innovations like the low-cost ECG and ultrasound machines, not only to expand beyond high-end segments in places like China and India but also to preempt local companies in those countries—the emerging giants—from creating similar products and then using them to disrupt GE in rich countries. To put it bluntly: If GE’s businesses are to survive and prosper in the next decade, they must become as adept at reverse innovation as they are at glocalization. Success in developing countries is a prerequisite for continued vitality in developed ones.

The problem is that there are deep conflicts between glocalization and reverse innovation. And the company can’t simply replace the first with the second, because glocalization will continue to dominate strategy for the foreseeable future. The two models need to do more than coexist; they need to cooperate. This is a heck of a lot easier said than done since the centralized, product-focused structures and practices that have made multinationals so successful at glocalization actually get in the way of reverse innovation, which requires a decentralized, local-market focus.

Almost all the people and resources dedicated to reverse innovation efforts must be based and managed in the local market. These local growth teams need to have P&L responsibility; the power to decide which products to develop for their markets and how to make, sell, and service them; and the right to draw from the company’s global resources. Once products have proven themselves in emerging markets, they must be taken global, which may involve pioneering radically new applications, establishing lower price points, and even using the innovations to cannibalize higher-margin products in rich countries. All of those approaches are antithetical to the glocalization model. This article aims to share what GE has learned in trying to overcome that conflict.

Idea in Brief

For decades, General Electric and other industrial-goods manufacturers based in rich countries grew by

developing high-end products at home and distributing them globally, with some adaptations to local conditions—an approach known as glocalization. Now they must do an about-face and learn to bring low-end products created specifically for emerging markets into wealthy markets. That process, called reverse innovation, isn't easy to master. It requires a decentralized, local-market focus that clashes with the centralized, product-focused structure that multinationals have evolved for glocalization. In this article, Immelt, GE's CEO, and Govindarajan and Trimble, of Dartmouth's Tuck School of Business, describe how GE has dealt with that challenge. An anomaly within the ultrasound unit of GE Healthcare provided the blueprint. Because China's poorly funded rural clinics couldn't afford the company's sophisticated ultrasound machines, a local team built a cheap, portable ultrasound out of a laptop equipped with special peripherals and software. It not only became a hit in China but jump-started growth in the developed world by pioneering applications for situations where portability is critical, such as at accident sites. The team succeeded because a top executive championed it and gave it unprecedented autonomy. GE has since set up more than a dozen similar operations in an effort to expand beyond the premium segments in developing countries—and to preempt emerging giants from disrupting GE's sales at home

Why Reverse Innovation Is So Important

Glocalization is so dominant today because it has delivered. Largely because of glocalization, GE's revenues outside the United States soared from \$4.8 billion, or 19% of total revenues, in 1980, to \$97 billion, or more than half of the total, in 2008.

The model came to prominence when opportunities in today's emerging markets were pretty limited—when their economies had yet to take off and their middle or low-end customer segments didn't exist. Therefore, it made sense for multinational manufacturers to simply offer them modifications of products for developed countries. Initially, GE, like other multinationals, was satisfied with the 15% to 20% growth rates its businesses enjoyed in

developing countries, thanks to glocalization.

Then in September 2001 one of the coauthors of this piece, Jeff Immelt, who had just become GE's CEO, set a goal: to greatly accelerate organic growth at the company and become less dependent on acquisitions. This made people question many things that had been taken for granted, including the glocalization strategy, which limited the company to skimming the top of emerging markets. A rigorous analysis of GE's health-care, power-generation, and power-distribution businesses showed that if they took full advantage of opportunities that glocalization had ignored in heavily populated places like China and India, they could grow two to three times faster there. But to do that, they'd have to develop innovative new products that met the specific needs and budgets of customers in those markets. That realization, in turn, led GE executives to question two core tenets of glocalization.

Assumption 1: Emerging economies will largely evolve in the same way that wealthy economies did

The reality is, developing countries aren't following the same path and could actually jump ahead of developed countries because of their greater willingness to adopt breakthrough innovations. With far smaller per capita incomes, developing countries are more than happy with high-tech solutions that deliver decent performance at an ultralow cost—a 50% solution at a 15% price. And they lack many of the legacy infrastructures of the developed world, which were built when conditions were very different. They need communications, energy, and transportation products that address today's challenges and opportunities, such as unpredictable oil prices and ubiquitous wireless technologies. Finally, because of their huge populations, sustainability problems are especially urgent for countries like China and India. Because of this, they're likely to tackle many environmental issues years or even decades before the developed world.

All this isn't theory. It's already happening. Emerging markets are becoming centers of innovation in fields like low-cost health-care devices, carbon sequestration, solar and wind power, biofuels, distributed power generation,

batteries, water desalination, microfinance, electric cars, and even ultra-low-cost homes.

Assumption 2: Products that address developing countries' special needs can't be sold in developed countries because they're not good enough to compete there

The reality here is, these products can create brand-new markets in the developed world—by establishing dramatically lower price points or pioneering new applications.

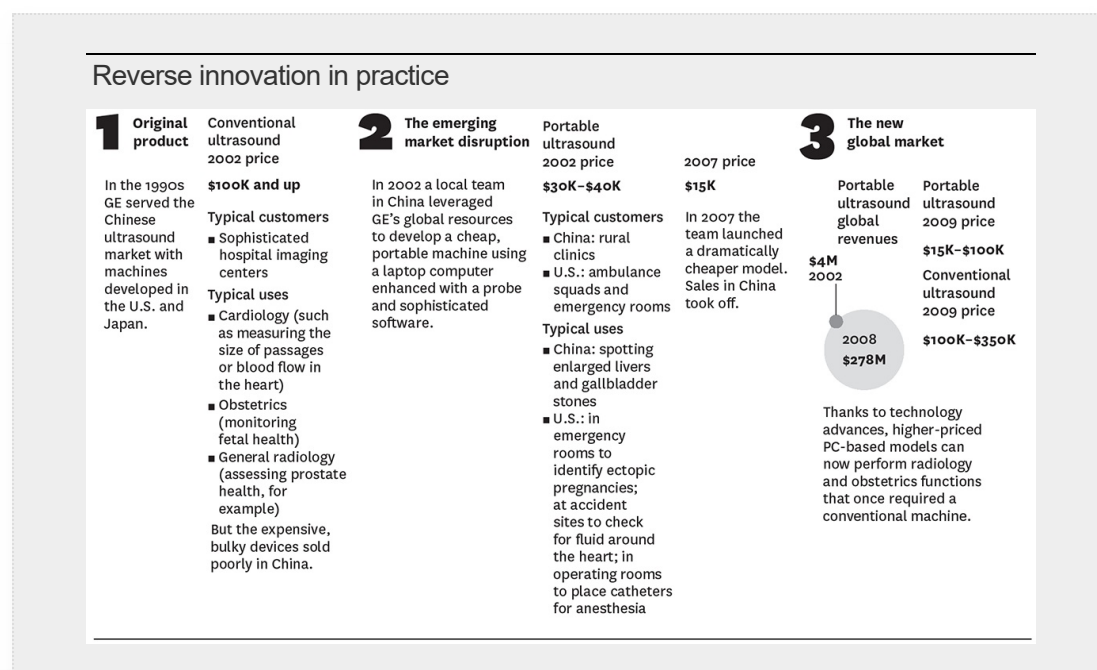
Consider GE's health-care business in the United States. It used to make most of its money on premium computed tomography (CT) and magnetic resonance (MR) imaging machines. But to succeed in the era of broader access and reduced reimbursement that President Obama hopes to bring about, the business will probably need to increase by 50% the number of products it offers at lower price points. And that doesn't mean just cheaper versions of high-tech products like imaging machines. The company also must create more offerings like the heated bassinet it developed for India, which has great potential in U.S. inner cities, where infant deaths related to the cold remain high.

And let's not forget that technology often can be improved until it satisfies more demanding customers. The compact ultrasound, which can now handle imaging applications that previously required a conventional machine, is one example. (See the exhibit "Reverse innovation in practice.") Another is an aircraft engine that GE acquired when it bought a Czech aerospace company for \$20 million. GE invested an additional \$25 million to further develop the engine's technology and now plans to use it to challenge Pratt & Whitney's dominance of the small turboprop market in developed countries. GE's cost position is probably half of what Pratt's is.

Preempting the Emerging Giants

Before the financial crisis plunged the world into a deep recession, GE's leaders had been looking to emerging markets to help achieve their ambitious

growth objectives. Now they're counting on these markets even more because they think that after the downturn ends, the developed world will suffer a prolonged period of slow growth—1% to 3% a year. In contrast, annual growth in emerging markets could easily reach two to three times that rate.



Ten years ago when GE senior managers discussed the global marketplace, they talked about “the U.S., Europe, Japan, and the rest of the world.” Now they talk about “resource-rich regions,” such as the Middle East, Brazil, Canada, Australia, and Russia, and “people-rich regions,” such as China and India. The “rest of world” means the U.S., Europe, and Japan.

To be honest, the company also is embracing reverse innovation for defensive reasons. If GE doesn't come up with innovations in poor countries and take them global, new competitors from the developing world—like Mindray, Suzlon, Goldwind, and Haier—will.

In GE's markets the Chinese will be bigger players than the Indians will. The Chinese have a real plan to become a major global force in transportation and power generation. GE Power Generation is already regularly running into Chinese enterprises as it competes in Africa, which will be an extremely important region for the company. One day those enterprises may compete with GE in its own backyard.

That's a bracing prospect. GE has tremendous respect for traditional rivals like Siemens, Philips, and Rolls-Royce. But it knows how to compete with them; they will never destroy GE. By introducing products that create a new price-performance paradigm, however, the emerging giants very well could. Reverse innovation isn't optional; it's oxygen.

A Clash of Two Models

Glocalization has defined international strategy for three decades. All the currently dominant ideas—from Christopher A. Bartlett and Sumantra Ghoshal's "transnational" strategy to Pankaj Ghemawat's "adaptation-aggregation" trade-off—fit within the glocalization framework. Since organization follows strategy, it's hardly surprising that glocalization also has molded the way that multinationals are structured and run.

GE is a case in point. For the past 30 years, its organization has evolved to maximize its effectiveness at glocalization. Power and P&L responsibility were concentrated in global business units headquartered in the developed world. The major business functions—including R&D, manufacturing, and marketing—were centralized at headquarters. While some R&D centers and manufacturing operations were moved abroad to tap overseas talent and reduce costs, they focused mainly on products for wealthy countries.

While this approach has enormous advantages, it makes reverse innovation impossible. The experiences of Venkatraman Raja, the head of GE Healthcare's business in India, illustrate why.

GE Healthcare sells an x-ray imaging product called a surgical C-arm, which is used in basic surgeries. A high-quality, high-priced product designed for hospitals in wealthy countries, it has proven tough to sell in India. Raja saw the problem and made a proposal in 2005. He wanted to develop, manufacture, and sell a simpler, easier-to-use, and substantially cheaper product in India. His proposal made sense, and yet, to no one's surprise, it was not approved.

If you were a leader of a GE operation in a developing country, as Raja was, here's what you were up against: Your formal responsibilities included neither

general management nor product development. Your responsibility was to sell, distribute, and service GE's global products locally and provide insights into customers' needs to help the company adapt its offerings. You were expected to grow revenues by 15% to 20% a year and make sure that costs increased at a much slower rate, so that margins rose. You were held rigidly accountable for delivering on plan. Just finding the time for an extracurricular activity like creating a proposal for a product tailored to the local market was challenging.

That was nothing, however, compared with the challenge of the next step: selling your proposal internally. Doing so required getting the attention of the general manager at headquarters in the United States, who sat two or more levels above your immediate boss and was far more familiar with a world-renowned medical center in Boston than a rural clinic outside Bangalore. Even if you got the meeting, you'd have limited time to make your case. (India accounted for just 1% of GE's revenues at the time and occupied roughly the same mindshare of managers with global responsibility.)

If you were extremely persuasive, you might be invited to share the proposal with others. But when you visited the head of global manufacturing, you'd have to counter arguments that a simple, streamlined global product line was much more efficient than custom offerings. When you visited the head of marketing, you'd have to deal with fears that a lower-priced product would weaken the GE brand and cannibalize existing sales. When you met with the head of finance, you'd have to wrestle with concerns that lower-priced products would drag down overall margins. And when you visited the head of global R&D, you'd have to explain why the energies of GE's scientists and engineers—including those in technology centers in emerging markets—should be diverted from projects directed at its most sophisticated customers, who paid top dollar.

Even if you gained support from each of these executives and got the proposal off the ground, you'd still have to compete for capital year after year against more certain projects with shorter-term payoffs. Meanwhile, of course, you'd still have to worry about making your quarterly numbers for your day

job.

It was little wonder that successful efforts to develop radically new products for poor countries were extremely rare.

Shifting the Center of Gravity

Obviously, changing long-established structures, practices, and attitudes is an enormous task. As is the case in any major change program, the company's top leaders have to play a major role.

To do so, they must investigate firsthand the size of the opportunity and how it could be exploited and encourage the teams running the corporation's businesses to do the same. As GE's CEO, Jeff goes to China and India two times a year. When he's in, say, China, he'll spend a day at GE's research center in Shanghai and then meet separately with dozens of people in the company's local business operations and just let them talk about what they're working on, what their cost points are, who their competitors are, and so on. On such visits, he has realized that there's a whole realm of technology that the company should be applying faster.

While in China, Jeff will also talk with government leaders, including Premier Wen Jiabao. Wen has told Jeff about his plans to develop China's economy and how making health care affordable for all citizens fits into that. It takes a conversation like that to fully appreciate the opportunities in China.

In India, Jeff will have dinner with the CEOs of Indian companies. At one dinner Anand Mahindra talked about how his company, Mahindra & Mahindra, was making life miserable for John Deere in India with a tractor that cost half the price of Deere's but was still enormously profitable. Such discussions drive home the point that you can make a lot of money in India if you have the right business models.

So the job of the CEO—of any senior business leader, for that matter—is to connect all the dots and then act as a catalyst. It's to give initiatives special status and funding and personally monitor them on a monthly or quarterly basis. And perhaps most important in the case of reverse innovation, it's to

push your enterprise to come up with the new organizational form that will allow product and business-model innovation to flourish in emerging markets.

A Homegrown Model

To develop that new organizational form, GE did what it has always done: learn from other companies' experiences but also try to find an internal group that somehow had managed to overcome the hurdles and achieve success. During their annual strategy review, the company's leaders spotted one in the ultrasound unit of GE Healthcare.

GE Healthcare's primary business is high-end medical-imaging equipment. By the late 1980s it had become clear that a new technology—ultrasound—had a bright future. Ultrasound machines, like the other imaging devices, were typically found in sophisticated imaging centers in hospitals. While they delivered lower quality than CT or MR scanners, they did so at much lower cost. The company aimed to be number one in ultrasound.

Over the next decade, GE Healthcare expanded its presence in the market. It built an R&D facility for developing new ultrasound products near its headquarters, in Milwaukee, and made acquisitions and entered into joint ventures around the world. It competed in all three of the primary market segments—obstetrics, cardiology, and general radiology—by launching premium products that employed cutting-edge technologies. By 2000, GE Healthcare had established solid market positions in rich countries around the world.

The results in developing countries, by contrast, were disappointing. By 2000, with the help of a joint venture partner in China, GE saw the problem: In wealthy countries performance mattered most, followed by features; in China price mattered most, followed by portability and ease of use.

The priorities weren't the same because the health-care infrastructure of China was so different from that of rich countries. More than 90% of China's population relied (and still relies) on poorly funded, low-tech hospitals or basic clinics in rural villages. These facilities had no sophisticated imaging centers,

and transportation to urban hospitals was difficult, especially for the sick. Patients couldn't come to the ultrasound machines; the ultrasound machines, therefore, had to go to the patients.

There was no way that GE could meet that need by simply scaling down, removing features from, or otherwise adapting its existing ultrasound machines, which were large, bulky, expensive, and complex. It needed a revolutionary product.

In 2002, the company launched its first compact ultrasound, which combined a regular laptop computer with sophisticated software. It sold for as low as \$30,000. In late 2007, GE introduced a model that sold for as low as \$15,000, less than 15% of the cost of GE's high-end ultrasound machines. Of course, its performance was not as high, but it was nonetheless a hit in rural clinics, where doctors used it for simple applications, such as spotting enlarged livers and gallbladders and stomach irregularities. The software-centric design also made it easy to adjust the machine—for example, to improve the interfaces—after observing how doctors worked with it. Today the portable machine is the growth engine of GE's ultrasound business in China.

Even more exciting, the innovation has generated dramatic growth in the developed world by pioneering new applications where portability is critical or space is constrained, such as at accident sites, where the compacts are used to diagnose problems like pericardial effusions (fluid around the heart); in emergency rooms, where they are employed to identify conditions such as ectopic pregnancies; and in operating rooms, where they aid anesthesiologists in placing needles and catheters.

Six years after their launch, portable ultrasounds were a \$278 million global product line for GE, one that was growing at 50% to 60% a year before the worldwide recession hit. Someday every general practitioner may carry both a stethoscope and a compact ultrasound device embedded in his or her PDA.

The products owe their successful development to an organizational anomaly in GE: the existence of multiple ultrasound business units. Although the three primary segments of the ultrasound business are vastly different,

GE's initial instinct was to follow the glocalization model when it built the business—that is, to create a single integrated global organization. In 1995, however, Omar Ishrak, a newcomer who had been hired to lead the business, saw that meshing operations would reduce them to a common denominator that served nobody well. He decided to run the business as three independent business units with their own P&L responsibility, all reporting to him.

When the compact ultrasound effort began in China, Ishrak saw that the new business would have little in common with the three units, which were focused on premium products. So instead, he created a fourth independent unit, based in Wuxi, China. It evolved the local growth team (LGT) model, which is based on five critical principles.

1. Shift power to where the growth is

Without autonomy, the LGTs will become pawns of the global business and won't be able to focus on the problems of customers in emerging markets. Specifically, they need the power to develop their own strategies, organizations, and products. Ishrak understood this and gave such broad authority to Diana Tang and J.K. Koo, the leaders of GE's ultrasound effort in China. The pair of GE veterans had deep experience in the ultrasound business, expertise in biomedical engineering and general management, and lengthy careers in Asia.

2. Build new offerings from the ground up

Given the tremendous gulfs between rich countries and poor ones in income, infrastructure, and sustainability needs, reverse innovation must be zero-based. These wide differences cannot be spanned by adapting global products.

The compact ultrasound was built from scratch, although it drew heavily from an existing R&D effort. In the late 1990s, in a product-development center in Israel, GE had started to experiment with a revolutionary new architecture—one that shifted most of the muscle inside an ultrasound machine from the hardware to the software. Instead of a large box full of custom hardware, the scientists and engineers involved in the project

envisioned a standard high-performance PC, special peripherals such as an ultrasound probe, and sophisticated software.

The concept generated little excitement in GE Healthcare at the time because it could not come close to matching the performance of the business's premium products. But Ishrak quickly saw the value of the new architecture in developing countries. He encouraged the team in China to pursue the concept further. The resulting compact ultrasound based on a laptop computer hit the mark in China.

3. Build LGTs from the ground up, like new companies

Zero-based innovation doesn't happen without zero-based organizational design. GE's organizational "software"—its hiring practices, reporting structures, titles, job descriptions, norms for working relationships, and power balances between functions—all evolved to support glocalization. LGTs need to rewrite the software.

Tang and Koo constructed a business unit that managed a complete value chain: product development, sourcing, manufacturing, marketing, sales, and service. By recruiting locally, they were able to find most of the expertise they needed—including engineers with deep knowledge of miniaturization and low-power consumption and a commercialization team well versed in health care in rural China.

The LGT also decided that dealers—rather than the direct sales force used by the premium ultrasound units—were the only cost-effective way to reach China's vast and fragmented rural markets and third-tier cities. And instead of relying on GE Healthcare's global customer-support and replacement-parts organizations, it built in-country teams that could provide quicker and less costly service.

4. Customize objectives, targets, and metrics

Innovation endeavors are, by nature, uncertain. It's more important to learn quickly by efficiently testing assumptions than to hit the numbers. So the relevant metrics and standards for LGTs—the ones that resolve the critical

unknowns—are rarely the same as those used by the established businesses.

The ultrasound LGT knew that doctors in rural China were less familiar with ultrasounds than doctors in cities. But the team didn't know how much experience rural doctors had with the technology or what features would meet their needs. So it set out to learn how doctors reacted to the machines and what the obstacles to their adoption were. The team discovered that ease of use, especially in primary-care screenings, where doctors test for common local conditions, was even more crucial than anticipated. In response, the new business emphasized training, offered online guides, designed simpler keyboards, created built-in presets for certain tasks, and tracked customer satisfaction to gauge success.

Ishrak was careful to use different criteria to evaluate the performance of the LGT in China. For example, because the government approval process for new product releases is less intricate in China, he set much shorter product-development cycles than were common in wealthy countries. He also agreed to allow the size of the local service organization to deviate from the GE Healthcare's global standards. Since salaries are lower and service is more demanding in China, a bigger staff relative to the number of installed machines made sense.

5. Have the LGT report to someone high in the organization

LGTs cannot thrive without strong support from the top. The executive overseeing the LGT has three critical roles: mediating conflicts between the team and the global business, connecting the team to resources such as global R&D centers, and helping take the innovations that the team develops into rich countries. Only a senior executive in the global business unit, or even its leader, can accomplish all of that.

Even when it was tiny, the LGT in China reported directly to Ishrak. Because GE Healthcare had an ambitious product-development agenda for rich countries when the compact project was launched, the LGT's engineers might easily have been redirected to other projects if Ishrak hadn't shielded the team. He protected and even expanded the team's resources. By 2007 its

number of engineers had grown from 13 to 70 and its total payroll had increased from 132 to 339. Ishrak also personally made sure that the team got the expertise it needed from other parts of GE, such as three highly respected development engineers from Israel, Japan, and South Korea. They worked full-time on the project and got it extra support from GE's R&D centers around the world.

Ishrak included the China LGT in the company's Ultrasound Council, a group of ultrasound executives and market and technology experts who meet for two days three times a year. At the meeting they share knowledge and insights and agree on which major projects to pursue. The council was instrumental in moving knowledge and technology into China.

Finally, Ishrak played a critical role in building a global market for the portable ultrasound. He identified potential new applications in the developed world and saw to it that the three units that sold the premium products aggressively pursued those opportunities.

GE now has more than a dozen local growth teams in China and India. In the midst of a severe global recession, GE's businesses in China will grow 25% this year—largely because of LGTs. It's way too early to declare victory, however. Progress has been uneven. While some businesses—notably, health care and power generation and distribution—have taken the ball and run with it, others have been less enthusiastic. And though GE's R&D centers in China and India have increased their focus on the problems of developing countries, the vast majority of their resources are still devoted to initiatives for developed ones. So there is still a long way to go.

It's still necessary for the company's top executives to monitor and protect local efforts and make sure they get resources. It's still necessary to experiment with people transfers, organizational structures, and processes to see what works. The biggest experiment is about to come: To speed progress in India, GE is creating a separate P&L that will include all GE businesses in that

country and giving the new unit considerable power to tap GE's global R&D resources. It will be headed by a senior vice president who will report to a vice chairman. That's anathema in a company used to a matrix in which product comes first and country second. Nonetheless, the company is going to try it and see if it can create new markets. GE has to learn how to operate on a different axis.

The resistance to giving India its own P&L reflects what is perhaps GE's biggest challenge: changing the mind-set of managers who've spent their careers excelling at glocalization. Even the exemplars have a rich-country bias. In a recent conversation with Jeff, one such manager—the head of a major business that's doing well in India and China—still seemed preoccupied with problems beyond his control in the U.S. “I don't even want to talk to you about your growth plans for the U.S.,” Jeff responded. “You've got to triple the size of your Indian business in the next three years. You've got to put more resources, more people, and more products in there, so you're deep in that market and not just skimming the very top. Let's figure out how to do it.” That's how senior managers have to think.

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The Customer-Centered Innovation Map

by Lance A. Bettencourt and Anthony W. Ulwick

WE ALL KNOW THAT people “hire” products and services to get a job done. Office workers hire word-processing software to create documents and digital recorders to capture meeting notes. Surgeons hire scalpels to dissect soft tissue and electrocautery devices to control patient bleeding. Janitors hire soap dispensers, paper towels, and cleansing fluid to help remove grime from their hands.

While all this seems obvious, very few companies use the perspective of “getting the job done” to discover opportunities for innovation. In fact, the innovation journey for many companies is little more than hopeful wandering through customer interviews. Such unsystematic inquiry may occasionally turn up interesting tidbits of information, but it rarely uncovers the best ideas or an exhaustive set of opportunities for growth.

We have developed an efficient yet simple system companies can use to find new ways to innovate. Our method, which we call “job mapping,” breaks down the task the customer wants done into a series of discrete process steps. By deconstructing a job from beginning to end, a company gains a complete view of all the points at which a customer might desire more help from a product or service—namely, at each step in the job. With a job map in hand, a company can analyze the biggest drawbacks of the products and services customers currently use. Job mapping also gives companies a comprehensive framework with which to identify the metrics customers themselves use to measure success in executing a task. (For a description of these metrics and a

discussion about how to gather and prioritize them, see Anthony W. Ulwick’s “Turn Customer Input into Innovation” in HBR’s January 2002 issue.)

Job mapping differs substantively from process mapping in that the goal is to identify what customers are *trying* to get done at every step, not what they are doing currently. For example, when an anesthesiologist checks a monitor during a surgical procedure, the action taken is just a means to an end. Detecting a change in patient vital signs is the job the anesthesiologist is trying to get done. By mapping out every step of the job and locating opportunities for innovative solutions, companies can discover new ways to differentiate their offerings.

Anatomy of a Customer Job

Over the past 10 years, we have mapped customer jobs in dozens of product and service categories that span professional and consumer services, durable and consumable goods, chemicals, software, and many other industries. Our work has revealed three fundamental principles about customer jobs.

All jobs are processes

Every job, from transplanting a heart to cleaning a floor, has a distinct beginning, middle, and end, and comprises a set of process steps along the way. The starting point for identifying innovation opportunities is to map out—from the customer’s perspective—the steps involved in executing a particular job. Once the steps are identified, a company can create value in a number of ways—by improving the execution of specific job steps; eliminating the need for particular inputs or outputs; removing an entire step from the responsibility of the customer; addressing an overlooked step; resequencing the steps; or enabling steps to be completed in new locations or at different times.

Idea in Brief

We all know that people “hire” products to get jobs

done. Office workers hire word-processing software to create documents. Surgeons hire scalpels to dissect soft tissue. But few companies keep this in mind while searching for ideas for breakthrough offerings. Instead, they rely on inquiry methods (such as customer interviews) that don't generate the most promising ideas or exhaustive sets of possibilities.

To systematically uncover more—and better—innovative ideas, Bettencourt and Ulwick recommend **job mapping**: Break down a job that customers want done into discrete steps. Then brainstorm ways to make steps easier, faster, or unnecessary.

For example, while cleaning clothes, people don't notice stubborn stains until they've taken the clothes from a dryer and started folding them. If they find a stain, they must repeat the job. A washer that detects persistent stains and takes appropriate action **before** consumers execute the rest of the job would have huge appeal.

When mapping the job of washing clothes, for example, a company would quickly discover that the step of “verifying that stains have been removed” often comes at the end of the job sequence, after the clothes have been removed from the washing machine, dried, folded, and put away—too late to do much of anything about it. If the washing machine itself could detect the presence of any remaining stains before the wash cycle ended—resequence when verification takes place—it could take the necessary actions at a much more convenient point in the job. If the machine could be designed to remove the need for inputs such as stain removers and bleach, that would be even better.

All jobs have a universal structure

That universal structure, regardless of the customer, has the following process steps: defining what the job requires; identifying and locating needed inputs; preparing the components and the physical environment; confirming that everything is ready; executing the task; monitoring the results and the environment; making modifications; and concluding the job. Because

problems can occur at many points in the process, nearly all jobs also require a problem resolution step.

Idea in Practice

All jobs have the same eight steps. To use job mapping, look for opportunities to help customers at every step:

During this step . . .	Customers . . .	Companies can innovate by . . .	Example
1: Define	Determine their goals and plan resources.	Simplifying planning.	Weight Watchers streamlines diet planning by offering a system that doesn't require calorie counting.
2: Locate	Gather items and information needed to do the job.	Making required inputs easier to gather and ensuring they're available when and where needed.	U-Haul provides customers with prepackaged moving kits containing the number and types of boxes required for a move.
3: Prepare	Set up the environment to do the job.	Making set-up less difficult and creating guides to ensure proper set-up of the work area.	Bosch added adjustable levers to its circular saw to accommodate common bevel angles used by roofers to cut wood.
4: Confirm	Verify that they're ready to perform the job.	Giving customers information they need to confirm readiness.	Oracle's ProfitLogic merchandising optimization software confirms optimal timing and level of a store's markdowns for each product.
5: Execute	Carry out the job.	Preventing problems or delays.	Kimberly-Clark's Patient Warning System automatically circulates heated water through thermal pads placed on surgery patients to maintain their normal body temperature during surgery.

During this step . . .	Customers . . .	Companies can innovate by . . .	Example
6: Monitor	Assess whether the job is being successfully executed.	Linking monitoring with improved execution.	Nike makes a running shoe containing a sensor that communicates audio feedback about time, distance, pace, and calories burned to an iPod worn by the runner.
7: Modify	Make alterations to improve execution.	Reducing the need to make alterations and the number of alterations needed.	By automatically downloading and installing updates, Microsoft's operating systems remove hassles for computer users. People don't have to determine which updates are necessary, find the updates, or ensure the updates are compatible with their operating system.
8: Conclude	Finish the job or prepare to repeat it.	Designing products that simplify the process of concluding the job.	3M makes a wound dressing that stretches and adheres only to itself—not to patients' skin or sutures. It thus offers a convenient way for medical personnel to secure dressings at the conclusion of treatment and then remove them after a wound has healed.

Some steps are more critical than others, depending on the job, but each is necessary to get the job done successfully. For example, when preparing for the task of replacing a hip joint, surgeons sterilize their hands, establish a sterile field between their body and the patient, prep the patient's skin for the incision, and properly position the patient. A janitor about to clean his hands might prepare by simply rolling up his sleeves. Innovation possibilities reside within each of the job steps.

Jobs are separate from solutions

Customers hire different products or services to get the same job done. When preparing income taxes, for example, one person might rely on the services of a CPA, whereas another might use tax preparation software. Others might hire both for different steps in the process.

Many companies are focused on the product or service they're already developing, or on the one the competition is offering, rather than on the help they must give the customer to execute the steps in a job. When the job is the focal point of value creation, companies not only can improve their existing offerings but also can target new, or "blue ocean," market space. While other MP3 manufacturers were concentrating on helping customers listen to music, for example, Apple reconsidered the entire job of music management, enabling customers to acquire, organize, listen to, and share music.

Taken together, these fundamental principles form the foundation of a company's search for opportunities to create customer value.

Creating a Job Map

The goal of creating a job map is not to find out how the customer is executing a job—that only generates maps of existing activities and solutions. Instead the aim is to discover what the customer is trying to get done at different points in executing a job and what must happen at each juncture in order for the job to be carried out successfully. (See the sidebar "[Mapping a Customer Job](#).") Let's look at the steps in detail.

1: Define

What aspects of getting the job done must the customer define up front in order to proceed? This step includes determining objectives; planning the approach; assessing which resources are necessary or available to complete the job; and selecting resources. A financial adviser may label this step "assessing the investment situation," since she must not only gauge investment priorities and risk tolerance but also consider how much money is available and which

types of investments to select. An anesthesiologist might call it “formulating the anesthesia plan,” since he must choose which type of anesthesia to provide, depending upon case characteristics and the patient’s medical history.

In this step, a company can look for ways to help customers understand their objectives, simplify the resource-planning process, and reduce the amount of planning needed. Consider how Weight Watchers assists dieters with the daunting task of losing weight. The company offers a core weight-loss plan that helps the dieter select appropriate foods without the need to count calories, carbohydrates, or anything else. In addition, it provides meal ideas and recipes that fit into its core and points-based diet plans. For dieters desiring more flexibility, Weight Watchers offers instant access to point values for over 27,000 foods and online tools to help dieters gauge the impact of what they eat.

2: Locate

What inputs or items must the customer locate to do the job? Inputs are both tangible (for example, the surgical tools a nurse must locate for an operation) and intangible (say, business or other requirements that a software developer uses when writing code). When tangible materials are involved, a company might consider streamlining this step by making the required components easier to gather, ensuring that they are available when and where needed, or eliminating the need for some inputs altogether. Consider how U-Haul helps customers locate the inputs necessary to complete the job of moving their physical goods. In addition to being a one-stop shop for moving supplies, U-Haul offers customers prepackaged moving kits that reduce the time it takes to gather the various boxes and supplies required for a move. In addition, an online partnership with eMove helps customers quickly locate a variety of inputs in the form of human helpers—packers, babysitters, cleaners, and painters. Opportunities abound to help customers assemble intangible materials as well: for instance, retrieve stored data, facilitate the collection of new information, and verify that data are accurate and complete.

TO FIND WAYS TO INNOVATE, deconstruct the job a customer is trying to get done. By working through the questions here, you can map a customer job in just a handful of interviews with customers and internal experts.

Start by understanding the execution step, to establish context and a frame of reference. Next, examine each step before execution and then after, to uncover the role each plays in getting the job done.

To ensure that you are mapping job steps (what the customer is trying to accomplish) rather than process solutions (what is currently being done), ask yourself the validating questions below at each step.

Validating Questions

As defined, does the step specify what the customer is trying to accomplish, or is it only being done to accomplish a more fundamental goal?

Valid step: ascertain patient vital signs

Invalid step: check the monitor

Does the step apply universally for any customer executing the job, or does it depend on how a particular customer does the job?

Valid step: place an order

Invalid step: call the supplier to place an order

Defining the Execution Step

What are the most central tasks that must be accomplished in getting the job done?

- **Validate the steps**

Defining Pre-Execution Steps

What must happen before the core execution step to ensure the job is successfully carried out?

- What must be defined or planned before the execution step?
- What must be located or gathered?
- What must be prepared or set up?
- What must be confirmed before the execution step?

- **Validate the steps**

Defining Post-Execution Steps

What must happen after the core execution step to ensure the job is successfully carried out?

- What must be monitored or verified after the execution step to ensure the job is successfully performed?
- What must be modified or adjusted after the execution step?
- What must be done to properly conclude the job or to prepare for the next job cycle?
- **Validate the steps**

3: Prepare

How must the customer prepare the inputs and environment to do the job?

Nearly all customer jobs involve an element of setting up and organizing materials. Before cooking french fries, the fast-food operator must open bags, portion, and load fries into baskets; the nurse must set out and organize surgical tools before an operation can begin. It may also be necessary to prepare a working surface or some other aspect of the physical environment. The dentist readies the surface of a molar prior to restoring the tooth; the painter cleans the wall before applying the first coat of paint.

At this stage, companies should consider ways to make setup less difficult. They might invent a means to automate the preparation process; make it easier to organize physical materials; or create guides and safeguards to ensure the proper arrangement of the work area. (For customers dealing with information, companies can help organize, integrate, and examine required data.) Bosch learned of one opportunity to help customers prepare to cut wood when professional roofers told the company that they would like a way to speed the process of setting bevel levels on their saws. Accordingly, Bosch added adjustable levers to its CS20 circular saw to accommodate the most common bevel adjustments such as 30°, 45°, and 60°. This reduced the time needed to cut the wood and increased the accuracy of the adjustments.

4: Confirm

Once preparation is complete, what does the customer need to verify before proceeding with the job to ensure its successful execution? Here, the customer makes sure that materials and the working environment have been properly prepared; validates the quality and functional capacity of material and informational components; and confirms priorities when deciding among execution options. This step is especially critical for jobs in which a delay in execution might risk a customer's money, time, or safety. For example, after preparing a patient for an operation, the surgical nurse must confirm the readiness of the patient (jewelry removed, vitals in check); of the equipment and instrumentation (battery power sufficient, scalpels available); and of the operating room (materials in place, sterile field intact).

Uncovering Opportunities for Innovation

WITH A JOB MAP IN HAND, you can begin to look systematically for opportunities to create value. The questions below can guide you in your search and help you avoid overlooking any possibilities. A great way to begin is to consider the biggest drawbacks of current solutions at each step in the map—in particular, drawbacks related to speed of execution, variability, and the quality of output. To increase the effectiveness of this approach, invite a diverse team of experts—marketing, design, engineering, and even some lead customers—to participate in this discussion.

Opportunities at the job level

- Can the job be executed in a more efficient or effective sequence?
- Do some customers struggle more with executing the job than others (for instance, novices versus experts, older versus younger)?
- What struggles or inconveniences do customers experience because they must rely on multiple solutions to get the job done?
- Is it possible to eliminate the need for particular inputs or outputs from the job?
- Is it necessary that the customers execute all steps for which they are currently responsible? Can the burden be automated or shifted to someone else?
- How may trends affect the way the job is executed in the future?

- In what contexts do customers most struggle with executing the job today? Where else or when else might customers want to execute the job?

Opportunities at the step level

- What causes variability (or unreliability) in executing this step? What causes execution to go off track?
- Do some customers struggle more than others with this step?
- What does this step's ideal output look like (and in what ways is the current output less than ideal)?
- Is this step more difficult to execute successfully in some contexts than others?
- What are the biggest drawbacks of current solutions used to execute this step?
- What makes executing this step time-consuming or inconvenient?

A company seeking to differentiate itself at this step could help customers gain access to the types of information and feedback they need to confirm readiness and decide among execution alternatives. Another approach is to search for ways to build confirmation into the locating and preparing steps, since this would allow the customer to proceed through the job more quickly and easily. For example, Oracle's ProfitLogic merchandising optimization software removes the responsibility from the merchandiser for confirming the optimal timing and level of markdowns by analyzing thousands of different demand scenarios at the individual product level and recommending the scenario for each product that is likely to yield the highest profit.

5: Execute

What must customers do to execute the job successfully? Whether they're printing a document or administering anesthesia, customers consider the execution step the most important part of the job. Because execution is also the most visible step, customers are especially concerned about avoiding problems and delays, as well as achieving optimal results. An office worker

who prints out a document wants to avoid paper jams, running out of toner, and long print queues. She also wants to improve the quality of printed output. An anesthesiologist wants to prevent negative patient reactions and to ensure that the patient is unable to feel pain.

Here, innovating companies can apply their technological knowhow to provide customers with real-time feedback or to automatically correct execution problems. Companies can also think about ways to keep performance consistent in different contexts. Kimberly-Clark's Patient Warming System is a good example of value added in this way. The system relies on a control unit that automatically circulates heated water through thermal pads placed on the patient to avoid temperature spikes during surgery. The system can maintain normal patient temperature with only 20% of the patient body covered, which means the device performs consistently and efficiently in a variety of complex surgical procedures.

6: Monitor

What does the customer need to monitor to ensure that the job is successfully executed? Customers must keep an eye on the results or output during execution, especially to determine whether they have to make adjustments to get the task back on track in the event of a problem. For some jobs, customers must also monitor environmental factors to see whether and when adjustments are necessary. A network administrator, for example, monitors Web traffic to avoid system overload.

While some monitoring activities are passive (like the way a pacemaker monitors heartbeats), others can often be time-consuming and demanding for customers. When the costs of poor execution are significant, as when operating on a patient, solutions that call attention to problems or relevant changes in the environment are especially valuable. Solutions that link monitoring with improved job execution or that provide diagnostic feedback offer considerable value as well. Consider how Nike helps runners monitor their workouts using the Nike+iPod Sport Kit. A sensor placed in Nike shoes

communicates with an iPod being worn by the runner, providing ongoing audio feedback about time, distance, pace, and calories burned. When the runner notices he is flagging, he can select his “power song” to reinvigorate himself. The kit also allows runners to track progress against predefined goals.

7: Modify

What might the customer need to alter for the job to be completed successfully? When there are changes in inputs or in the environment, or if the execution is problematic, the customer may need help with updates, adjustments, or maintenance. At this step, customers need help deciding what should be adjusted as well as determining when, how, and where to make changes. Like monitoring, searching for the right adjustment can be both time-consuming and costly. Companies can help by offering ways to get execution back on track when there are problems. They can also provide avenues for reducing the time needed make updates and the number of adjustments the customer has to make to achieve desired results. (In addition, solutions that target the location and preparation steps can be designed to eliminate modifications.) Many software programs perform well at supporting this step. Microsoft, for example, assists customers with the job of modifying their computer to protect against security threats. Automatic updates of its operating system remove the hassle of determining which updates are necessary, finding them, and ensuring that fixes are compatible with various elements of the operating system.

8: Conclude

What must the customer do to finish the job? With some simple jobs such as hand washing, the conclusion is self-evident. Complex jobs, on the other hand, may involve some concluding process steps. The office worker has to retrieve a document from the printer and possibly collate, bind, and store it. An anesthesiologist must document surgery details, as well as wake and oversee transfer of the patient to a postoperative recovery area.

Customers often think of concluding steps as burdensome because the core job has already been completed, so companies need to help them simplify the process. Also, the conclusion of one job cycle is often the start of another or may affect the next one's beginning. When a job is cyclical, companies can help customers make sure that concluding activities are closely connected to the starting point of a new job cycle.

One way to help customers finish the job is to design benefits sought at the conclusion into an earlier step in the process. 3M's Coban Self-Adherent Wrap, for example, offers a convenient way for medical personnel to secure wound dressings at the end of treatment, because it is made of a material that stretches and adheres only to itself. This self-adherence property makes the wrap easy to remove, because it doesn't stick to patient skin or the wound. 3M designed the product in such a way that putting on the wrap anticipates the act of taking it off.

Ancillary Step: Troubleshooting

What problems must the customer troubleshoot and resolve in the course of performing the job? Even in the simplest jobs, things occasionally go wrong—orders are late, printers jam, surgical tools are misplaced, and software test cases fail. When that happens, the customer must disengage from the core job process and enter into a distinct ancillary job of troubleshooting and resolving the problem at hand. What customers want at that point is a speedy resolution—which is a function of how clearly the problem is understood. If the printer jams, for example, how should the office worker remove the damaged paper? If a nurse gets cut when a surgeon hands him a scalpel, what steps must the nurse take to avoid being infected with a blood-borne organism?

When a problem arises, customers need resources, tools, and diagnostics to help them determine a resolution quickly, protect themselves and resources that might be affected, and know when the problem is fixed. They also want solutions that prevent problems at each job step. Consider how MasterCard helps customers with the job of paying for products and services when

problems occur. In addition to its zero-liability coverage policy, MasterCard provides downloadable contact numbers so that customers who lose a card while traveling know exactly how to contact the company to report the loss. Then MasterCard can send out emergency cash advances and a replacement card within 48 hours.

To identify opportunities for innovation, some companies focus on product leadership, some on operational excellence, and some on customer intimacy. Some offer services; others offer goods. Regardless of which business model a company chooses, the fundamental basis for identifying opportunities for growth is the same. When companies understand that customers hire products, services, software, and ideas to get jobs done, they can dissect those jobs to discover the innovation opportunities that are the key to growth.

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Is It Real? Can We Win? Is It Worth Doing?

Managing Risk and Reward in an Innovation Portfolio. *by George S. Day*

MINOR INNOVATIONS MAKE up 85% to 90% of companies' development portfolios, on average, but they rarely generate the growth companies seek. At a time when companies should be taking bigger—but smart—innovation risks, their bias is in the other direction. From 1990 to 2004 the percentage of major innovations in development portfolios dropped from 20.4 to 11.5—even as the number of growth initiatives rose.¹ The result is internal traffic jams of safe, incremental innovations that delay all projects, stress organizations, and fail to achieve revenue goals.

These small projects, which I call “little i” innovations, are necessary for continuous improvement, but they don't give companies a competitive edge or contribute much to profitability. It's the risky “Big I” projects—new to the company or new to the world—that push the firm into adjacent markets or novel technologies and can generate the profits needed to close the gap between revenue forecasts and growth goals. (According to one study, only 14% of new-product launches were substantial innovations, but they accounted for 61% of all profit from innovations among the companies examined.)²

The aversion to Big I projects stems from a belief that they are too risky and their rewards (if any) will accrue too far in the future. Certainly the probability of failure rises sharply when a company ventures beyond incremental initiatives within familiar markets. But avoiding risky projects

altogether can strangle growth. The solution is to pursue a disciplined, systematic process that will distribute your innovations more evenly across the spectrum of risk.

Two tools, used in tandem, can help companies do this. The first, the risk matrix, will graphically reveal risk exposure across an entire innovation portfolio. The second, the R-W-W (“real, win, worth it”) screen, originated by Dominick (“Don”) M. Schrello, of Long Beach, California, can be used to evaluate individual projects. Versions of the screen have been circulating since the 1980s, and since then a growing roster of companies, including General Electric, Honeywell, Novartis, Millipore, and 3M, have used them to assess business potential and risk exposure in their innovation portfolios; 3M has used R-W-W for more than 1,500 projects. I have expanded the screen and used it to evaluate dozens of projects at four global companies, and I have taught executives and Wharton students how to use it as well.

Although both tools, and the steps within them, are presented sequentially here, their actual use is not always linear. The information derived from each one can often be reapplied in later stages of development, and the two tools may inform each other. Usually, development teams quickly discover when and how to improvise on the tools’ structured approach in order to maximize learning and value.

The Risk Matrix

To balance its innovation portfolio, a company needs a clear picture of how its projects fall on the spectrum of risk. The risk matrix employs a unique scoring system and calibration of risk to help estimate the probability of success or failure for each project based on how big a stretch it is for the firm: The less familiar the intended market (x axis) and the product or technology (y axis), the higher the risk. (See the exhibit “Assessing risk across an innovation portfolio.”)

Incremental innovations (small, safe changes to your firm's offerings) make up 85%–90% of companies' development portfolios. But "little i" projects rarely produce competitive advantage. For that, you need "Big I" innovations—offerings new to your organization or the world. Yes, they're risky. But avoid them, and you may strangle your company's growth.

Day recommends a solution: Increase the proportion of major innovations in your portfolio while carefully managing their risks. Two tools can help:

- A **risk matrix** enables you to estimate each project's probability of success or failure based on how big a stretch it is for your firm. The less familiar the intended market and the product or technology, the higher the risk.
- The **R-W-W ("real," "win," "worth it") screen** helps you evaluate projects' feasibility. The first step in using this tool—asking "Is it real" questions—helps you determine whether customers want your innovation and, if so, whether you can build it.

A project's position on the matrix is determined by its score on a range of factors, such as how closely the behavior of targeted customers will match that of the company's current customers, how relevant the company's brand is to the intended market, and how applicable its technology capabilities are to the new product.

A portfolio review team—typically consisting of senior managers with strategic oversight and authority over development budgets and allocations—conducts the evaluation, with the support of each project's development team. Team members rate each project independently and then explain their rationale. They discuss reasons for any differences of opinion and seek consensus. The resulting scores serve as a project's coordinates on the risk matrix.

The determination of each score requires deep insights. When McDonald's attempted to offer pizza, for example, it assumed that the new offering was

closely adjacent to its existing ones, and thus targeted its usual customers. Under that assumption, pizza would be a familiar product for the present market and would appear in the bottom left of the risk matrix. But the project failed, and a postmortem showed that the launch had been fraught with risk: Because no one could figure out how to make and serve a pizza in 30 seconds or less, orders caused long backups, violating the McDonald's service-delivery model. The postmortem also revealed that the company's brand didn't give "permission" to offer pizza. Even though its core fast-food customers were demographically similar to pizza lovers, their expectations about the McDonald's experience didn't include pizza.

Idea in Practice

Using the Risk Matrix

Assemble a team to assess each innovation project's potential risk using these criteria:

- How closely target customers' behavior will match current customers'
- How relevant the company's brand is to the intended market
- How applicable your capabilities are to the new product

Neglect to assess risk, and you may make a major misstep.

Example: When McDonald's started offering pizza, it assumed the new product was closely adjacent to existing ones. So it targeted its usual customers. But employees couldn't make and serve a pizza within 30 seconds—which violated McDonald's service-delivery model. And the company's brand didn't give "permission" to offer pizza. The project failed.

Using the R-W-W screen

Used throughout a product's development, the R-W-W screen exposes faulty assumptions, knowledge gaps, sources of risk, and problems suggesting termination. To employ this tool, repeatedly test each project's

viability according to these criteria:

Is it real?

A market exists for the product if:	The product is real if:
• There's a need or desire for the product. • Customers can buy it (for example, they have the money). • There are enough potential buyers. • Consumers will buy (for instance, they're willing to switch to your offering).	• It has precisely described characteristics. • It can be produced with available technology and materials. • It will satisfy the market in its final form.

Can we win?

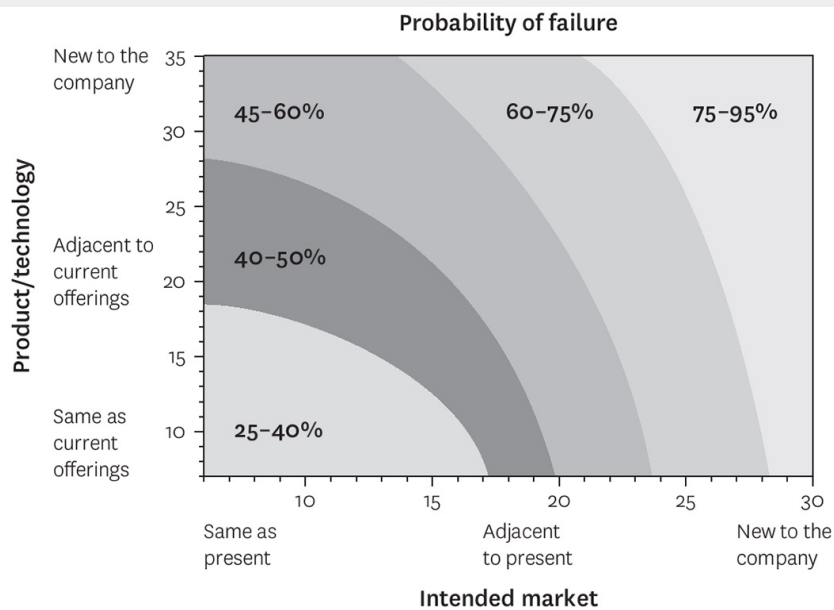
The product will be competitive if:	Your company will be competitive if:
• It offers clear advantages over alternatives, such as greater safety or social acceptability (think hybrid cars). • Those advantages can be sustained (for example, through patents). • It can survive competitors' responses (such as a price war).	• It has superior resources (such as engineering or logistics). • Managers have experience in the market and skills appropriate for the project's scale and complexity. • Projects have champions who can energize development teams, sell the vision to senior management, and overcome adversity. • It has mastery of market research tools and shares customers' insights with development-team members.

Is it worth doing?

The product will be profitable at an acceptable risk if:	The product makes strategic sense if:
• Its forecasted returns are greater than costs—considering matters such as the timing and amount of capital outlays, marketing expenses, breakeven time, and the cost of product extensions needed to keep ahead of competitors.	• It fits with your company's growth strategy; for example, by enhancing customer relationships or creating opportunities for follow-on business.

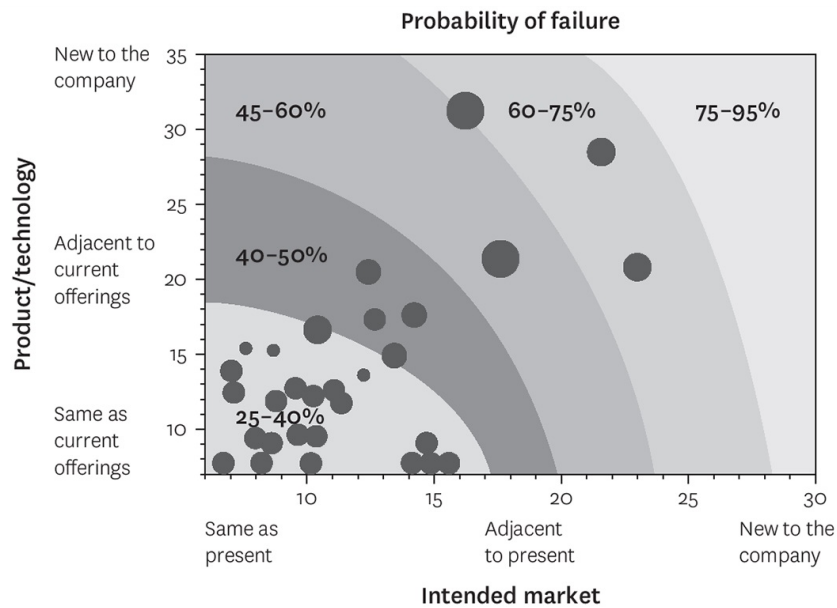
The risk matrix*

This tool will reveal the distribution of risk across a company's innovation portfolio. Each innovation can be positioned on the matrix by determining its score on two dimensions—how familiar to the company the intended market is (x axis) and how familiar the product or technology is (y axis)—using the grid “Positioning projects on the matrix.” Familiar products aimed at the company's current markets will fall in the bottom left of the matrix, indicating a low probability of failure. New products aimed at unfamiliar markets will fall in the upper right, revealing a high probability of failure.



Risk and revenue

Each dot on this risk matrix stands for one innovation in an imaginary company's portfolio. The size of each dot is proportional to the project's estimated revenue. (Companies may choose to illustrate estimated development investment or some other financial measure instead.) This portfolio, dominated by relatively low-risk, low-reward projects, is typical in its distribution.



Positioning projects on the matrix

Position each innovation product or concept by completing each statement in the left-hand column with one of the options offered across the top to arrive at a score from 1 to 5. Add the six scores in the “Intended market” section to determine the project’s x-axis coordinate on the risk matrix. Add the seven scores in the “Product/technology” section to determine its y-axis coordinate.

	Intended market					
	...be the same as in our present market	...partially overlap with our present market	...be entirely different from our present market or are unknown			
Customers' behavior and decision-making processes will...	1	2	3	4	5	
Our distribution and sales activities will...	1	2	3	4	5	
The competitive set (incumbents or potential entrants) will...	1	2	3	4	5	
	...highly relevant		...somewhat relevant	...not at all relevant		
	1	2	3	4	5	
Our brand promise is...	1	2	3	4	5	
Our current customer relationships are...	1	2	3	4	5	
Our knowledge of competitors' behavior and intentions is...	1	2	3	4	5	
					Total (x-axis coordinate)	

	Product/technology					
	...is fully applicable		...will require significant adaptation		...is not applicable	
Our current development capability...	1	2	3	4	5	
Our technology competency...	1	2	3	4	5	
Our intellectual property protection...	1	2	3	4	5	
Our manufacturing and service delivery system...	1	2	3	4	5	
	...are identical to those of our current offerings		...overlap somewhat with those of our current offerings		...completely differ from those of our current offerings	
The required knowledge and science bases...	1	2	3	4	5	
The necessary product and service functions...	1	2	3	4	5	
The expected quality standards...	1	2	3	4	5	
	Total (y-axis coordinate)					

*This risk matrix was developed from many sources, including long-buried consulting reports by A.T. Kearney and other firms, the extensive literature on the economic performance of acquisitions and alliances, and numerous audits of product and service innovations. It broadly defines “failure” as significantly missing the objectives that were used to justify the investment in the growth initiative. Estimates of the probability of failure have been thoroughly validated in dozens of interviews with consultants and senior managers involved in innovation initiatives and are consistent with recent surveys that place the overall failure rate of new products close to 40%. The ranges in probabilities take into account some of the variability in organizations’ definitions of failure and in what constitutes a new market or technology for a given company. The probabilities do not apply to fast-moving consumer goods (where incremental innovations have high long-run failure rates) or ethical pharmaceuticals, and don’t distinguish whether “new to the company” is also “new to the world.” (Although these are distinct categories, in my experience most major new-to-the-company innovations are also new to the world; for the purposes of this article, they’re considered to be broadly overlapping.) “Market” refers to customers, not geographies.

Once the risk matrix has been completed, it typically reveals two things: that a company has more projects than it can manage well, and that the distribution of Big I and little i innovations is lopsided. Most companies will find that the majority of their projects cluster in the bottom left quadrant of the matrix, and a minority skew toward the upper right.

This imbalance is unhealthy if unsurprising. Discounted cash flow analysis and other financial yardsticks for evaluating development projects are usually biased against the delayed payoffs and uncertainty inherent in Big I

innovations. What's more, little i projects tend to drain R&D budgets as companies struggle to keep up with customers' and salespeople's demands for a continuous flow of incrementally improved products. The risk matrix creates a visual starting point for an ongoing dialogue about the company's mix of projects and their fit with strategy and risk tolerance. The next step is to look closely at each project's prospects in the marketplace.

Screening with R-W-W

The R-W-W screen is a simple but powerful tool built on a series of questions about the innovation concept or product, its potential market, and the company's capabilities and competition (see the exhibit "Screening for success"). It is not an algorithm for making go/no-go decisions but, rather, a disciplined process that can be employed at multiple stages of product development to expose faulty assumptions, gaps in knowledge, and potential sources of risk, and to ensure that every avenue for improvement has been explored. The R-W-W screen can be used to identify and help fix problems that are miring a project, to contain risk, and to expose problems that can't be fixed and therefore should lead to termination.

Innovation is inherently messy, nonlinear, and iterative. For simplicity, this article focuses on using the R-W-W screen in the early stages to test the viability of product concepts. In reality, however, a given product would be screened repeatedly during development—at the concept stage, during prototyping, and early in the launch planning. Repeated assessment allows screeners to incorporate increasingly detailed product, market, and financial analyses into the evaluation, yielding ever more accurate answers to the screening questions.

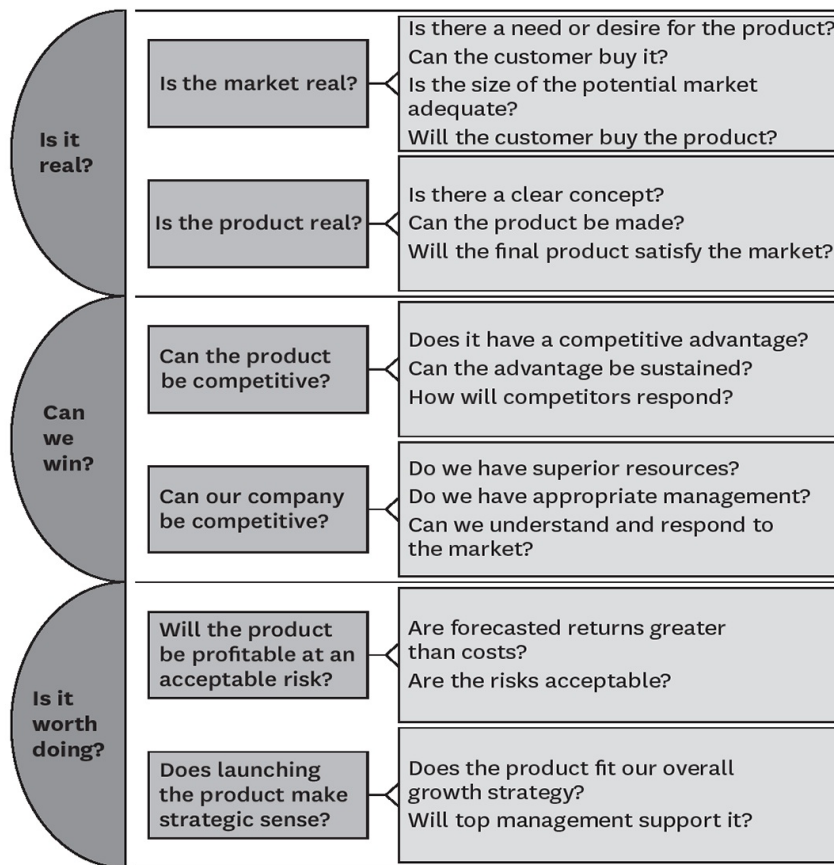
R-W-W guides a development team to dig deeply for the answers to six fundamental questions: *Is the market real? Is the product real? Can the product be competitive? Can our company be competitive? Will the product be profitable at an acceptable risk? Does launching the product make strategic sense?*

The development team answers these queries by exploring an even deeper

set of supporting questions. The team determines where the answer to each question falls on a continuum ranging from definitely yes to definitely no. A definite no to any of the first five fundamental questions typically leads to termination of the project, for obvious reasons. For example, if the consensus answer to *Can the product be competitive?* is a definite no, and the team can imagine no way to change it to a yes (or even a maybe), continuing with development is irrational. When a project has passed all other tests in the screen, however, and thus is a very good business bet, companies are sometimes more forgiving of a no to the sixth question, *Does launching the product make strategic sense?*

Screening for success

Each product concept in your company's innovation portfolio should be assessed by its development team using the R-W-W screen below. A definite yes or no answer to the first-column questions Is it real?, Can we win?, and Is it worth doing? requires digging deeply for robust answers to the supporting questions in the second and third columns. Often a team will answer maybe; its goal should be to investigate all possible avenues to converting no or maybe into yes. A definite no to any second-column question typically leads to termination of the project, since failure is all but certain. A definite no to any third-column question argues strongly against proceeding with development. (The full set of questions in columns two and three of the screen come from evaluations of more than 50 product failures within two companies I worked with by teams of auditors who asked, "What questions, properly answered, might have prevented the failure?")



The Screening Team

PROJECT SCREENING TEAMS vary by company, type of initiative, and stage of development. Over the course of R-W-W screening, teams typically involve members from across functions, including R&D, marketing, and manufacturing. They should also work with senior managers who are familiar with the screen and have the expertise and the instincts to push dispassionately for accurate answers, particularly at each decision point during development. At the same time, however, these managers should be sympathetic and willing to provide the team with the resources to fill information gaps.

A critical job in managing the R-W-W process is preventing teams from regarding the screen as an obstacle to be overcome or circumvented. It's also important that the team not regard the screen as simply a go/no-go tool imposed by management—a potential threat to a favorite project. Such a misperception will subvert proper use of the screen as a learning tool for revealing dubious assumptions and identifying problems and solutions.

Because the members of the development team are both evaluators

and advocates, the screen is vulnerable to misuse and manipulation. Team members' convictions about the merits of the project may lead them to make cursory evaluations if they fear that a deep assessment, including a frank voicing of doubts, might imperil the project. One way to avoid this pitfall is to enlist a credible outside facilitator, perhaps someone from another part of the company who has a solid new-product track record and no stake in the outcome. This person's job should be to unearth all the key uncertainties, information gaps, and differences of opinion and help resolve them.

This article will delineate the screening process and demonstrate the depth of probing needed to arrive at valid answers. What follows is not, of course, a comprehensive guide to all the issues that might be raised by each question. Development teams can probe more or less deeply, as needed, at each decision point. (For more on team process, see the sidebar ["The Screening Team."](#))

Is It Real?

Figuring out whether a market exists and whether a product can be made to satisfy that market are the first steps in screening a product concept. Those steps will indicate the degree of opportunity for any firm considering the potential market, so the inquiring company can assess how competitive the environment might be right from the start.

One might think that asking if the envisioned product is even a possibility should come before investigating the potential market. But establishing that the market is real takes precedence for two reasons: First, the robustness of a market is almost always less certain than the technological ability to make something. This is one of the messages of the risk matrix, which shows that the probability of a product failure becomes greater when the *market* is unfamiliar to the company than when the *product or technology* is unfamiliar. A company's ability to crystallize the market concept—the target segment and how the product can do a better job of meeting its needs—is far more important than how well the company fields a fundamentally new product or technology. In fact, research by Procter & Gamble suggests that 70% of

product failures across most categories occur because companies misconstrue the market. New Coke is a classic market-concept failure; Netflix got the market concept right. In each case the outcome was determined by the company's understanding of the market, not its facility with the enabling technologies.

Second, establishing the nature of the market can head off a costly “technology push.” This syndrome often afflicts companies that emphasize how to solve a problem rather than what problem should be solved or what customer desires need to be satisfied. Segway, with its Personal Transporter, and Motorola, with its Iridium satellite phone, both succumbed to technology push. Segway's PT was an ingenious way to gyroscopically stabilize a two-wheeled platform, but it didn't solve the mobility problems of any target market. The reasons for Iridium's demise are much debated, but one possibility is that mobile satellite services proved less able than terrestrial wireless roaming services to cost-effectively meet the needs of most travelers.

Whether the market and the product are real should dominate the screening dialogue early in the development process, especially for Big I innovations. In the case of little i innovations, a close alternative will already be on the market, which has been proved to be real.

Is the market real?

A market opportunity is real only when four conditions are satisfied: The proposed product will clearly meet a need or solve a problem better than available alternatives; customers are able to buy it; the potential market is big enough to be worth pursuing; and customers are willing to buy the product.

Is there a need or desire for the product? Unmet or poorly satisfied needs must be surfaced through market research using observational, ethnographic, and other tools to explore customers' behaviors, desires, motivations, and frustrations. Segway's poor showing is partly a market-research failure; the company didn't establish at the outset that consumers actually had a need for a self-balancing two-wheeled transporter.

Once a need has been identified, the next question is, *Can the customer buy it?*

Even if the proposed product would satisfy a need and offer superior value, the market isn't real when there are objective barriers to purchasing it. Will budgetary constraints prevent customers from buying? (Teachers and school boards, for example, are always eager to invest in educational technologies but often can't find the funding.) Are there regulatory requirements that the new product may not meet? Are customers bound by contracts that would prevent them from switching to a new product? Could manufacturing or distribution problems prevent them from obtaining it?

The team next needs to ask, *Is the size of the potential market adequate?* It's dangerous to venture into a "trombone oil" market, where the product may provide distinctive value that satisfies a need, but the need is minuscule. A market opportunity isn't real unless there are enough potential buyers to warrant developing the product.

Finally, having established customers' need and ability to buy, the team must ask, *Will the customer buy the product?* Are there subjective barriers to purchasing it? If alternatives to the product exist, customers will evaluate them and consider, among other things, whether the new product delivers greater value in terms of features, capabilities, or cost. Improved value doesn't necessarily mean more capabilities, of course. Many Big I innovations, such as the Nintendo Wii, home defibrillators, and Salesforce.com's CRM software as a service, have prevailed by outperforming the incumbents on a few measures while being merely adequate on others. By the same token, some Big I innovations have stumbled because although they had novel capabilities, customers didn't find them superior to the incumbents.

Even when customers have a clear need or desire, old habits, the perception that a switch is too much trouble, or a belief that the purchase is risky can inhibit them. One company encountered just such a problem during the launch of a promising new epoxy for repairing machine parts during routine maintenance. Although the product could prevent costly shutdowns and thus offered unique value, the plant engineers and production managers at whom it was targeted vetoed its use. The engineers wanted more proof of the product's

efficacy, while the production managers feared that it would damage equipment. Both groups were risk avoiders. A postmortem of the troubled launch revealed that maintenance people, unlike plant engineers and production managers, like to try new solutions. What's more, they could buy the product independently out of their own budgets, circumventing potential vetoes from higher up. The product was relaunched targeting maintenance and went on to become successful, but the delay was expensive and could have been avoided with better screening.

Customers may also be inhibited by a belief that the product will fail to deliver on its promise or that a better alternative might soon become available. Addressing this reluctance requires foresight into the possibilities of improvement among competitors. The prospects of third-generation (3G) mobile phones were dampened by enhancements in 2.5G phones, such as high-sensitivity antennae that made the incumbent technology perform much better.

Is the product real?

Once a company has established the reality of the market, it should look closely at the product concept and expand its examination of the intended market.

Is there a clear concept? Before development begins, the technology and performance requirements of the concept are usually poorly defined, and team members often have diverging ideas about the product's precise characteristics. This is the time to expose those ideas and identify exactly what is to be developed. As the project progresses and the team becomes immersed in market realities, the requirements should be clarified. This entails not only nailing down technical specifications but also evaluating the concept's legal, social, and environmental acceptability.

Can the product be made? If the concept is solid, the team must next explore whether a viable product is feasible. Could it be created with available technology and materials, or would it require a breakthrough of some sort? If the product can be made, can it be produced and delivered cost-effectively, or

would it be so expensive that potential customers would shun it? Feasibility also requires either that a value chain for the proposed product exists or that it can be easily and affordably developed, and that de facto technology standards (such as those ensuring compatibility among products) can be met.

Some years ago the R-W-W screen was used to evaluate a radical proposal to build nuclear power-generating stations on enormous floating platforms moored offshore. Power companies were drawn to the idea, because it solved both cooling and not-in-my-backyard problems. But the team addressing the *Is the product real?* stage of the process found that the inevitable flexing of the giant platforms would lead to metal fatigue and joint wear in pumps and turbines. Since this problem was deemed insurmountable, the team concluded that absent some technological breakthrough, the no answer to the feasibility question could never become even a maybe, and development was halted.

Will the final product satisfy the market? During development, trade-offs are made in performance attributes; unforeseen technical, manufacturing, or systems problems arise; and features are modified. At each such turn in the road, a product designed to meet customer expectations may lose some of its potential appeal. Failure to monitor these shifts can result in the launch of an offering that looked great on the drawing board but falls flat in the marketplace.

Consider the ongoing disappointment of e-books. Even though the newest entrant, the Sony Reader, boasts a huge memory and breakthrough display technology, using it doesn't begin to compare with the experience of reading conventional books. The promised black-on-white effect is closer to dark gray on light gray. Meanwhile, the Reader's unique features, such as the ability to store many volumes and to search text, are for many consumers insufficiently attractive to offset the near \$300 price tag. Perhaps most important, consumers are well satisfied with ordinary books. By July of 2007 the entire e-book category had reached only \$30 million in sales for the year.

Can We Win?

After determining that the market and the product are both real, the project team must assess the company's ability to gain and hold an adequate share of the market. Simply finding a real opportunity doesn't guarantee success: The more real the opportunity, the more likely it is that hungry competitors are eyeing it. And if the market is already established, incumbents will defend their positions by copying or leapfrogging any innovations.

Two of the top three reasons for new-product failures, as revealed by audits, would have been exposed by the *Can we win?* analysis: Either the new product didn't achieve its market-share goals, or prices dropped much faster than expected. (The third reason is that the market was smaller, or grew more slowly, than expected.)

The questions at this stage of the R-W-W screening carefully distinguish between the offering's ability to succeed in the marketplace and the company's capacity—through resources and management talent—to help it do so.

Can the product be competitive?

Customers will choose one product over alternatives if it's perceived as delivering superior value with some combination of benefits such as better features, lower life-cycle cost, and reduced risk. The team must assess all sources of perceived value for a given product and consider the question *Does it have a competitive advantage?* (Here the customer research that informed the team's evaluation of whether the market and the product were real should be drawn on and extended as needed.) Can someone else's offering provide customers with the same results or benefits? One company's promising laminate technology, for instance, had intrigued technical experts, but the launch failed because the customers' manufacturing people had found other, cheaper ways to achieve the same improvement. The team should also consider whether the product offers additional tangible advantages—such as lifetime cost savings, greater safety, higher quality, and lower maintenance or support needs—or intangible benefits, such as greater social acceptability (think of hybrid cars and synthetic-fur coats) and the promise of reduced risk that is implicit in a trusted brand name.

Can the advantage be sustained? Competitive advantage is only as good as the company's ability to keep imitators at bay. The first line of defense is patents. The project team should evaluate the relevance of its existing patents to the product in development and decide what additional patents may be needed to protect related intellectual property. It should ask whether a competitor could reverse engineer the product or otherwise circumvent patents that are essential to the product's success. If maintaining advantage lies in tacit organizational knowledge, can that knowledge be protected? For example, how can the company ensure that the people who have it will stay? What other barriers to imitation are possible? Can the company lock up scarce resources or enter into exclusive supply contracts?

Consider the case of 3M's computer privacy screen. Although the company's microlouver technology promised unique privacy benefits, its high price threatened to limit sales to a small market niche, making the project's status uncertain. An R-W-W screening, however, revealed that the technology was aggressively patented, so no competitor could imitate its performance. It also clarified an opportunity in adjacent markets for antiglare filters for computers. Armed with these insights, 3M used the technology to launch a full line of privacy and antiglare screens while leveraging its brand equity and sales presence in the office-products market. Five years later the product line formed the basis of one of 3M's fastest-growing businesses.

How will competitors respond? Assuming that patent protection is (or will be) in place, the project team needs to investigate competitive threats that patents can't deflect. A good place to start is a "red team" exercise: If we were going to attack our own product, what vulnerabilities would we find? How can we reduce them? A common error companies make is to assume that competitors will stand still while the new entrant fine-tunes its product prior to launch. Thus the team must consider what competing products will look like when the offering is introduced, how competitors may react after the launch, and how the company could respond. Finally, the team should examine the possible effects of this competitive interplay on prices. Would the product survive a

sustained price war?

Can our company be competitive?

After establishing that the offering can win, the team must determine whether or not the company's resources, management, and market insight are better than those of the competition. If not, it may be impossible to sustain advantage, no matter how good the product.

Do we have superior resources? The odds of success increase markedly when a company has or can get resources that both enhance customers' perception of the new product's value and surpass those of competitors. Superior engineering, service delivery, logistics, or brand equity can give a new product an edge by better meeting customers' expectations. The European no-frills airline easyJet, for example, has successfully expanded into cruises and car rentals by leveraging its ability to blend convenience, low cost, and market-appropriate branding to appeal to small-business people and other price-sensitive travelers.

If the company doesn't have superior resources, addressing the deficiency is often straightforward. When the U.S. market leader for high-efficiency lighting products wanted to expand into the local-government market, for example, it recognized two barriers: The company was unknown to the buyers, and it had no experience with the competitive bidding process they used. It overcame these problems by hiring people who were skilled at analyzing competitors, anticipating their likely bids, and writing proposals. Some of these people came from the competition, which put the company's rivals at a disadvantage.

Sometimes, though, deficiencies are more difficult to overcome, as is the case with brand equity. As part of its inquiry into resources, the project team must ask whether the company's brand provides—or denies—permission to enter the market. The 3M name gave a big boost to the privacy screen because it is strongly associated with high-quality, innovative office supplies—whereas the McDonald's name couldn't stretch to include pizza. Had the company's management asked whether its brand equity was both relevant and superior to that of the competition—such as Papa Gino's—the answer would have been

equivocal at best.

Do we have appropriate management? Here the team must examine whether the organization has direct or related experience with the market, whether its development-process skills are appropriate for the scale and complexity of the project, and whether the project both fits company culture and has a suitable champion. Success requires a passionate cheerleader who will energize the team, sell the vision to senior management, and overcome skepticism or adversity along the way. But because enthusiasm can blind champions to potentially crippling faults and lead to a biased search for evidence that confirms a project's viability, their advocacy must be constructively challenged throughout the screening process.

Can we understand and respond to the market? Successful product development requires a mastery of market-research tools, an openness to customer insights, and the ability to share them with development-team members. Repeatedly seeking the feedback of potential customers to refine concepts, prototypes, and pricing ensures that products won't have to be recycled through the development process to fix deficiencies.

Most companies wait until after development to figure out how to price the new product—and then sometimes discover that customers won't pay. Procter & Gamble avoids this problem by including pricing research early in the development process. It also asks customers to actually buy products in development. Their answers to *whether* they would buy are not always reliable predictors of future purchasing behavior.

Is It Worth Doing?

Just because a project can pass the tests up to this point doesn't mean it is worth pursuing. The final stage of the screening provides a more rigorous analysis of financial and strategic value.

Will the product be profitable at an acceptable risk?

Few products launch unless top management is persuaded that the answer to *Are forecasted returns greater than costs?* is definitely yes. This requires projecting

the timing and amount of capital outlays, marketing expenses, costs, and margins; applying time to breakeven, cash flow, net present value, and other standard financial-performance measures; and estimating the profitability and cash flow from both aggressive and cautious launch plans. Financial projections should also include the cost of product extensions and enhancements needed to keep ahead of the competition.

Forecasts of financial returns from new products are notoriously unreliable. Project managers know they are competing with other worthy projects for scarce resources and don't want theirs to be at a disadvantage. So it is not surprising that project teams' financial reports usually meet upper management's financial-performance requirements. Given the susceptibility of financial forecasts to manipulation, overconfidence, and bias, executives should depend on rigorous answers to the prior questions in the screen for their conclusions about profitability.

Are the risks acceptable? A forecast's riskiness can be initially assessed with a standard sensitivity test: How will small changes in price, market share, and launch timing affect cash flows and breakeven points? A big change in financial results stemming from a small one in input assumptions indicates a high degree of risk. The financial analysis should consider opportunity costs: Committing resources to one project may hamper the development of others.

To understand risk at a deeper level, consider all the potential causes of product failure that have been unearthed by the R-W-W screen and devise ways to mitigate them—such as partnering with a company that has market or technology expertise your firm lacks.

Does launching the product make strategic sense?

Even when a market and a concept are real, the product and the company could win, and the project would be profitable, it may not make strategic sense to launch. To evaluate the strategic rationale for development, the project team should ask two more questions.

Does the product fit our overall growth strategy? In other words, will it enhance the company's capabilities by, for example, driving the expansion of

manufacturing, logistics, or other functions? Will it have a positive or a negative impact on brand equity? Will it cannibalize or improve sales of the company's existing products? (If the former, is it better to cannibalize one's own products than to lose sales to competitors?) Will it enhance or harm relationships with stakeholders—dealers, distributors, regulators, and so forth? Does the project create opportunities for follow-on business or new markets that would not be possible otherwise? (Such an opportunity helped 3M decide to launch its privacy screen: The product had only a modest market on its own, but the launch opened up a much bigger market for antiglare filters.) These questions can serve as a starting point for what must be a thorough evaluation of the product's strategic fit. A discouraging answer to just one of them shouldn't kill a project outright, but if the overall results suggest that a project makes little strategic sense, the launch is probably ill-advised.

Will top management support it? It's certainly encouraging for a development team when management commits to the initial concept. But the ultimate success of a project is better assured if management signs on because the project's assumptions can withstand the rigorous challenges of the R-W-W screen.

Notes

1. Robert G. Cooper, "Your NPD Portfolio May Be Harmful to Your Business Health," *PDMA Visions*, April 2005.

2. W. Chan Kim and Renée Mauborgne, "Strategy, Value Innovation, and the Knowledge Economy," *Sloan Management Review*, Spring 1999.

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Six Myths of Product Development

The Fallacies That Cause Delays, Undermine Quality, and Raise Costs. *by Stefan Thomke and Donald Reinertsen*

MOST PRODUCT-DEVELOPMENT MANAGERS are always struggling to bring in projects on time and on budget. They never have enough resources to get the job done, and their bosses demand predictable schedules and deliverables. So the managers push their teams to be more parsimonious, to write more-detailed plans, and to minimize schedule variations and waste. But that approach, which may work well in turning around underperforming factories, can actually hurt product-development efforts.

Although many companies treat product development as if it were similar to manufacturing, the two are profoundly different. In the world of manufacturing physical objects, tasks are repetitive, activities are reasonably predictable, and the items being created can be in only one place at a time. In product development many tasks are unique, project requirements constantly change, and the output—thanks, in part, to the widespread use of advanced computer-aided design and simulation and the incorporation of software in physical products—is information, which can reside in multiple places at the same time.

The failure to appreciate those critical differences has given rise to several fallacies that undermine the planning, execution, and evaluation of product-development projects. Together, we have spent more than 50 years studying and advising companies on product-development efforts, and we have encountered these misconceptions—as well as others that arise for different

reasons—in a wide range of industries, including semiconductors, autos, consumer electronics, medical devices, software, and financial services. In this article we'll expose them and offer ways to overcome the problems they create.

Fallacy 1: High Utilization of Resources Will Improve Performance

In both our research and our consulting work, we've seen that the vast majority of companies strive to fully employ their product-development resources. (One of us, Donald, through surveys conducted in executive courses at the California Institute of Technology, has found that the average product-development manager keeps capacity utilization above 98%.) The logic seems obvious: Projects take longer when people are not working 100% of the time—and therefore, a busy development organization will be faster and more efficient than one that is not as good at utilizing its people.

But in practice that logic doesn't hold up. We have seen that projects' speed, efficiency, and output quality inevitably decrease when managers completely fill the plates of their product-development employees—no matter how skilled those managers may be. High utilization has serious negative side effects, which managers underestimate for three reasons.

They don't take into full account the intrinsic variability of development work

Many aspects of product development are unpredictable: when projects will arrive, what individual tasks they'll require, and how long it will take workers who've never tackled such tasks before to do them. Companies, however, are most familiar with repetitive processes like manufacturing and transaction processing, where the work doesn't change much and surprises are few and far between. Such processes behave in an orderly manner as the utilization of resources increases. Add 5% more work, and it will take 5% more time to complete.

Idea in Brief

Many companies approach product development as if it were manufacturing, trying to control costs and improve quality by applying zero-defect, efficiency-focused techniques. While this tactic can boost the performance of factories, it generally backfires with product development. The process of designing products is profoundly different from the process of making them, and the failure of executives to appreciate the differences leads to several fallacies that actually hurt product-development efforts.

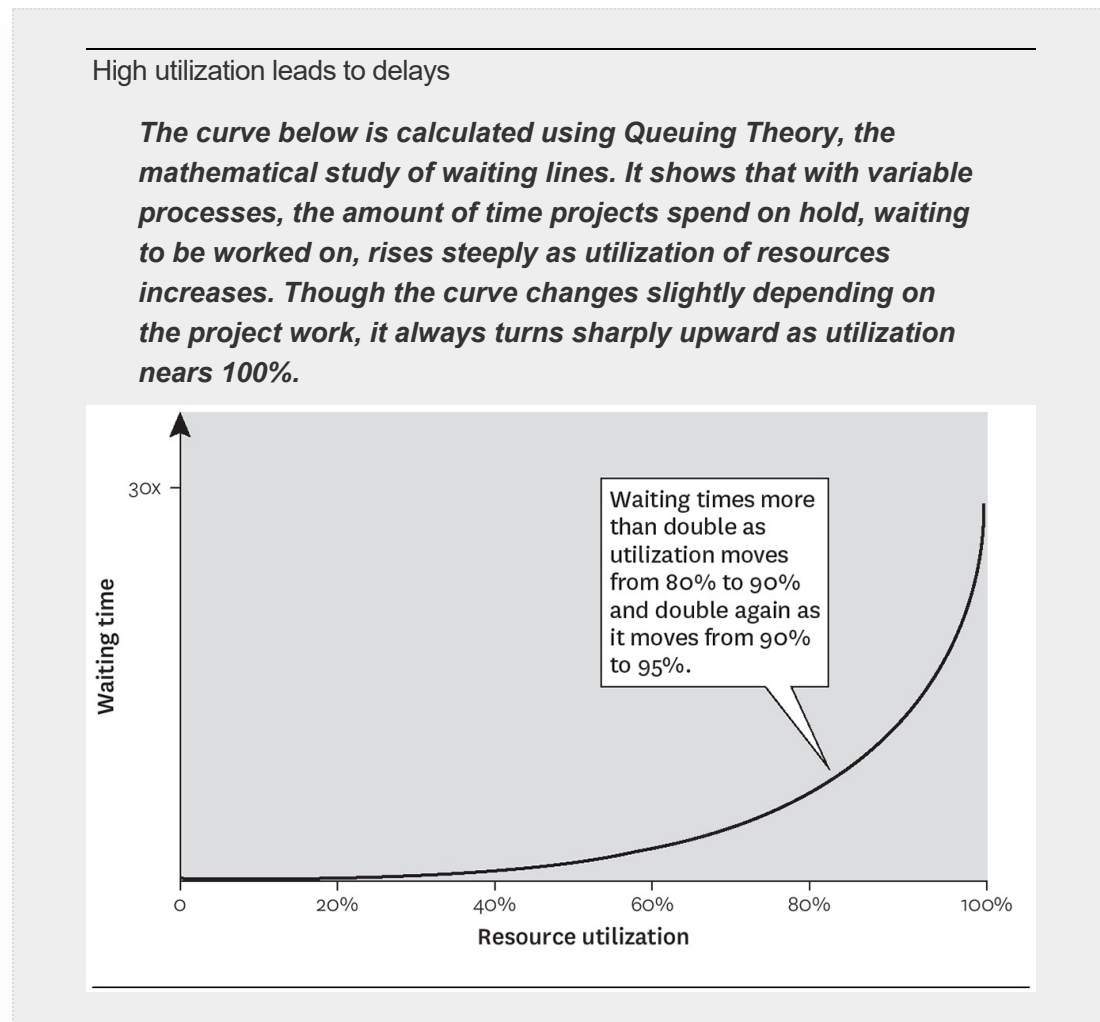
In this article, the authors, an HBS professor and a consultant, expose these misperceptions and others. They look at six dangerous myths:

1. High utilization of resources will make the department more efficient.
2. Processing work in large batches will be more economical.
3. Teams need to faithfully follow their development plan, minimizing any deviations from it.
4. The sooner a project is started, the sooner it will be finished.
5. The more features a product has, the better customers will like it.
6. Projects will be more successful if teams “get them right the first time.”

The authors explain the negative effects these “principles” have when applied to product development, offer practical guidelines on overcoming them, and walk readers through a visual tool that will help them keep projects on track.

Processes with high variability behave very differently. As utilization increases, delays lengthen dramatically. (See the exhibit “High utilization leads to delays.”) Add 5% more work, and completing it may take 100% longer. But few people understand this effect. In our experience with hundreds of

product-development teams, we have found that most were significantly overcommitted. To complete all projects on time and on budget, some organizations we worked with would have needed at least 50% more resources than they had.



It is true that some variability is the result of a lack of discipline, and that some product-development tasks (like designing components for an airplane prototype or performing clinical trials) include more-repetitive work. But even if some of the work is predictable, when it's combined with other unpredictable work, you will see queuing problems.

They don't understand how queues affect economic performance

High utilization of resources inevitably creates queues of projects. When

partially completed work sits idle, waiting for capacity to become available, the duration of the overall project will grow. Queues also delay feedback, causing developers to follow unproductive paths longer. They make it hard for companies to adjust to evolving market needs and to detect weaknesses in their product before it's too late. Ironically, these problems are precisely the ones that managers think high utilization will allow their teams to avoid.

Even when managers know that they're creating queues, they rarely realize the economic cost. Although that cost can be quantified, we've found that the vast majority of companies don't calculate it. Managers need to weigh queue costs against the costs of underutilized capacity in order to strike the right balance.

In product development, work-in-process inventory is predominantly invisible

Manufacturing queues consist of physical things, and when inventory in a factory doubles, it's obvious. That's not the case in product development, where inventory largely consists of information, such as design documentation, test procedures and results, and instructions for building prototypes. When inventory doubles in an engineering process, there are no physical signs. Moreover, because accounting standards require most R&D inventory to be carried at zero value, financial statements give no indication of serious inventory excesses in product development.

It is very difficult to fight a problem that you can't see or measure. Consider the situation at a major pharmaceutical firm. Several years ago its newly appointed head of drug discovery faced a managerial dilemma. Like other senior executives who run large R&D organizations, he was trying to find ways to make his scientists more innovative. He wanted them to experiment more with new chemical compounds that could generate promising new drugs and, at the same time, to eliminate unpromising candidates as early as possible. Experiments with living organisms, however, were the responsibility of animal testing, a department that was not under his control and was run as a cost center. It was evaluated by how efficiently it used testing resources, which

naturally led to high utilization. Consequently, the scientists in drug discovery had to wait three to four months for the results of tests that took a little more than a week to perform. The “well-managed” testing organization impeded the discovery unit’s progress.

The obvious solution to such problems is to provide a capacity buffer in processes that are highly variable. Some companies have long understood this. For decades, 3M has scheduled product developers at 85% of their capacity. And Google is famous for its “20% time” (allowing engineers to work one day a week on anything they want—a practice that means extra capacity is available if a project falls behind schedule). However, in our experience this kind of solution is quite hard to implement. As we will discuss, few organizations can resist the temptation to use every last bit of available capacity. Managers reflexively start more work whenever they see idle time.

But there are other viable solutions:

Change the management-control systems. For the pharmaceutical company, this might involve taking steps to align the objectives of the animal-testing unit with those of the discovery unit. The company could, for example, reward animal testing for prompt responses (measuring time from request to completion of test) rather than resource utilization.

Selectively increase capacity. Adding extra resources to the areas where the utilization rates are 70% or higher can significantly reduce waiting time. If the pharmaceutical company did this in animal testing, it would obtain feedback on new chemical compounds far

faster. In settings where testing is conducted with computer modeling and simulation, increasing capacity is often relatively inexpensive, since it just involves buying additional computer equipment and software licenses.

Limit the number of active projects. If the pharmaceutical firm couldn't increase animal testing's capacity, it could still lower the utilization rate by reducing the number of active projects exploring new chemical compounds. The discipline of putting a hard limit on what goes into a product-development pipeline often results in sharper focus and clearer priorities.

Make the work-in-process inventory easier to see. One method is to use visual control boards. These can take a number of forms, but the key is to have some sort of physical token, such as a Post-it note, represent the development work (see the exhibit "Typical work-in-process control board"). A control board should display all active work and show what state each part of the project is in. It should be at the center of the team's management process. Teams can hold 15-minute daily stand-up meetings around such

boards to coordinate efforts and keep work moving.

Fallacy 2: Processing Work in Large Batches Improves the Economics of the Development Process

A second cause of queues in product development is batch size. Let's say a new product is composed of 200 components. You could choose to design and build all 200 parts before you test any of them. If you instead designed and built only 20 components before you began testing, the batch size would be 90% smaller. That would have a profound effect on queue time, because the average queue in a process is directly proportional to batch size.

The reduction of batch sizes is a critical principle of lean manufacturing. Small batches allow manufacturers to slash work in process and accelerate feedback, which, in turn, improves cycle times, quality, and efficiency. Small batches have even greater utility in product development, but few developers realize the power of this method.

One reason is the nature of their work flow. Again, because the information they're producing is mostly invisible to them, the batch sizes are too. Second, developers seem to have an inherent bias to use large batches—possibly because they incorrectly believe that large batches produce economies of scale.

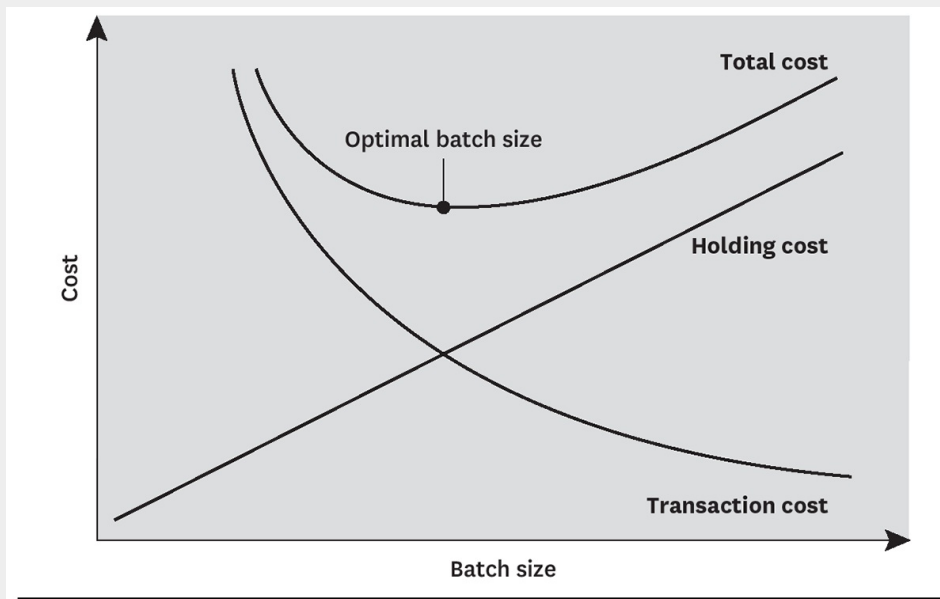
In a well-managed process, the batch size will balance transaction and holding costs (see the exhibit “How to determine optimal batch size”). It's similar to buying eggs at the grocery store. If you buy a 12-month supply on a single trip, your transaction cost is low, but most of the eggs will spoil, increasing your holding cost. If you buy a one-day supply at a time, your spoilage will be low, but your transaction costs will be high. Intuitively, you try to strike a balance between the two.

How to determine optimal batch size

Changes in batch size affect two primary costs: the transaction cost and the holding cost. As batch sizes become larger, average inventory levels rise, which raises holding costs. But

at the same time, transaction costs decrease, because it takes fewer transactions to service demand.

The optimal batch size is the point where the total cost (combined holding and transaction cost) is lowest. When a company operates near this point, small deviations have little impact. For example, if a company operates at less than 20% above or below the optimal batch size, total costs increase less than 3%. So even rough estimates permit a company to capture large economic benefits.



The companies that understand how this works have exploited IT advances to reduce batch sizes, often with astonishing results. Some software companies that used to test large batches of code every 90 days are now testing much smaller batches several times a day. A manufacturer of computer peripherals that used a similar approach with its software group reduced cycle time in software testing by 95% (from 48 months to 2.5 months), improved efficiency by 220%, and decreased defects by 33%. The cost savings were twice as high as the company had expected. Although those results were exceptional, we have found that reducing batch size improves most development projects significantly. Similarly, computerized modeling and simulation tools have dramatically lowered the optimal batch size of experimentation and testing in companies that develop physical products.

Fallacy 3: Our Development Plan Is Great; We Just Need to

Stick to It

In all our consulting work and research, we've never come across a single product-development project whose requirements remained stable throughout the design process. Yet many organizations place inordinate faith in their plans. They attribute any deviations to poor management and execution and, to minimize them, carefully track every step against intermediate targets and milestones. Such thinking is fine for highly repetitive activities in established manufacturing processes. But it can lead to poor results in product innovation, where new insights are generated daily and conditions are constantly changing.

A classic study of technical problem solving done by Thomas Allen of MIT highlights the fluid nature of development work. He found that engineers who were developing an aerospace subsystem conceived of and evaluated a number of design alternatives before selecting one that they judged to be the best. Along the way their preferences changed frequently, as they tested and refined competing technical solutions. This is typical in innovation projects: Testing and experimentation reveal what does and doesn't work, and initial assumptions about costs and value may be disproved.

Defining customers' needs can also be hard to do at the outset of a product-development project. When you think about it, that's not surprising: It isn't easy for customers to accurately specify their needs for solutions that don't yet exist. In fact, familiarity with existing product attributes can interfere with an individual's ability to express his or her need for a novel product. Customers' preferences can also shift abruptly during the course of a development project, as competitors introduce new offerings and new trends emerge.

For all those reasons, sticking to the original plan—no matter how excellent its conception and how skillful its execution—can be a recipe for disaster. This is not to suggest that we don't believe in planning. Product development is a set of complex activities that require careful coordination and attention to the smallest detail. However, the plan should be treated as an initial hypothesis that is constantly revised as the evidence unfolds, economic assumptions

change, and the opportunity is reassessed. (See “The Value Captor’s Process,” by Rita Gunther McGrath and Thomas Keil, HBR May 2007.)

Fallacy 4: The Sooner the Project Is Started, the Sooner It Will Be Finished

As we discussed earlier, idle time is anathema to managers. They tend to exploit any downtime by starting a new project. Even if the task cannot be completed because people have to return to another project, managers reason that anything accomplished on the new project is work that won’t have to be done later. Such thinking leads companies to start more projects than they can vigorously pursue, diluting resources.

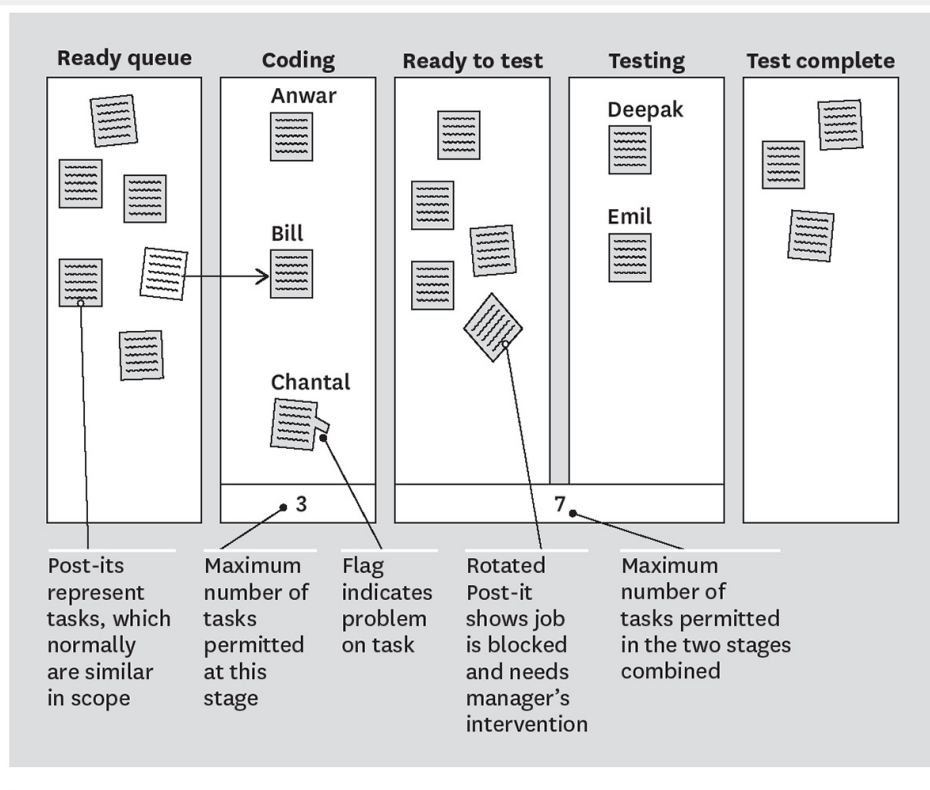
This dilution is dangerous. If a company embarks on a project before it has the resources to move ahead, it will stumble slowly through the development process. That’s problematic because product-development work is highly perishable: Assumptions about technologies and the market can quickly become obsolete. The slower a project progresses, the greater the likelihood it will have to be redirected. Indeed, one branch of the military discovered that its cost and schedule overruns were exponentially proportional (to the fourth power) to a project’s duration. In other words, when the original schedule of a project doubled, the cost and schedule overruns increased by a factor of 16.

The importance of reducing the amount of work in process is evident when we look at one of the classic formulas of queuing theory: Little’s Law. It simply states that, on average, cycle time is proportional to the size of the queue divided by the processing rate. Thus, if 20 people are ahead of you in line at Starbucks and the barista is serving five people a minute, you will be served in four minutes. You can shorten the cycle time by raising the processing rate or by reducing the number of jobs under way. In most settings the latter is the only practical choice.

Typical work-in-process control board

Control boards make invisible work visible by showing the precise stage that each work item is in. In designing the

boards, most teams limit the number of tasks at each stage to prevent delays. This simple board contains features that might be found on a software project that involves a team composed of six to 10 people.



For some product developers the solution has been to rigorously control the rate at which they start work. They match it to the rate at which work is actually completed; carefully manage the number of projects in process; make sure that once a project is launched, it is adequately staffed until it is completed; and resist the temptation to steal resources from an ongoing project to squeeze in new ones.

Fallacy 5: The More Features We Put into a Product, the More Customers Will Like It

Product-development teams seem to believe that adding features creates value for customers and subtracting them destroys value. This attitude explains why products are so complicated: Remote controls seem impossible to use, computers take hours to set up, cars have so many switches and knobs that they resemble airplane cockpits, and even the humble toaster now comes with

a manual and LCD displays.

Companies that challenge the belief that more is better create products that are elegant in their simplicity. Bang & Olufsen, the Danish manufacturer of audio products, televisions, and telephones, understands that customers don't necessarily want to fiddle with the equalizer, balance, and other controls to find the optimum combination of settings for listening to music. Its high-end speakers automatically make the adjustments needed to reproduce a song with as much fidelity to the original as possible. All that's left for users to select is the volume.

Getting companies to buy into and implement the principle that less can be more is hard because it requires extra effort in two areas of product development.

Defining the problem

Articulating the problem that developers will try to solve is the most underrated part of the innovation process. Too many companies devote far too little time to it. But this phase is important because it's where teams develop a clear understanding of what their goals are and generate hypotheses that can be tested and refined through experiments. The quality of a problem statement makes all the difference in a team's ability to focus on the few features that really matter.

When Walt Disney was planning Disneyland, he didn't rush to add more features (rides, kinds of food, amount of parking) than other amusement parks had. Rather, he began by asking a much larger question: How could Disneyland provide visitors with a magical customer experience? Surely, the answer didn't come overnight; it required painstakingly detailed research, constant experimentation, and deep insights into what "magical" meant to Disney and its customers. IDEO and other companies have dedicated phases in which they completely immerse themselves in the context in which the envisioned product or service will be used. Their developers read everything of interest about the markets, observe and interview future users, research offerings that will compete with the new product, and synthesize everything

that they have learned into pictures, models, and diagrams. The result is deep insights into customers that are tested, improved, or abandoned throughout the iterative development process.

Determining what to hide or omit

Teams are often tempted to show off by producing brilliant technical solutions that amaze their peers and management. But often customers would prefer a product that just works effortlessly. From a customer's point of view, the best solutions solve a problem in the simplest way and hide the work that developers are so proud of.

One company that has understood this is Apple. It is known for many things—innovative products, stylish designs, and savvy marketing—but perhaps its greatest strength is its ability to get to the heart of a problem. (See “The Real Leadership Lessons of Steve Jobs,” by Walter Isaacson, in our April issue.) As the late Steve Jobs once explained, “When you start looking at a problem and it seems really simple, you don’t really understand the complexity of the problem. And your solutions are way too oversimplified. Then you get into the problem, and you see it’s really complicated. And you come up with all these convoluted solutions. . . . That’s where most people stop.” Not Apple. It keeps on plugging away. “The really great person will keep on going,” said Jobs, “and find . . . the key underlying principle of the problem and come up with a beautiful, elegant solution that works.”

Determining which features to omit is just as important as—and perhaps more important than—figuring out which ones to include. Unfortunately, many companies, in an effort to be innovative, throw in every possible bell and whistle without fully considering important factors such as the value to customers and ease of use. When such companies do omit some planned functionality, it’s typically because they need to cut costs or have fallen behind schedule or because the team has failed in some other way.

Instead, managers should focus on figuring out whether the deletion of any proposed feature might improve a particular product and allow the team to concentrate on things that truly heighten the overall customer experience. This

can be determined by treating each alleged requirement as a hypothesis and testing it in small, quick experiments with prospective customers.

Development teams often assume that their products are done when no more features can be added. Perhaps their logic should be the reverse: Products get closer to perfection when no more features can be eliminated. As Leonardo da Vinci once said, “Simplicity is the ultimate sophistication.”

Fallacy 6: We Will Be More Successful If We Get It Right the First Time

Many product-development projects fail to meet their objectives for budgets, schedules, and technical performance. Undoubtedly, poor planning, rigid processes, and weak leadership all play a role. But another cause that’s often overlooked is managers’ demand that their teams “get it right the first time.” Requiring success on the first pass biases teams toward the least-risky solutions, even if customers don’t consider them much of an improvement over what’s already available. Worse yet, teams have little incentive to pursue innovative solutions to customers’ problems.

To avoid making mistakes, teams follow a linear process in which each stage (specify, design, build, test, scale, launch) is carefully monitored at review “gates.” Work on the next stage cannot begin until the project passes through the gate. As the project moves down the line, significant commitments are made and the cost of responding to new insights increases by orders of magnitude. Successful tests in late stages are celebrated, and surprises, no matter how valuable they are, are considered setbacks. Unfortunately, such a linear process flow can cause project overruns because test feedback is delayed, teams cling to bad ideas longer than they should, and problems aren’t unearthed until it’s expensive to solve them.

Practical guidelines for overcoming common fallacies

A checklist for today’s product-development managers

1. Make queues and information flows visible.

2. Quantify the cost of delays and factor it into your decisions.
3. Introduce resource slack where utilization is highest.
4. Shift the focus of control systems from efficiency to response time.
5. Reduce transaction costs to enable smaller batch sizes and faster feedback.
6. Experiment with smaller batches; you can easily revert to large batches if this doesn't work.
7. Treat the development plan as a hypothesis that will evolve as new information becomes available.
8. Start projects only when you are ready to make a full commitment.
9. Aim for simplicity: Ask what features can be deleted, not just what can be added.
10. Experiment early, rapidly, and frequently, with computer models and physical prototypes, in controlled and real-life customer environments.
11. Emphasize overlapping and iterative—not linear—process designs.
12. Focus on quick feedback instead of first-pass success.

A tolerance for “getting it wrong the first time” can be the better strategy as long as people iterate rapidly and frequently and learn quickly from their failures. Advances in simulation and rapid-prototyping technologies have made operating in this fashion vastly easier and less expensive.

Consider what we found in a study of 391 teams that designed custom integrated circuits. Teams that followed an iterative approach and conducted early and frequent tests made more errors along the way. But because they used low-cost prototyping technologies, they outperformed (in terms of the time and effort required) teams that tried to get their design right the first time. The teams that faced high prototyping costs invested more effort on specification, development, and verification. And because they did their iterations later in the process—and did far fewer of them—they delayed the discovery of critical problems.

Experimenting with many diverse ideas is crucial to innovation projects. When people experiment rapidly and frequently, many novel concepts will fail, of course. But such early failures can be desirable because they allow teams to eliminate poor options quickly and focus on more-promising alternatives. A

crash test that shows that a car design is unsafe, a drug candidate that proves to be toxic, or a software user interface that confuses customers can all be desirable outcomes—provided that they occur early in a process, when few resources have been committed, designs are still very flexible, and other solutions can be tried.

A classic example of the advantages of the “fail early, fail often” approach is Team New Zealand’s surprising victory in the 1995 America’s Cup. To test ideas for improving the keel design, the team used two nearly identical boats: one boat that was modified during the course of the project and a “control” boat that was not. On a daily basis, the team simulated hypotheses on a local graphics workstation, applied those that looked promising to the one boat, raced it against the control, and analyzed the results. In contrast, its competitor, Team Dennis Conner, which had access to more-powerful computers (supercomputers at Boeing), ran large batches of simulations every few weeks and then tested possible solutions on one boat. The result: Team New Zealand completed many more learning cycles, eliminated unpromising ideas more rapidly, and ended up beating Team Dennis Conner’s boat *Young America*.

What we hope is becoming clear by now is that experiments resulting in failures are not necessarily failed experiments. They generate new information that an innovator was unable to foresee. The faster the experimentation cycle, the more feedback can be gathered and incorporated into new rounds of experiments with novel and potentially risky ideas. In such an environment employees tend to persevere when times get tough, engage in more-challenging work, and outperform their risk-averse peers.

But creating this kind of environment isn’t easy—a topic that Amy C. Edmondson of Harvard Business School explored in “Strategies for Learning from Failure” (HBR April 2011). Failure can lead to embarrassment and expose gaps in knowledge, which can undermine individuals’ self-esteem and standing in an organization. After all, how often are managers promoted and teams rewarded for the early exposure of failures that lead a project to be

killed—even though the early redeployment of precious resources benefits the company? This is especially true in organizations that have built a “zero tolerance for failure” or “error-free” (Six Sigma) environment.

Thomas Alva Edison understood all this. He organized his famous laboratories around the concept of rapid experimentation, locating machine shops for building models close to the rooms where experiments were conducted so that machinists could cooperate closely with researchers. The labs had libraries containing a vast number of volumes so that information could be found quickly; nearby storerooms with ample quantities of supplies; and a diverse workforce of craftsmen, scientists, and engineers. Edison wanted to make sure that when he or his people had an idea, it could be immediately turned into a working model or prototype. “The real measure of success is the number of experiments that can be crowded into 24 hours,” he said.

Advances in information technology, such as computer-aided design, modeling, and simulation, have already allowed companies to make great strides in developing better products in less time and at a lower cost. Many companies, however, have not tapped the full potential of these tools, because their management thinking has not evolved as quickly as the technology: They still approach the highly variable information-generating work of product development as if it were like manufacturing. As advances in IT continue, the opportunity to improve the product-development process will become even greater. But so will the risks for companies that fail to recognize that product development is profoundly different from manufacturing.

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Innovation: The Classic Traps

by Rosabeth Moss Kanter

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

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

became a passion.

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

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

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

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

Idea in Brief

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

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

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

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

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

Idea in Practice

To innovate successfully, replace common mistakes with potent remedies.

Strategy Mistakes

- Rejecting opportunities that at first glance appear too small.
- Assuming that only new products count—not new services or improved processes.
- Launching too many minor product extensions that confuse customers and increase internal complexity.

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

Process Mistakes

- Strangling innovation with the same tight planning, budgeting, and reviews applied to existing businesses.
- Rewarding managers for doing only what they committed to do—and discouraging them from making changes as circumstances warrant.

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

Example: After executives at the struggling UK television network BBC set aside funds in a corporate

account to support innovation proposals, a new recruit used money originally allocated for a new BBC training film to make a pilot for ***The Office***. The show became the BBC's biggest hit comedy in decades.

Structure Mistakes

- Isolating fledgling and established enterprises in separate silos.
- Creating two classes of corporate citizens—those who have all the fun (innovators) and those who must make the money (mainstream business managers).

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

Skills Mistakes

- Allowing innovators to rotate out of teams so quickly that team chemistry can't gel.
- Assuming that innovation teams should be led by the best technical people.

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

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

Each wave brought new concepts. For example, the rise of biotechnology, characterized by complicated licensing arrangements, helped legitimize the idea that established firms could outsource R&D and learn from entrepreneurial partners or that consumer products companies could turn to external idea shops, as well as their own labs, to invent new products. Approaches to innovation also reflected changing economic conditions and geopolitical events. And, of course, innovation has covered a wide spectrum, including technologies, products, processes, and complete business ventures, each with its own requirements.

Still, despite changes to the environment and differences among types of innovation, each wave of enthusiasm has encountered similar dilemmas. Most of these stem from the tensions between protecting revenue streams from existing businesses critical to current success and supporting new concepts that may be crucial to future success. These tensions are exacerbated by the long-known phenomenon that important innovations often arise from outside an industry and beyond the established players, creating extra pressure for companies to find the next big concept quickly. Consequently, a large body of knowledge about innovation dilemmas has arisen.

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

Yet despite all the research and literature, I still observe executives

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

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

Strategy Mistakes: Hurdles Too High, Scope Too Narrow

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

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

similar technology. The rival, of course, gained dominant market share by being a first mover. Likewise, Pillsbury and Quaker lagged the competition in bringing new concepts to market and, as underperformers, were eventually acquired.

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

The Lessons of Innovation

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

Strategy Lessons

- Not every innovation idea has to be a blockbuster. Sufficient numbers of small or incremental innovations can lead to big profits.
- Don't just focus on new product development: Transformative ideas can come from any function—for instance, marketing, production, finance, or distribution.
- Successful innovators use an “innovation pyramid,” with several big bets at the top that get most of the investment; a portfolio of promising midrange ideas in test stage; and a broad base of early stage ideas or incremental innovations. Ideas and influence can flow up or down the pyramid.

Process Lessons

- Tight controls strangle innovation. The planning, budgeting, and reviews applied to existing businesses will squeeze the life out of an innovation effort.
- Companies should expect deviations from plan: If employees are rewarded simply for doing what they committed to do, rather than acting as circumstances would suggest, their employers will stifle and drive out innovation.

Structure Lessons

- While loosening formal controls, companies should tighten interpersonal connections between innovation efforts and the rest of the business.
- Game-changing innovations often cut across established channels or combine elements of existing capacity in new ways.
- If companies create two classes of corporate citizens—supplying the innovators with more perks, privileges, and prestige—those in the existing business will make every effort to crush the innovation.

Skills Lessons

- Even the most technical of innovations requires strong leaders with great relationship and communication skills.
- Members of successful innovation teams stick together through the development of an idea, even if the company's approach to career timing requires faster job rotation.
- Because innovations need connectors—people who know how to find partners in the mainstream business or outside world—they flourish in cultures that encourage collaboration.

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

a meeting discussing the need for change, a veteran factory worker, who had joined as a young immigrant and still spoke with a heavy accent, tentatively approached the new executive with an idea for ending the breakage. The company tried it, and it worked. When asked how long he had had that idea, the worker replied, “Thirty-two years.”

Similarly, because managers at Quaker Oats in the 1990s were too busy tweaking product formulas in minor ways, the company missed numerous opportunities in other arenas, such as distribution—for instance, taking advantage of the smaller, health-oriented outlets used by its Snapple beverage acquisition. And in a packaging coup, Ocean Spray, the cranberry juice company, stole a march on America’s largest juice purveyors (then including P&G and Coca-Cola) by getting an 18-month exclusive license for the introduction of Tetra Pak’s paper bottles to the U.S. market. Ocean Spray boasted a more eclectic innovation strategy than that of its rivals, including idea forums to explore innovations in any domain and open to any employee. Paper bottles were an instant hit with children (and parents packing their lunches), and Ocean Spray’s market share shot way up.

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

Similarly, Cemex, the global cement company based in Mexico, has used widespread brainstorming to generate innovations that create other sources of value for a product that could easily become a commodity. Those innovations include branded, bagged cement and technology-enabled delivery methods to get cement to customers as fast as if it were a pizza. And while P&G is getting attention for its product innovations, such as the Swiffer and Crest

Whitestrips, its innovations in new media, such as interactive Web sites for the soap operas it sponsors, may prove even more valuable for the company's future.

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

Process Mistakes: Controls Too Tight

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

AlliedSignal (now Honeywell) in 2000 sought new Internet-based products and services using established strategic-planning and budgeting processes through existing business units. The CEO asked the divisions to bring their best ideas for Internet-related innovations to the quarterly budget reviews. Although designated as a priority, these innovation projects were subjected to the same financial metrics the established businesses were. Budgets contained no additional funds for investment; managers working on innovations had to

find their own sources of funding through savings or internal transfers. What emerged were often retrofitted versions of ideas that had been in the pipeline anyway.

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

In the early 1990s, Bank of Boston (now part of Bank of America) set up an innovative unit called First Community Bank (FCB), the first comprehensive banking initiative to focus on inner-city markets. FCB struggled to convince mainstream managers in Bank of Boston's retail-banking group that the usual performance metrics, such as transaction time and profitability per customer, were not appropriate for this market—which required customer education, among other things—or for a new venture that still needed investment. Mainstream managers argued that “underperforming” branches should be closed. In order to save the innovation, FCB leaders had to invent their own metrics, based on customer satisfaction and loyalty, and find creative ways to show results by clusters of branches. The venture later proved both profitable and important to the parent bank as it embarked on a series of acquisitions.

Structure Mistakes: Connections Too Loose, Separations Too Sharp

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

The more dramatic approach is to create a unit apart from the mainstream business, which must still serve its embedded base. This was the logic behind

the launch of Saturn as an autonomous subsidiary of General Motors. GM's rules were suspended, and the Saturn team was encouraged to innovate in every aspect of vehicle design, production, marketing, sales, and customer service. The hope was that the best ideas would be incorporated back at the parent company, but instead, after a successful launch, Saturn was reintegrated into GM, and many of its innovations disappeared.

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

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

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

AT&T Worldnet, the Internet access venture of the venerable long-distance telephone company, faced this lethal mix in the mid-1990s. Managers in the traditional consumer services and business services units participated in a series of debates over whether to manage Worldnet as a distinct business unit,

with its own P&L, or to include it in the existing business units focused primarily on the consumer sector. While consumer services managers were reluctant to let go of anything, they eventually agreed to a carve-out intended to protect the embryonic venture from being crushed by the bureaucracy and to keep it from being measured against more-mature businesses that were generating significant cash flow rather than requiring investment. They weren't all that concerned, because they believed an Internet service provider would never generate significant revenue and profitability.

But as Worldnet gained momentum, it attracted more attention. The people in consumer services began to view the innovation's possible expansion to provide voice over Internet protocol (VoIP) services as a threat that could cannibalize existing business. Consumer services managers grabbed control of Worldnet and proceeded to starve it. They used it as a platform to sell core land-based long-distance services and started applying the same metrics to the Internet business that were used for consumer long-distance. Pricing was an immediate problem. Worldnet's services had been priced low to fuel growth, to get the scale and network effects of a large group of subscribers, but the mainstream unit did not want to incur losses on any line of business. So it raised prices, and Worldnet's growth stalled. Consumer services managers could then treat Worldnet as a trivial, slow-growing business, not worthy of large investment. They did not allocate sufficient resources to develop Internet access and VoIP technology, restraining important telecom innovations in which AT&T could have been the pioneer.

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

Even when a new venture is launched within an existing business, culture clashes become class warfare if there are two classes of corporate citizens—those who have all the fun and those who make all the money. The designated innovators, whether an R&D group or a new-venture unit, are identified as creators of the future. They are free of rules or revenue demands and are

allowed to play with ideas that don't yet work. Their colleagues are expected to follow rules, meet demands, and make money while feeling like grinds and sometimes being told they are dinosaurs whose business models will soon be obsolete.

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

Skills Mistakes: Leadership Too Weak, Communication Too Poor

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

Groups that are convened without attention to interpersonal skills find it difficult to embrace collective goals, take advantage of the different strengths various members bring, or communicate well enough to share the tacit

knowledge that is still unformed and hard to document while an innovation is under development. It takes time to build the trust and interplay among team members that will spark great ideas. MIT researchers have found that for R&D team members to be truly productive, they have to have been on board for at least two years. At one point, Pillsbury realized that the average length of time the company took to go from new product idea to successful commercialization was 24 to 26 months, but the average length of time people spent on product teams was 18 months. No wonder the company was falling behind in innovation.

Changes in team composition that result from companies' preferences for the frequency with which individuals make career moves can make it hard for new ventures to deal with difficult challenges, prompting them to settle for quick, easy, conventional solutions. At Honeywell in the 1980s, leaders of new-venture teams were often promoted out of them before the work had been completed. Because promotions were take-it-or-leave-it offers and pay was tied to size of assets controlled (small by definition in new ventures) rather than difficulty of task, even dedicated innovators saw the virtues of leaving their projects midstream. Honeywell was undermining its own innovation efforts. An executive review of why new ventures failed uncovered this problem, but a technology bias made it hard for old-school managers of that era to increase their appreciation for the value of team bonding and continuity.

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

Innovators cannot work in isolation if they want their concepts to catch on. They must build coalitions of supporters who will provide air cover for the

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

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

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

The climate for relationships within an innovation group is shaped by the climate outside it. Having a negative instead of a positive culture can cost a

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

Under a new CEO and COO, Steve Luczo and Bill Watkins, who operated as partners, Seagate developed new norms for how people should treat one another, starting with the executive group. Their raised consciousness led to a systemic process for forming and running "core teams" (cross-functional innovation groups), and Seagate employees were trained in common methodologies for team building, both in conventional training programs and through participation in difficult outdoor activities in New Zealand and other remote locations. To lead core teams, Seagate promoted people who were known for strong relationship skills above others with greater technical skills. Unlike the antagonistic committees convened during the years of decline, the core teams created dramatic process and product innovations that brought the company back to market leadership. The new Seagate was able to create innovations embedded in a wide range of new electronic devices, such as iPods and cell phones.

Innovation Remedies

The quest for breakthrough ideas, products, and services can get derailed in any or all of the ways described earlier. Fortunately, however, history also

shows how innovation succeeds. “Corporate entrepreneurship” need not be an oxymoron. Here are four ways to win.

Strategy remedy: Widen the search, broaden the scope

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

Thinking of innovation in terms of this pyramid gives senior managers a tool for assessing current efforts, making adjustments as ideas prove their value and require further support, and ensuring that there is activity at all levels. A culture of innovation grows because everyone can play. While dedicated groups pursue the big projects and temporary teams develop midrange ideas, everyone else in the company can be invited to contribute ideas. Every employee can be a potential idea scout and project initiator, as IBM is demonstrating. This past July, the company held a three-day InnovationJam on the Web, during which about 140,000 employees and clients—representing 104 countries—contributed about 37,000 ideas and ranked them, giving the company an enormous pool of raw ideas, some of them big, most of them small. Indeed, an organization is more likely to get bigger ideas if it has a wide funnel into which numerous small ideas can be poured. One of the secrets of success for companies that demonstrate high rates of innovation is that they simply try more things.

Gillette adopted the pyramid model as part of its push to accelerate innovation in 2003 and 2004. The result was a stream of innovations in every function and business unit that raised revenues and profits. They included new

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

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

Process remedy: Add flexibility to planning and control systems

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

IBM is building such flexibility directly into its infrastructure. The company established a \$100 million innovation fund to support the best ideas arising

from its InnovationJam, independent of the normal planning and budgeting processes, to allow bottom-up ideas to flourish. “No one has ever before brought together such a global and diverse set of business thought leaders on this scale to discuss the most pressing issues and opportunities of our age,” says Nick Donofrio, IBM’s executive vice president of innovation and technology. “We have companies literally knocking at the door and saying, ‘Give us your best and brightest ideas, and let’s work together to make them a reality.’ It’s a golden opportunity to create entirely new markets and partnerships.”

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

Structure remedy: Facilitate close connections between innovators and mainstream businesses

While loosening the formal controls that would otherwise stifle innovations, companies should tighten the human connections between those pursuing innovation efforts and others throughout the rest of the business. Productive conversations should take place regularly between innovators and mainstream business managers. Innovation teams should be charged with external communication as part of their responsibility, but senior leaders should also convene discussions to encourage mutual respect rather than tensions and antagonism. Such conversations should be aimed at mutual learning, to minimize cannibalization and to maximize effective reintegration of

innovations that become new businesses. In addition to formal meetings, companies can facilitate informal conversations—as Steelcase did by building a design center that would force people to bump into one another—or identify the people who lead informal cross-unit networks and encourage their efforts at making connections.

Innovation groups can be told at the outset that they have a responsibility to serve the mainstream while also seeking bigger innovations to start new businesses. This can be built into their charters and reinforced by overlapping relationships—whether it involves representatives from mainstream businesses rotating through innovation groups or advisory boards overseeing innovation efforts. After its first great idea flopped, Timberland’s Invention Factory learned to work closely with mainstream teams to meet their needs for immediate innovations, such as recreational shoes lined with SmartWool, and to seek game-changing breakthroughs. Turner Broadcasting’s new-products group mixes project types: stand-alone developments, enhancements for current channels, external partnerships, and venture capital investments. PNC Financial Services Group recently established a new-products group to oversee mainstream developments, such as pricing and product enhancements, as well as growth engines in new capabilities, such as technology-enabled services and back-office services for investment funds. The company’s sales of emerging products were up 21% in 2005, accounting for 46% of all sales.

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

teams model.

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

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

Skills remedy: Select for leadership and interpersonal skills, and surround innovators with a supportive culture of collaboration

Companies that cultivate leadership skills are more likely to net successful innovations. One reason Williams-Sonoma could succeed in e-commerce quickly and profitably was its careful attention to the human dimension. Shelley Nandkeolyar, the first manager of Williams-Sonoma's e-commerce group, was not the most knowledgeable about the technology, but he was a leader who could assemble the right team. He valued relationships, so he chose a mixture of current employees from other units, who could be

ambassadors to their former groups, and new hires that brought new skills. He added cross-company teams to advise and link to the e-commerce team. He invented an integrator role to better connect operations groups and chose Patricia Skerritt, known for being relationship oriented, to fill it.

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

IBM's big innovations, such as demonstrating grid computing through World Community Grid, are possible only because the company's culture encourages people to collaborate. CEO Sam Palmisano has engaged hundreds of thousands of IBMers in a Web-based discussion of company values, and Nick Donofrio, IBM's executive vice president for innovation and technology, works to make 90,000 technical people around the world feel part of one innovationseeking community. The corporate champion of World Community Grid, IBM vice president Stanley Litow, sought out partners in its business units and geographies to move the innovation forward.

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

Innovation involves ideas that create the future. But the quest for innovation is doomed unless the managers who seek it take time to learn from

the past. Getting the balance right between exploiting (getting the highest returns from current activities) and exploring (seeking the new) requires organizational flexibility and a great deal of attention to relationships. It always has, and it always will.

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The Discipline of Innovation

by Peter F. Drucker

DESPITE MUCH DISCUSSION THESE days of the “entrepreneurial personality,” few of the entrepreneurs with whom I have worked during the past 30 years had such personalities. But I have known many people—salespeople, surgeons, journalists, scholars, even musicians—who did have them without being the least bit entrepreneurial. What all the successful entrepreneurs I have met have in common is not a certain kind of personality but a commitment to the systematic practice of innovation.

Innovation is the specific function of entrepreneurship, whether in an existing business, a public service institution, or a new venture started by a lone individual in the family kitchen. It is the means by which the entrepreneur either creates new wealth-producing resources or endows existing resources with enhanced potential for creating wealth.

Today, much confusion exists about the proper definition of entrepreneurship. Some observers use the term to refer to all small businesses; others, to all new businesses. In practice, however, a great many well-established businesses engage in highly successful entrepreneurship. The term, then, refers not to an enterprise’s size or age but to a certain kind of activity. At the heart of that activity is innovation: the effort to create purposeful, focused change in an enterprise’s economic or social potential.

Sources of Innovation

There are, of course, innovations that spring from a flash of genius. Most

innovations, however, especially the successful ones, result from a conscious, purposeful search for innovation opportunities, which are found only in a few situations. Four such areas of opportunity exist within a company or industry: unexpected occurrences, incongruities, process needs, and industry and market changes.

Three additional sources of opportunity exist outside a company in its social and intellectual environment: demographic changes, changes in perception, and new knowledge.

True, these sources overlap, different as they may be in the nature of their risk, difficulty, and complexity, and the potential for innovation may well lie in more than one area at a time. But together, they account for the great majority of all innovation opportunities.

1. Unexpected occurrences

Consider, first, the easiest and simplest source of innovation opportunity: the unexpected. In the early 1930s, IBM developed the first modern accounting machine, which was designed for banks. But banks in 1933 did not buy new equipment. What saved the company—according to a story that Thomas Watson, Sr., the company's founder and long-term CEO, often told—was its exploitation of an unexpected success: The New York Public Library wanted to buy a machine. Unlike the banks, libraries in those early New Deal days had money, and Watson sold more than a hundred of his otherwise unsalable machines to libraries.

Fifteen years later, when everyone believed that computers were designed for advanced scientific work, business unexpectedly showed an interest in a machine that could do payroll. Univac, which had the most advanced machine, spurned business applications. But IBM immediately realized it faced a possible unexpected success, redesigned what was basically Univac's machine for such mundane applications as payroll, and within five years became a leader in the computer industry, a position it has maintained to this day.

Idea in Brief

In the hypercompetition for breakthrough solutions, managers worry too much about characteristics and personality—“Am I smart enough? Do I have the right temperament?”—and not enough about process. A commitment to the systematic search for imaginative and useful ideas is what successful entrepreneurs share—not some special genius or trait. What’s more, entrepreneurship can occur in a business of any size or age because, at heart, it has to do with a certain kind of activity: innovation, the disciplined effort to improve a business’s potential.

Most innovations result from a conscious, purposeful search for opportunities—within the company and the industry as well as the larger social and intellectual environment. A successful innovation may come from pulling together different strands of knowledge, recognizing an underlying theme in public perception, or extracting new insights from failure.

The key is to know where to look.

The unexpected failure may be an equally important source of innovation opportunities. Everyone knows about the Ford Edsel as the biggest new-car failure in automotive history. What very few people seem to know, however, is that the Edsel’s failure was the foundation for much of the company’s later success. Ford planned the Edsel, the most carefully designed car to that point in American automotive history, to give the company a full product line with which to compete with General Motors. When it bombed, despite all the planning, market research, and design that had gone into it, Ford realized that something was happening in the automobile market that ran counter to the basic assumptions on which GM and everyone else had been designing and marketing cars. No longer was the market segmented primarily by income groups; the new principle of segmentation was what we now call “lifestyles.” Ford’s response was the Mustang, a car that gave the company a distinct personality and reestablished it as an industry leader.

Unexpected successes and failures are such productive sources of innovation opportunities because most businesses dismiss them, disregard them, and even resent them. The German scientist who around 1905 synthesized novocaine, the first nonaddictive narcotic, had intended it to be used in major surgical procedures like amputation. Surgeons, however, preferred total anesthesia for such procedures; they still do. Instead, novocaine found a ready appeal among dentists. Its inventor spent the remaining years of his life traveling from dental school to dental school making speeches that forbade dentists from “misusing” his noble invention in applications for which he had not intended it.

Idea in Practice

Successful entrepreneurs don't wait for innovative ideas to strike like a lightning bolt. They go out looking for innovation opportunities in seven key areas:

1. Unexpected occurrences. These often include failures. Few people know, for instance, that the failure of the Edsel led Ford to realize that the auto market was now segmented by lifestyle instead of by income group. Ford's response was the Mustang, and an auto legend was born.

2. Incongruities. By the 1960s, cataract removal had become high-tech, except for cutting a ligament, an “old-fashioned” step that was uncomfortable for eye surgeons. Alcon Laboratories responded by modifying an enzyme that dissolved the ligament. Surgeons immediately accepted the new product, giving Alcon a monopoly.

3. Process needs. Two process innovations developed around 1890 created “the media” as we know it today: linotype made it possible to produce newspapers quickly, and advertising made it possible to distribute news practically free of charge.

4. Industry and market changes. The brokerage firm Donaldson, Lufkin & Jenrette achieved fabulous success because its founders recognized that the emerging market for institutional investors would one

day predominate in the industry.

5. Demographic changes. Why are the Japanese ahead in robotics? Around 1970, everyone knew that there was both a baby bust and an education explosion, such that the number of blue-collar manufacturing workers would decline. Everyone knew—but only the Japanese took action.

6. Changes in perception. Such changes don't alter the facts, but can dramatically change their meaning. Americans' health has never been better—yet we're obsessed with preventing disease and staying fit. Innovators who understand our *perception* of health have launched magazines, introduced health foods, and started exercise classes.

7. New knowledge. Knowledge-based innovations require long lead times and the convergence of different kinds of knowledge. The computer required knowledge that was available by 1918, but the first operational digital computer did not appear until 1946.

Purposeful innovation begins with looking, asking, and listening. Talent and expert knowledge help, but don't be deluded by all the stories about flashes of insight. The key task is to work out analytically what the innovation has to be in order to satisfy a particular opportunity.

This is a caricature, to be sure, but it illustrates the attitude managers often take to the unexpected: “It should not have happened.” Corporate reporting systems further ingrain this reaction, for they draw attention away from unanticipated possibilities. The typical monthly or quarterly report has on its first page a list of problems—that is, the areas where results fall short of expectations. Such information is needed, of course, to help prevent deterioration of performance. But it also suppresses the recognition of new opportunities. The first acknowledgment of a possible opportunity usually applies to an area in which a company does better than budgeted. Thus genuinely entrepreneurial businesses have two “first pages”—a problem page and an opportunity page—and managers spend equal time on both.

2. Incongruities

Alcon Laboratories was one of the success stories of the 1960s because Bill Conner, the company's cofounder, exploited an incongruity in medical technology. The cataract operation is the world's third or fourth most common surgical procedure. During the past 300 years, doctors systematized it to the point that the only "old-fashioned" step left was the cutting of a ligament. Eye surgeons had learned to cut the ligament with complete success, but it was so different a procedure from the rest of the operation, and so incompatible with it, that they often dreaded it. It was incongruous.

Doctors had known for 50 years about an enzyme that could dissolve the ligament without cutting. All Conner did was to add a preservative to this enzyme that gave it a few months' shelf life. Eye surgeons immediately accepted the new compound, and Alcon found itself with a worldwide monopoly. Fifteen years later, Nestlé bought the company for a fancy price.

Such an incongruity within the logic or rhythm of a process is only one possibility out of which innovation opportunities may arise. Another source is incongruity between economic realities. For instance, whenever an industry has a steadily growing market but falling profit margins—as, say, in the steel industries of developed countries between 1950 and 1970—an incongruity exists. The innovative response: minimills.

An incongruity between expectations and results can also open up possibilities for innovation. For 50 years after the turn of the century, shipbuilders and shipping companies worked hard both to make ships faster and to lower their fuel consumption. Even so, the more successful they were in boosting speed and trimming their fuel needs, the worse the economics of ocean freighters became. By 1950 or so, the ocean freighter was dying, if not already dead.

All that was wrong, however, was an incongruity between the industry's assumptions and its realities. The real costs did not come from doing work (that is, being at sea) but from *not* doing work (that is, sitting idle in port). Once managers understood where costs truly lay, the innovations were obvious: the roll-on and roll-off ship and the container ship. These solutions,

which involved old technology, simply applied to the ocean freighter what railroads and truckers had been using for 30 years. A shift in viewpoint, not in technology, totally changed the economics of ocean shipping and turned it into one of the major growth industries of the last 20 to 30 years.

3. Process needs

Anyone who has ever driven in Japan knows that the country has no modern highway system. Its roads still follow the paths laid down for—or by—oxcarts in the tenth century. What makes the system work for automobiles and trucks is an adaptation of the reflector used on American highways since the early 1930s. The reflector lets each car see which other cars are approaching from any one of a half-dozen directions. This minor invention, which enables traffic to move smoothly and with a minimum of accidents, exploited a process need.

What we now call the media had its origin in two innovations developed around 1890 in response to process needs. One was Ottmar Mergenthaler's Linotype, which made it possible to produce newspapers quickly and in large volume. The other was a social innovation, modern advertising, invented by the first true newspaper publishers, Adolph Ochs of the *New York Times*, Joseph Pulitzer of the *New York World*, and William Randolph Hearst. Advertising made it possible for them to distribute news practically free of charge, with the profit coming from marketing.

4. Industry and market changes

Managers may believe that industry structures are ordained by the good Lord, but these structures can—and often do—change overnight. Such change creates tremendous opportunity for innovation.

One of American business's great success stories in recent decades is the brokerage firm of Donaldson, Lufkin & Jenrette, recently acquired by the Equitable Life Assurance Society. DL&J was founded in 1960 by three young men, all graduates of the Harvard Business School, who realized that the structure of the financial industry was changing as institutional investors became dominant. These young men had practically no capital and no

connections. Still, within a few years, their firm had become a leader in the move to negotiated commissions and one of Wall Street's stellar performers. It was the first to be incorporated and go public.

In a similar fashion, changes in industry structure have created massive innovation opportunities for American health care providers. During the past ten or 15 years, independent surgical and psychiatric clinics, emergency centers, and HMOs have opened throughout the country. Comparable opportunities in telecommunications followed industry upheavals—in transmission (with the emergence of MCI and Sprint in long-distance service) and in equipment (with the emergence of such companies as Rolm in the manufacturing of private branch exchanges).

When an industry grows quickly—the critical figure seems to be in the neighborhood of 40% growth in ten years or less—its structure changes. Established companies, concentrating on defending what they already have, tend not to counterattack when a newcomer challenges them. Indeed, when market or industry structures change, traditional industry leaders again and again neglect the fastest growing market segments. New opportunities rarely fit the way the industry has always approached the market, defined it, or organized to serve it. Innovators therefore have a good chance of being left alone for a long time.

5. Demographic changes

Of the outside sources of innovation opportunities, demographics are the most reliable. Demographic events have known lead times; for instance, every person who will be in the American labor force by the year 2000 has already been born. Yet because policy makers often neglect demographics, those who watch them and exploit them can reap great rewards.

The Japanese are ahead in robotics because they paid attention to demographics. Everyone in the developed countries around 1970 or so knew that there was both a baby bust and an education explosion going on; about half or more of the young people were staying in school beyond high school. Consequently, the number of people available for traditional blue-collar work

in manufacturing was bound to decrease and become inadequate by 1990. Everyone knew this, but only the Japanese acted on it, and they now have a ten-year lead in robotics.

Much the same is true of Club Mediterranee's success in the travel and resort business. By 1970, thoughtful observers could have seen the emergence of large numbers of affluent and educated young adults in Europe and the United States. Not comfortable with the kind of vacations their working-class parents had enjoyed—the summer weeks at Brighton or Atlantic City—these young people were ideal customers for a new and exotic version of the “hangout” of their teen years.

Managers have known for a long time that demographics matter, but they have always believed that population statistics change slowly. In this century, however, they don't. Indeed, the innovation opportunities made possible by changes in the numbers of people—and in their age distribution, education, occupations, and geographic location—are among the most rewarding and least risky of entrepreneurial pursuits.

6. Changes in perception

“The glass is half full” and “The glass is half empty” are descriptions of the same phenomenon but have vastly different meanings. Changing a manager's perception of a glass from half full to half empty opens up big innovation opportunities.

All factual evidence indicates, for instance, that in the last 20 years, Americans' health has improved with unprecedented speed—whether measured by mortality rates for the newborn, survival rates for the very old, the incidence of cancers (other than lung cancer), cancer cure rates, or other factors. Even so, collective hypochondria grips the nation. Never before has there been so much concern with or fear about health. Suddenly, everything seems to cause cancer or degenerative heart disease or premature loss of memory. The glass is clearly half empty.

Rather than rejoicing in great improvements in health, Americans seem to be emphasizing how far away they still are from immortality. This view of

things has created many opportunities for innovations: markets for new health care magazines, for exercise classes and jogging equipment, and for all kinds of health foods. The fastest growing new U.S. business in 1983 was a company that makes indoor exercise equipment.

A change in perception does not alter facts. It changes their meaning, though—and very quickly. It took less than two years for the computer to change from being perceived as a threat and as something only big businesses would use to something one buys for doing income tax. Economics do not necessarily dictate such a change; in fact, they may be irrelevant. What determines whether people see a glass as half full or half empty is mood rather than fact, and a change in mood often defies quantification. But it is not exotic. It is concrete. It can be defined. It can be tested. And it can be exploited for innovation opportunity.

7. New knowledge

Among history-making innovations, those that are based on new knowledge—whether scientific, technical, or social—rank high. They are the superstars of entrepreneurship; they get the publicity and the money. They are what people usually mean when they talk of innovation, although not all innovations based on knowledge are important.

Knowledge-based innovations differ from all others in the time they take, in their casualty rates, and in their predictability, as well as in the challenges they pose to entrepreneurs. Like most superstars, they can be temperamental, capricious, and hard to direct. They have, for instance, the longest lead time of all innovations. There is a protracted span between the emergence of new knowledge and its distillation into usable technology. Then there is another long period before this new technology appears in the marketplace in products, processes, or services. Overall, the lead time involved is something like 50 years, a figure that has not shortened appreciably throughout history.

To become effective, innovation of this sort usually demands not one kind of knowledge but many. Consider one of the most potent knowledge-based innovations: modern banking. The theory of the entrepreneurial bank—that is,

of the purposeful use of capital to generate economic development—was formulated by the Comte de Saint-Simon during the era of Napoleon. Despite Saint-Simon’s extraordinary prominence, it was not until 30 years after his death in 1825 that two of his disciples, the brothers Jacob and Isaac Pereire, established the first entrepreneurial bank, the Credit Mobilier, and ushered in what we now call finance capitalism.

The Pereires, however, did not know modern commercial banking, which developed at about the same time across the channel in England. The Credit Mobilier failed ignominiously. A few years later, two young men—one an American, J.P. Morgan, and one a German, Georg Siemens—put together the French theory of entrepreneurial banking and the English theory of commercial banking to create the first successful modern banks: J.P. Morgan & Company in New York, and the Deutsche Bank in Berlin. Ten years later, a young Japanese, Shibusawa Eiichi, adapted Siemens’s concept to his country and thereby laid the foundation of Japan’s modern economy. This is how knowledge-based innovation always works.

The computer, to cite another example, required no fewer than six separate strands of knowledge:

- binary arithmetic;
- Charles Babbage’s conception of a calculating machine, in the first half of the nineteenth century;
- the punch card, invented by Herman Hollerith for the U.S. census of 1890;
- the audion tube, an electronic switch invented in 1906;
- symbolic logic, which was developed between 1910 and 1913 by Bertrand Russell and Alfred North Whitehead;
- and concepts of programming and feedback that came out of abortive attempts during World War I to develop effective anti-aircraft guns.

Although all the necessary knowledge was available by 1918, the first

operational digital computer did not appear until 1946.

Long lead times and the need for convergence among different kinds of knowledge explain the peculiar rhythm of knowledge-based innovation, its attractions, and its dangers. During a long gestation period, there is a lot of talk and little action. Then, when all the elements suddenly converge, there is tremendous excitement and activity and an enormous amount of speculation. Between 1880 and 1890, for example, almost 1,000 electric-apparatus companies were founded in developed countries. Then, as always, there was a crash and a shakeout. By 1914, only 25 were still alive. In the early 1920s, 300 to 500 automobile companies existed in the United States; by 1960, only four of them remained.

It may be difficult, but knowledge-based innovation can be managed. Success requires careful analysis of the various kinds of knowledge needed to make an innovation possible. Both J.P. Morgan and Georg Siemens did this when they established their banking ventures. The Wright brothers did this when they developed the first operational airplane.

Careful analysis of the needs—and, above all, the capabilities—of the intended user is also essential. It may seem paradoxical, but knowledge-based innovation is more market dependent than any other kind of innovation. De Havilland, a British company, designed and built the first passenger jet, but it did not analyze what the market needed and therefore did not identify two key factors. One was configuration—that is, the right size with the right payload for the routes on which a jet would give an airline the greatest advantage. The other was equally mundane: How could the airlines finance the purchase of such an expensive plane? Because de Havilland failed to do an adequate user analysis, two American companies, Boeing and Douglas, took over the commercial jet-aircraft industry.

Principles of Innovation

Purposeful, systematic innovation begins with the analysis of the sources of new opportunities. Depending on the context, sources will have different

importance at different times. Demographics, for instance, may be of little concern to innovators of fundamental industrial processes like steelmaking, although the Linotype machine became successful primarily because there were not enough skilled typesetters available to satisfy a mass market. By the same token, new knowledge may be of little relevance to someone innovating a social instrument to satisfy a need that changing demographics or tax laws have created. But whatever the situation, innovators must analyze all opportunity sources.

Because innovation is both conceptual and perceptual, would-be innovators must also go out and look, ask, and listen. Successful innovators use both the right and left sides of their brains. They work out analytically what the innovation has to be to satisfy an opportunity. Then they go out and look at potential users to study their expectations, their values, and their needs.

To be effective, an innovation has to be simple, and it has to be focused. It should do only one thing; otherwise it confuses people. Indeed, the greatest praise an innovation can receive is for people to say, “This is obvious! Why didn’t I think of it? It’s so simple!” Even the innovation that creates new users and new markets should be directed toward a specific, clear, and carefully designed application.

Effective innovations start small. They are not grandiose. It may be to enable a moving vehicle to draw electric power while it runs along rails, the innovation that made possible the electric streetcar. Or it may be the elementary idea of putting the same number of matches into a matchbox (it used to be 50). This simple notion made possible the automatic filling of matchboxes and gave the Swedes a world monopoly on matches for half a century. By contrast, grandiose ideas for things that will “revolutionize an industry” are unlikely to work.

In fact, no one can foretell whether a given innovation will end up a big business or a modest achievement. But even if the results are modest, the successful innovation aims from the beginning to become the standard setter, to determine the direction of a new technology or a new industry, to create the

business that is—and remains—ahead of the pack. If an innovation does not aim at leadership from the beginning, it is unlikely to be innovative enough.

Above all, innovation is work rather than genius. It requires knowledge. It often requires ingenuity. And it requires focus. There are clearly people who are more talented innovators than others, but their talents lie in well-defined areas. Indeed, innovators rarely work in more than one area. For all his systematic innovative accomplishments, Thomas Edison worked only in the electrical field. An innovator in financial areas, Citibank for example, is not likely to embark on innovations in health care.

In innovation, as in any other endeavor, there is talent, there is ingenuity, and there is knowledge. But when all is said and done, what innovation requires is hard, focused, purposeful work. If diligence, persistence, and commitment are lacking, talent, ingenuity, and knowledge are of no avail.

There is, of course, far more to entrepreneurship than systematic innovation—distinct entrepreneurial strategies, for example, and the principles of entrepreneurial management, which are needed equally in the established enterprise, the public service organization, and the new venture. But the very foundation of entrepreneurship is the practice of systematic innovation.

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Innovation Killers

How Financial Tools Destroy Your Capacity to Do New Things. *by Clayton M. Christensen, Stephen P. Kaufman, and Willy C. Shih*

FOR YEARS WE'VE BEEN puzzling about why so many smart, hardworking managers in well-run companies find it impossible to innovate successfully. Our investigations have uncovered a number of culprits, which we've discussed in earlier books and articles. These include paying too much attention to the company's most profitable customers (thereby leaving less-demanding customers at risk) and creating new products that don't help customers do the jobs they want to do. Now we'd like to name the misguided application of three financial-analysis tools as an accomplice in the conspiracy against successful innovation. We allege crimes against these suspects:

- The use of discounted cash flow (DCF) and net present value (NPV) to evaluate investment opportunities causes managers to underestimate the real returns and benefits of proceeding with investments in innovation.
- The way that fixed and sunk costs are considered when evaluating future investments confers an unfair advantage on challengers and shackles incumbent firms that attempt to respond to an attack.
- The emphasis on earnings per share as the primary driver of share price and hence of shareholder value creation, to the exclusion of almost everything else, diverts resources away from investments whose payoff lies beyond the immediate horizon.

These are not bad tools and concepts, we hasten to add. But the way they are commonly wielded in evaluating investments creates a systematic bias against innovation. We will recommend alternative methods that, in our experience, can help managers innovate with a much more astute eye for future value. Our primary aim, though, is simply to bring these concerns to light in the hope that others with deeper expertise may be inspired to examine and resolve them.

Misapplying Discounted Cash Flow and Net Present Value

The first of the misleading and misapplied tools of financial analysis is the method of discounting cash flow to calculate the net present value of an initiative. Discounting a future stream of cash flows into a “present value” assumes that a rational investor would be indifferent to having a dollar today or to receiving some years from now a dollar plus the interest or return that could be earned by investing that dollar for those years. With that as an operating principle, it makes perfect sense to assess investments by dividing the money to be received in future years by $(1 + r)^n$, where r is the discount rate—the annual return from investing that money—and n is the number of years during which the investment could be earning that return.

While the mathematics of discounting is logically impeccable, analysts commonly commit two errors that create an anti-innovation bias. The first error is to assume that the base case of not investing in the innovation—the do-nothing scenario against which 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. As shown in the exhibit “The DCF trap,” the mathematics considers the investment in isolation and compares the present value of the innovation’s cash stream less project costs with the cash stream in the absence of the investment, which is assumed to be unchanging. In most situations, however, competitors’ sustaining and disruptive investments over time result in price and margin pressure, technology changes, market share losses, sales volume decreases, and a

declining stock price. As Eileen Rudden at Boston Consulting Group pointed out, the most likely stream of cash for the company in the do-nothing scenario is not a continuation of the status quo. It is a nonlinear decline in performance.

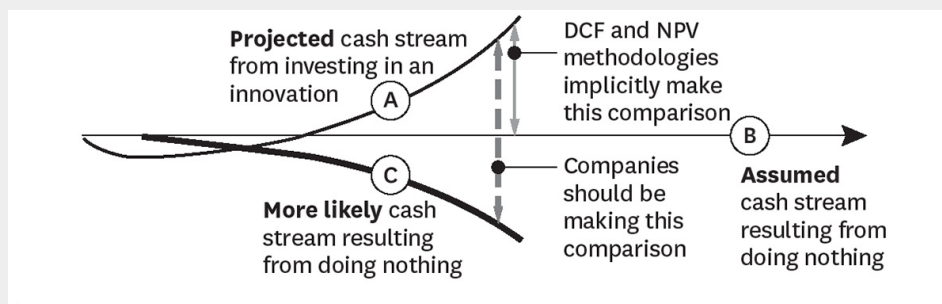
Idea in Brief

Most companies aren't half as innovative as their senior executives want them to be (or as their marketing claims suggest they are). What's stifling innovation? There are plenty of usual suspects, but the authors finger three financial tools as key accomplices. Discounted cash flow and net present value, as commonly used, underestimate the real returns and benefits of proceeding with an investment. Most executives compare the cash flows from innovation against the default scenario of doing nothing, assuming—incorrectly—that the present health of the company will persist indefinitely if the investment is not made. In most situations, however, competitors' sustaining and disruptive investments over time result in deterioration of financial performance. Fixed- and sunk-cost conventional wisdom confers an unfair advantage on challengers and shackles incumbent firms that attempt to respond to an attack. Executives in established companies, bemoaning the expense of building new brands and developing new sales and distribution channels, seek instead to leverage their existing brands and structures. Entrants, in contrast, simply create new ones. The problem for the incumbent isn't that the challenger can spend more; it's that the challenger is spared the dilemma of having to choose between full-cost and marginal-cost options. The emphasis on short-term earnings per share as the primary driver of share price, and hence shareholder value creation, acts to restrict investments in innovative long-term growth opportunities. These are not bad tools and concepts in and of themselves, but the way they are used to evaluate investments creates a systematic bias against successful innovation. The authors recommend alternative methods that can help managers innovate with a much more astute eye for future value.

It's tempting but wrong to assess the value of a proposed investment by measuring whether it will make us better off than we are now. It's wrong because, if things are deteriorating on their own, we might be worse off than we are now after we make the proposed investment but better off than we would have been without it. Philip Bobbitt calls this logic Parmenides' Fallacy, after the ancient Greek logician who claimed to have proved that conditions in the real world must necessarily be unchanging. Analysts who attempt to distill the value of an innovation into one simple number that they can compare with other simple numbers are generally trapped by Parmenides' Fallacy.

The DCF trap

Most executives compare the cash flows from innovation against the default scenario of doing nothing, assuming—incorrectly—that the present health of the company will persist indefinitely if the investment is not made. For a better assessment of the innovation's value, the comparison should be between its projected discounted cash flow and the more likely scenario of a decline in performance in the absence of innovation investment.



It's hard to accurately forecast the stream of cash from an investment in innovation. It is even more difficult to forecast the extent to which a firm's financial performance may deteriorate in the absence of the investment. But this analysis must be done. Remember the response that good economists are taught to offer to the question "How are you?" It is "Relative to what?" This is a crucial question. Answering it entails assessing the projected value of the innovation against a range of scenarios, the most realistic of which is often a deteriorating competitive and financial future.

The second set of problems with discounted cash flow calculations relates to errors of estimation. Future cash flows, especially those generated by disruptive investments, are difficult to predict. Numbers for the “out years” can be a complete shot in the dark. To cope with what cannot be known, analysts often project a year-by-year stream of numbers for three to five years and then “punt” by calculating a terminal value to account for everything thereafter. The logic, of course, is that the year-to-year estimates for distant years are so imprecise as to be no more accurate than a terminal value. To calculate a terminal value, analysts divide the cash to be generated in the last year for which they’ve done a specific estimate by $(r-g)$, the discount rate minus the projected growth rate in cash flows from that time on. They then discount that single number back to the present. In our experience, assumed terminal values often account for more than half of a project’s total NPV.

Terminal value numbers, based as they are on estimates for preceding years, tend to amplify errors contained in early-year assumptions. More worrisome still, terminal value doesn’t allow for the scenario testing that we described above—contrasting the result of this investment with the deterioration in performance that is the most likely result of doing nothing. And yet, because of market inertia, competitors’ development cycles, and the typical pace of disruption, it is often in the fifth year or beyond—the point at which terminal value factors in—that the decline of the enterprise in the do-nothing scenario begins to accelerate.

Arguably, a root cause of companies’ persistent underinvestment in the innovations required to sustain long-term success is the indiscriminate and oversimplified use of NPV as an analytical tool. Still, we understand the desire to quantify streams of cash that defy quantification and then to distill those streams into a single number that can be compared with other single numbers: It is an attempt to translate cacophonous articulations of the future into a language—numbers—that everyone can read and compare. We hope to show that numbers are not the only language into which the value of future investments can be translated—and that there are, in fact, other, better

languages that all members of a management team can understand.

Using Fixed and Sunk Costs Unwisely

The second widely misapplied paradigm of financial decision making relates to fixed and sunk costs. When evaluating a future course of action, the argument goes, managers should consider only the future or marginal cash outlays (either capital or expense) that are required for an innovation investment, subtract those outlays from the marginal cash that is likely to flow in, and discount the resulting net flow to the present. As with the paradigm of DCF and NPV, there is nothing wrong with the mathematics of this principle—as long as the capabilities required for yesterday’s success are adequate for tomorrow’s as well. When new capabilities are required for future success, however, this margining on fixed and sunk costs biases managers toward leveraging assets and capabilities that are likely to become obsolete.

For the purposes of this discussion we’ll define fixed costs as those whose level is independent of the level of output. Typical fixed costs include general and administrative costs: salaries and benefits, insurance, taxes, and so on. (Variable costs include things like raw materials, commissions, and pay to temporary workers.) Sunk costs are those portions of fixed costs that are irrevocably committed, typically including investments in buildings and capital equipment and R&D costs.

An example from the steel industry illustrates how fixed and sunk costs make it difficult for companies that can and should invest in new capabilities actually to do so. In the late 1960s, steel minimills such as Nucor and Chaparral began disrupting integrated steelmakers such as U.S. Steel (USX), picking off customers in the least-demanding product tiers of each market and then moving relentlessly upmarket, using their 20% cost advantage to capture first the rebar market and then the bar and rod, angle iron, and structural beam markets. By 1988 the minimills had driven the higher-cost integrated mills out of lower-tier products, and Nucor had begun building its first minimill to roll sheet steel in Crawfordsville, Indiana. Nucor estimated that for an investment

of \$260 million it could sell 800,000 tons of steel annually at a price of \$350 per ton. The cash cost to produce a ton of sheet steel in the Crawfordsville mill would be \$270. When the timing of cash flows was taken into account, the internal rate of return to Nucor on this investment was over 20%—substantially higher than Nucor’s weighted average cost of capital.

Incumbent USX recognized that the minimills constituted a grave threat. Using a new technology called continuous strip production, Nucor had now entered the sheet steel market, albeit with an inferior-quality product, at a significantly lower cost per ton. And Nucor’s track record of vigilant improvement meant that the quality of its sheet steel would improve with production experience. Despite this understanding, USX engineers did not even consider building a greenfield minimill like the one Nucor built. The reason? It seemed more profitable to leverage the old technology than to create the new. USX’s existing mills, which used traditional technology, had 30% excess capacity, and the marginal cash cost of producing an extra ton of steel by leveraging that excess capacity was less than \$50 per ton. When USX’s financial analysts contrasted the marginal cash flow of \$300 (\$350 revenue minus the \$50 marginal cost) with the average cash flow of \$80 per ton in a greenfield mill, investment in a new low-cost minimill made no sense. What’s more, USX’s plants were depreciated, so the marginal cash flow of \$300 on a low asset base looked very attractive.

And therein lies the rub. Nucor, the attacker, had no fixed or sunk cost investments on which to do a marginal cost calculation. To Nucor, the full cost was the marginal cost. Crawfordsville was the only choice on its menu—and because the IRR was attractive, the decision was simple. USX, in contrast, had two choices on its menu: It could build a greenfield plant like Nucor’s with a lower average cost per ton or it could utilize more fully its existing facility.

So what happened? Nucor has continued to improve its process, move upmarket, and gain market share with more efficient continuous strip production capabilities, while USX has relied on the capabilities that had been

built to succeed in the past. USX's strategy to maximize marginal profit, in other words, caused the company not to minimize long-term average costs. As a result, the company is locked into an escalating cycle of commitment to a failing strategy.

The attractiveness of any investment can be completely assessed only when it is compared with the attractiveness of the right alternatives on a menu of investments. When a company is looking at adding capacity that is identical to existing capacity, it makes sense to compare the marginal cost of leveraging the old with the full cost of creating the new. But when new technologies or capabilities are required for future competitiveness, margining on the past will send you down the wrong path. The argument that investment decisions should be based on marginal costs is always correct. But when creating new capabilities is the issue, the relevant marginal cost is actually the full cost of creating the new.

When we look at fixed and sunk costs from this perspective, several anomalies we have observed in our studies of innovation are explained. Executives in established companies bemoan how expensive it is to build new brands and develop new sales and distribution channels—so they seek instead to leverage their existing brands and structures. Entrants, in contrast, simply create new ones. The problem for the incumbent isn't that the challenger can outspend it; it's that the challenger is spared the dilemma of having to choose between full-cost and marginal-cost options. We have repeatedly observed leading, established companies misapply fixed-and-sunk-cost doctrine and rely on assets and capabilities that were forged in the past to succeed in the future. In doing so, they fail to make the same investments that entrants and attackers find to be profitable.

A related misused financial practice that biases managers against investment in needed future capabilities is that of using a capital asset's estimated *usable* lifetime as the period over which it should be depreciated. This causes problems when the asset's usable lifetime is longer than its *competitive* lifetime. Managers who depreciate assets according to the more gradual schedule of

usable life often face massive write-offs when those assets become competitively obsolete and need to be replaced with newer-technology assets. This was the situation confronting the integrated steelmakers. When building new capabilities entails writing off the old, incumbents face a hit to quarterly earnings that disruptive entrants to the industry do not. Knowing that the equity markets will punish them for a write-off, managers may stall in adopting new technology.

This may be part of the reason for the dramatic increase in private equity buyouts over the past decade and the recent surge of interest in technology-oriented industries. As disruptions continue to shorten the competitive lifetime of major investments made only three to five years ago, more companies find themselves needing to take asset write-downs or to significantly restructure their business models. These are wrenching changes that are often made more easily and comfortably outside the glare of the public markets.

What's the solution to this dilemma? Michael Mauboussin at Legg Mason Capital Management suggests it is to value *strategies*, not projects. When an attacker is gaining ground, executives at the incumbent companies need to do their investment analyses in the same way the attackers do—by focusing on the strategies that will ensure long-term competitiveness. This is the only way they can see the world as the attackers see it and the only way they can predict the consequences of not investing.

No manager would consciously decide to destroy a company by leveraging the competencies of the past while ignoring those required for the future. Yet this is precisely what many of them do. They do it because strategy and finance were taught as separate topics in business school. Their professors of financial modeling alluded to the importance of strategy, and their strategy professors occasionally referred to value creation, but little time was spent on a thoughtful integration of the two. This bifurcation persists in most companies, where responsibilities for strategy and finance reside in the realms of different vice presidents. Because a firm's actual strategy is defined by the

stream of projects in which it does or doesn't invest, finance and strategy need to be studied and practiced in an integrated way.

Focusing Myopically on Earnings per Share

A third financial paradigm that leads established companies to underinvest in innovation is the emphasis on earnings per share as the primary driver of share price and hence of shareholder value creation. Managers are under so much pressure, from various directions, to focus on short-term stock performance that they pay less attention to the company's long-term health than they might—to the point where they're reluctant to invest in innovations that don't pay off immediately.

Where's the pressure coming from? To answer that question, we need to look briefly at the principal-agent theory—the doctrine that the interests of shareholders (principals) aren't aligned with those of managers (agents). Without powerful financial incentives to focus the interests of principals and agents on maximizing shareholder value, the thinking goes, agents will pursue other agendas—and in the process, may neglect to pay enough attention to efficiencies or squander capital investments on pet projects—at the expense of profits that ought to accrue to the principals.

That conflict of incentives has been taught so aggressively that the compensation of most senior executives in publicly traded companies is now heavily weighted away from salaries and toward packages that reward improvements in share price. That in turn has led to an almost singular focus on earnings per share and EPS growth as *the* metric for corporate performance. While we all recognize the importance of other indicators such as market position, brands, intellectual capital, and long-term competitiveness, the bias is toward using a simple quantitative indicator that is easily compared period to period and across companies. And because EPS growth is an important driver of near-term share price improvement, managers are biased against investments that will compromise near-term EPS. Many decide instead to use the excess cash on the balance sheet to buy back the company's stock

under the guise of “returning money to shareholders.” But although contracting the number of shares pumps up earnings per share, sometimes quite dramatically, it does nothing to enhance the underlying value of the enterprise and may even damage it by restricting the flow of cash available for investment in potentially disruptive products and business models. Indeed, some have fingered share-price-based incentive compensation packages as a key driver of the share price manipulation that captured so many business headlines in the early 2000s.

The myopic focus on EPS is not just about the money. CEOs and corporate managers who are more concerned with their reputations than with amassing more wealth also focus on stock price and short-term performance measures such as quarterly earnings. They know that, to a large extent, others’ perception of their success is tied up in those numbers, leading to a self-reinforcing cycle of obsession. This behavior cycle is amplified when there is an “earnings surprise.” Equity prices over the short term respond positively to upside earnings surprises (and negatively to downside surprises), so investors have no incentive to look at rational measures of long-term performance. To the contrary, they are rewarded for going with the market’s short-term model.

The active leveraged buyout market has further reinforced the focus on EPS. Companies that are viewed as having failed to maximize value, as evidenced by a lagging share price, are vulnerable to overtures from outsiders, including corporate raiders or hedge funds that seek to increase their near-term stock price by putting a company into play or by replacing the CEO. Thus, while the past two decades have witnessed a dramatic increase in the proportion of CEO compensation tied to stock price—and a breathtaking increase in CEO compensation overall—they have witnessed a concomitant decrease in the average tenure of CEOs. Whether you believe that CEOs are most motivated by the carrot (major increases in compensation and wealth) or the stick (the threat of the company being sold or of being replaced), you should not be surprised to find so many CEOs focused on current earnings per share as the best predictor of stock price, sometimes to the exclusion of

anything else. One study even showed that senior executives were routinely willing to sacrifice long-term shareholder value to meet earnings expectations or to smooth reported earnings.

We suspect that the principal-agent theory is misapplied. Most traditional principals—by which we mean shareholders—don’t themselves have incentives to watch out for the long-term health of a company. Over 90% of the shares of publicly traded companies in the United States are held in the portfolios of mutual funds, pension funds, and hedge funds. The average holding period for stocks in these portfolios is less than 10 months—leading us to prefer the term “share owner” as a more accurate description than “shareholder.” As for agents, we believe that most executives work tirelessly, throwing their hearts and minds into their jobs, not because they are paid an incentive to do so but because they love what they do. Tying executive compensation to stock prices, therefore, does not affect the intensity or energy or intelligence with which executives perform. But it does direct their efforts toward activities whose impact can be felt within the holding horizon of the typical share owner and within the measurement horizon of the incentive—both of which are less than one year.

Ironically, most so-called principals today are themselves agents—agents of other people’s mutual funds, investment portfolios, endowments, and retirement programs. For these agents, the enterprise in which they are investing has no inherent interest or value beyond providing a platform for improving the short-term financial metric by which their fund’s performance is measured and their own compensation is determined. And, in a final grand but sad irony, the real principals (the people who put their money into mutual funds and pension plans, sometimes through yet another layer of agents) are frequently the very individuals whose long-term employment is jeopardized when the focus on short-term EPS acts to restrict investments in innovative growth opportunities. We suggest that the principal-agent theory is obsolete in this context. What we really have is an *agent-agent* problem, where the desires and goals of the agent for the share owners compete with the desires and goals

of the agents running the company. The incentives are still misaligned, but managers should not capitulate on the basis of an obsolete paradigm.

Processes That Support (or Sabotage) Innovation

As we have seen, managers in established corporations use analytical methods that make innovation investments extremely difficult to justify. As it happens, the most common system for green-lighting investment projects only reinforces the flaws inherent in the tools and dogmas discussed earlier.

Stage-gate innovation

Most established companies start by considering a broad range of possible innovations; they winnow out the less viable ideas, step by step, until only the most promising ones remain. Most such processes include three stages: feasibility, development, and launch. The stages are separated by stage gates: review meetings at which project teams report to senior managers what they've accomplished. On the basis of this progress and the project's potential, the gatekeepers approve the passage of the initiative into the next phase, return it to the previous stage for more work, or kill it.

Many marketers and engineers regard the stage-gate development process with disdain. Why? Because the key decision criteria at each gate are the size of projected revenues and profits from the product and the associated risks. Revenues from products that incrementally improve upon those the company is currently selling can be credibly quantified. But proposals to create growth by exploiting potentially disruptive technologies, products, or business models can't be bolstered by hard numbers. Their markets are initially small, and substantial revenues generally don't materialize for several years. When these projects are pitted against incremental sustaining innovations in the battle for funding, the incremental ones sail through while the seemingly riskier ones get delayed or die.

The process itself has two serious drawbacks. First, project teams generally know how good the projections (such as NPV) need to look in order to win funding, and it takes only nanoseconds to tweak an assumption and run

another full scenario to get a faltering project over the hurdle rate. If, as is often the case, there are eight to 10 assumptions underpinning the financial model, changing only a few of them by a mere 2% or 3% each may do the trick. It is then difficult for the senior managers who sit as gatekeepers to even discern which are the salient assumptions, let alone judge whether they are realistic.

The second drawback is that the stage-gate system assumes that the proposed strategy is the right strategy. Once an innovation has been approved, developed, and launched, all that remains is skillful execution. If, after launch, a product falls seriously short of the projections (and 75% of them do), it is canceled. The problem is that, except in the case of incremental innovations, the right strategy—especially which job the customer wants done—cannot be completely known in advance. It must emerge and then be refined.

The stage-gate system is not suited to the task of assessing innovations whose purpose is to build new growth businesses, but most companies continue to follow it simply because they see no alternative.

Discovery-driven planning

Happily, though, there are alternative systems specifically designed to support intelligent investments in future growth. One such process, which Rita Gunther McGrath and Ian MacMillan call *discovery-driven planning*, has the potential to greatly improve the success rate. Discovery-driven planning essentially reverses the sequence of some of the steps in the stage-gate process. Its logic is elegantly simple. If the project teams all know how good the numbers need to look in order to win funding, why go through the charade of making and revising assumptions in order to fabricate an acceptable set of numbers? Why not just put the minimally acceptable revenue, income, and cash flow statement as the standard first page of the gate documents? The second page can then raise the critical issues: “Okay. So we all know this is how good the numbers need to look. What set of assumptions must prove true in order for these numbers to materialize?” The project team creates from that analysis an assumptions checklist—a list of things that need to prove true

for the project to succeed. The items on the checklist are rank-ordered, with the deal killers and the assumptions that can be tested with little expense toward the top. McGrath and MacMillan call this a “reverse income statement.”

When a project enters a new stage, the assumptions checklist is used as the basis of the project plan for that stage. This is not a plan to execute, however. It is a plan to *learn*—to test as quickly and at as low a cost as possible whether the assumptions upon which success is predicated are actually valid. If a critical assumption proves not to be valid, the project team must revise its strategy until the assumptions upon which it is built are all plausible. If no set of plausible assumptions will support the case for success, the project is killed.

Traditional stage-gate planning obfuscates the assumptions and shines the light on the financial projections. But there is no need to focus the analytical spotlight on the numbers, because the desirability of attractive numbers has never been the question. Discovery-driven planning shines a spotlight on the place where senior management needs illumination—the assumptions that constitute the key uncertainties. More often than not, failure in innovation is rooted in not having asked an important question, rather than in having arrived at an incorrect answer.

Today, processes like discovery-driven planning are more commonly used in entrepreneurial settings than in the large corporations that desperately need them. We hope that by recounting the strengths of one such system we’ll persuade established corporations to reassess how they make decisions about investment projects.

We keep rediscovering that the root reason for established companies’ failure to innovate is that managers don’t have good tools to help them understand markets, build brands, find customers, select employees, organize teams, and develop strategy. Some of the tools typically used for financial analysis, and decision making about investments, distort the value, importance, and

likelihood of success of investments in innovation. There's a better way for management teams to grow their companies. But they will need the courage to challenge some of the paradigms of financial analysis and the willingness to develop alternative methodologies.

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Leading Change

Why Transformation Efforts Fail. *by John P. Kotter*

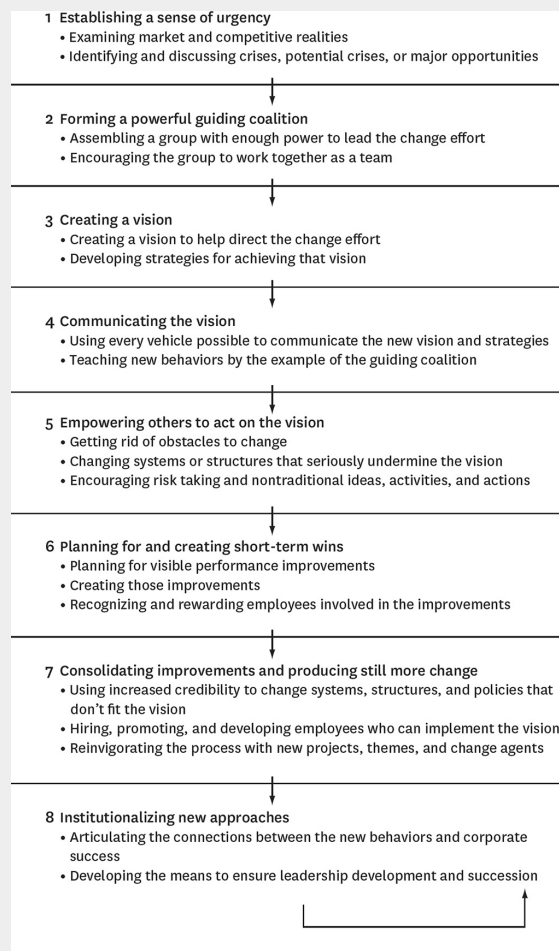
OVER THE PAST DECADE, I have watched more than 100 companies try to remake themselves into significantly better competitors. They have included large organizations (Ford) and small ones (Landmark Communications), companies based in the United States (General Motors) and elsewhere (British Airways), corporations that were on their knees (Eastern Airlines), and companies that were earning good money (Bristol-Myers Squibb). These efforts have gone under many banners: total quality management, reengineering, rightsizing, restructuring, cultural change, and turnaround. But, in almost every case, the basic goal has been the same: to make fundamental changes in how business is conducted in order to help cope with a new, more challenging market environment.

A few of these corporate change efforts have been very successful. A few have been utter failures. Most fall somewhere in between, with a distinct tilt toward the lower end of the scale. The lessons that can be drawn are interesting and will probably be relevant to even more organizations in the increasingly competitive business environment of the coming decade.

The most general lesson to be learned from the more successful cases is that the change process goes through a series of phases that, in total, usually require a considerable length of time. Skipping steps creates only the illusion of speed and never produces a satisfying result. A second very general lesson is that critical mistakes in any of the phases can have a devastating impact, slowing momentum and negating hard-won gains. Perhaps because we have

relatively little experience in renewing organizations, even very capable people often make at least one big error.

Eight steps to transforming your organization



Idea in Brief

Most major change initiatives—whether intended to boost quality, improve culture, or reverse a corporate death spiral—generate only lukewarm results. Many fail miserably.

Why? Kotter maintains that too many managers don't realize transformation is a **process**, not an event. It advances through stages that build on each other. And it takes years. Pressured to accelerate the process, managers skip stages. But shortcuts never work.

Equally troubling, even highly capable managers make

critical mistakes—such as declaring victory too soon. Result? Loss of momentum, reversal of hard-won gains, and devastation of the entire transformation effort.

By understanding the stages of change—and the pitfalls unique to each stage—you boost your chances of a successful transformation. The payoff? Your organization flexes with tectonic shifts in competitors, markets, and technologies—leaving rivals far behind.

Error 1: Not Establishing a Great Enough Sense of Urgency

Most successful change efforts begin when some individuals or some groups start to look hard at a company's competitive situation, market position, technological trends, and financial performance. They focus on the potential revenue drop when an important patent expires, the five-year trend in declining margins in a core business, or an emerging market that everyone seems to be ignoring. They then find ways to communicate this information broadly and dramatically, especially with respect to crises, potential crises, or great opportunities that are very timely. This first step is essential because just getting a transformation program started requires the aggressive cooperation of many individuals. Without motivation, people won't help, and the effort goes nowhere.

Compared with other steps in the change process, phase one can sound easy. It is not. Well over 50% of the companies I have watched fail in this first phase. What are the reasons for that failure? Sometimes executives underestimate how hard it can be to drive people out of their comfort zones. Sometimes they grossly overestimate how successful they have already been in increasing urgency. Sometimes they lack patience: "Enough with the preliminaries; let's get on with it." In many cases, executives become paralyzed by the downside possibilities. They worry that employees with seniority will become defensive, that morale will drop, that events will spin out of control, that short-term business results will be jeopardized, that the stock will sink, and that they will be blamed for creating a crisis.

Idea in Practice

To give your transformation effort the best chance of succeeding, take the right actions at each stage—and avoid common pitfalls

Stage	Actions needed	Pitfalls
Establish a sense of urgency	- Examine market and competitive realities for potential crises and untapped opportunities. - Convince at least 75% of your managers that the status quo is more dangerous than the unknown.	- Underestimating the difficulty of driving people from their comfort zones - Becoming paralyzed by risks
Form a powerful guiding coalition	- Assemble a group with shared commitment and enough power to lead the change effort. - Encourage them to work as a team outside the normal hierarchy.	- No prior experience in teamwork at the top - Relegating team leadership to an HR, quality, or strategic-planning executive rather than a senior line manager
Create a vision	- Create a vision to direct the change effort. - Develop strategies for realizing that vision.	Presenting a vision that's too complicated or vague to be communicated in five minutes
Communicate the vision	- Use every vehicle possible to communicate the new vision and strategies for achieving it. - Teach new behaviors by the example of the guiding coalition.	- Undercommunicating the vision - Behaving in ways antithetical to the vision

Stage	Actions needed	Pitfalls
Empower others to act on the vision	- Remove or alter systems or structures undermining the vision. - Encourage risk taking and nontraditional ideas, activities, and actions.	Failing to remove powerful individuals who resist the change effort
Plan for and create short-term wins	- Define and engineer visible performance improvements. - Recognize and reward employees contributing to those improvements.	- Leaving short-term successes up to chance - Failing to score successes early enough (12–24 months into the change effort)
Consolidate improvements and produce more change	- Use increased credibility from early wins to change systems, structures, and policies undermining the vision. - Hire, promote, and develop employees who can implement the vision. - Reinvigorate the change process with new projects and change agents.	- Declaring victory too soon—with the first performance improvement - Allowing resistors to convince “troops” that the war has been won
Institutionalize new approaches	- Articulate connections between new behaviors and corporate success. - Create leadership development and succession plans consistent with the new approach.	- Not creating new social norms and shared values consistent with changes - Promoting people into leadership positions who don't personify the new approach

A paralyzed senior management often comes from having too many managers and not enough leaders. Management's mandate is to minimize risk and to keep the current system operating. Change, by definition, requires creating a new system, which in turn always demands leadership. Phase one in a renewal process typically goes nowhere until enough real leaders are promoted or hired into senior-level jobs.

Transformations often begin, and begin well, when an organization has a new head who is a good leader and who sees the need for a major change. If the renewal target is the entire company, the CEO is key. If change is needed in a division, the division general manager is key. When these individuals are not new leaders, great leaders, or change champions, phase one can be a huge challenge.

Bad business results are both a blessing and a curse in the first phase. On the positive side, losing money does catch people's attention. But it also gives less maneuvering room. With good business results, the opposite is true: Convincing people of the need for change is much harder, but you have more resources to help make changes.

But whether the starting point is good performance or bad, in the more successful cases I have witnessed, an individual or a group always facilitates a frank discussion of potentially unpleasant facts about new competition, shrinking margins, decreasing market share, flat earnings, a lack of revenue growth, or other relevant indices of a declining competitive position. Because there seems to be an almost universal human tendency to shoot the bearer of bad news, especially if the head of the organization is not a change champion, executives in these companies often rely on outsiders to bring unwanted information. Wall Street analysts, customers, and consultants can all be helpful in this regard. The purpose of all this activity, in the words of one former CEO of a large European company, is "to make the status quo seem more dangerous than launching into the unknown."

In a few of the most successful cases, a group has manufactured a crisis. One CEO deliberately engineered the largest accounting loss in the company's

history, creating huge pressures from Wall Street in the process. One division president commissioned first-ever customer satisfaction surveys, knowing full well that the results would be terrible. He then made these findings public. On the surface, such moves can look unduly risky. But there is also risk in playing it too safe: When the urgency rate is not pumped up enough, the transformation process cannot succeed, and the long-term future of the organization is put in jeopardy.

When is the urgency rate high enough? From what I have seen, the answer is when about 75% of a company's management is honestly convinced that business as usual is totally unacceptable. Anything less can produce very serious problems later on in the process.

Error 2: Not Creating a Powerful Enough Guiding Coalition

Major renewal programs often start with just one or two people. In cases of successful transformation efforts, the leadership coalition grows and grows over time. But whenever some minimum mass is not achieved early in the effort, nothing much worthwhile happens.

It is often said that major change is impossible unless the head of the organization is an active supporter. What I am talking about goes far beyond that. In successful transformations, the chairman or president or division general manager, plus another five or 15 or 50 people, come together and develop a shared commitment to excellent performance through renewal. In my experience, this group never includes all of the company's most senior executives because some people just won't buy in, at least not at first. But in the most successful cases, the coalition is always pretty powerful—in terms of titles, information and expertise, reputations, and relationships.

In both small and large organizations, a successful guiding team may consist of only three to five people during the first year of a renewal effort. But in big companies, the coalition needs to grow to the 20 to 50 range before much progress can be made in phase three and beyond. Senior managers always form the core of the group. But sometimes you find board members, a

representative from a key customer, or even a powerful union leader.

Because the guiding coalition includes members who are not part of senior management, it tends to operate outside of the normal hierarchy by definition. This can be awkward, but it is clearly necessary. If the existing hierarchy were working well, there would be no need for a major transformation. But since the current system is not working, reform generally demands activity outside of formal boundaries, expectations, and protocol.

A high sense of urgency within the managerial ranks helps enormously in putting a guiding coalition together. But more is usually required. Someone needs to get these people together, help them develop a shared assessment of their company's problems and opportunities, and create a minimum level of trust and communication. Off-site retreats, for two or three days, are one popular vehicle for accomplishing this task. I have seen many groups of five to 35 executives attend a series of these retreats over a period of months.

Companies that fail in phase two usually underestimate the difficulties of producing change and thus the importance of a powerful guiding coalition. Sometimes they have no history of teamwork at the top and therefore undervalue the importance of this type of coalition. Sometimes they expect the team to be led by a staff executive from human resources, quality, or strategic planning instead of a key line manager. No matter how capable or dedicated the staff head, groups without strong line leadership never achieve the power that is required.

Efforts that don't have a powerful enough guiding coalition can make apparent progress for a while. But, sooner or later, the opposition gathers itself together and stops the change.

Error 3: Lacking a Vision

In every successful transformation effort that I have seen, the guiding coalition develops a picture of the future that is relatively easy to communicate and appeals to customers, stockholders, and employees. A vision always goes beyond the numbers that are typically found in five-year plans. A vision says

something that helps clarify the direction in which an organization needs to move. Sometimes the first draft comes mostly from a single individual. It is usually a bit blurry, at least initially. But after the coalition works at it for three or five or even 12 months, something much better emerges through their tough analytical thinking and a little dreaming. Eventually, a strategy for achieving that vision is also developed.

In one midsize European company, the first pass at a vision contained two-thirds of the basic ideas that were in the final product. The concept of global reach was in the initial version from the beginning. So was the idea of becoming preeminent in certain businesses. But one central idea in the final version—getting out of low value-added activities—came only after a series of discussions over a period of several months.

Without a sensible vision, a transformation effort can easily dissolve into a list of confusing and incompatible projects that can take the organization in the wrong direction or nowhere at all. Without a sound vision, the reengineering project in the accounting department, the new 360-degree performance appraisal from the human resources department, the plant's quality program, the cultural change project in the sales force will not add up in a meaningful way.

In failed transformations, you often find plenty of plans, directives, and programs but no vision. In one case, a company gave out four-inch-thick notebooks describing its change effort. In mind-numbing detail, the books spelled out procedures, goals, methods, and deadlines. But nowhere was there a clear and compelling statement of where all this was leading. Not surprisingly, most of the employees with whom I talked were either confused or alienated. The big, thick books did not rally them together or inspire change. In fact, they probably had just the opposite effect.

In a few of the less successful cases that I have seen, management had a sense of direction, but it was too complicated or blurry to be useful. Recently, I asked an executive in a midsize company to describe his vision and received in return a barely comprehensible 30-minute lecture. Buried in his answer were

the basic elements of a sound vision. But they were buried—deeply.

A useful rule of thumb: If you can't communicate the vision to someone in five minutes or less and get a reaction that signifies both understanding and interest, you are not yet done with this phase of the transformation process.

Error 4: Undercommunicating the Vision by a Factor of Ten

I've seen three patterns with respect to communication, all very common. In the first, a group actually does develop a pretty good transformation vision and then proceeds to communicate it by holding a single meeting or sending out a single communication. Having used about 0.0001% of the yearly intracompany communication, the group is startled when few people seem to understand the new approach. In the second pattern, the head of the organization spends a considerable amount of time making speeches to employee groups, but most people still don't get it (not surprising, since vision captures only 0.0005% of the total yearly communication). In the third pattern, much more effort goes into newsletters and speeches, but some very visible senior executives still behave in ways that are antithetical to the vision. The net result is that cynicism among the troops goes up, while belief in the communication goes down.

Transformation is impossible unless hundreds or thousands of people are willing to help, often to the point of making short-term sacrifices. Employees will not make sacrifices, even if they are unhappy with the status quo, unless they believe that useful change is possible. Without credible communication, and a lot of it, the hearts and minds of the troops are never captured.

This fourth phase is particularly challenging if the short-term sacrifices include job losses. Gaining understanding and support is tough when downsizing is a part of the vision. For this reason, successful visions usually include new growth possibilities and the commitment to treat fairly anyone who is laid off.

Executives who communicate well incorporate messages into their hour-by-hour activities. In a routine discussion about a business problem, they talk

about how proposed solutions fit (or don't fit) into the bigger picture. In a regular performance appraisal, they talk about how the employee's behavior helps or undermines the vision. In a review of a division's quarterly performance, they talk not only about the numbers but also about how the division's executives are contributing to the transformation. In a routine Q&A with employees at a company facility, they tie their answers back to renewal goals.

In more successful transformation efforts, executives use all existing communication channels to broadcast the vision. They turn boring, unread company newsletters into lively articles about the vision. They take ritualistic, tedious quarterly management meetings and turn them into exciting discussions of the transformation. They throw out much of the company's generic management education and replace it with courses that focus on business problems and the new vision. The guiding principle is simple: Use every possible channel, especially those that are being wasted on nonessential information.

Perhaps even more important, most of the executives I have known in successful cases of major change learn to "walk the talk." They consciously attempt to become a living symbol of the new corporate culture. This is often not easy. A 60-year-old plant manager who has spent precious little time over 40 years thinking about customers will not suddenly behave in a customer-oriented way. But I have witnessed just such a person change, and change a great deal. In that case, a high level of urgency helped. The fact that the man was a part of the guiding coalition and the vision-creation team also helped. So did all the communication, which kept reminding him of the desired behavior, and all the feedback from his peers and subordinates, which helped him see when he was not engaging in that behavior.

Communication comes in both words and deeds, and the latter are often the most powerful form. Nothing undermines change more than behavior by important individuals that is inconsistent with their words.

Error 5: Not Removing Obstacles to the New Vision

Successful transformations begin to involve large numbers of people as the process progresses. Employees are emboldened to try new approaches, to develop new ideas, and to provide leadership. The only constraint is that the actions fit within the broad parameters of the overall vision. The more people involved, the better the outcome.

To some degree, a guiding coalition empowers others to take action simply by successfully communicating the new direction. But communication is never sufficient by itself. Renewal also requires the removal of obstacles. Too often, an employee understands the new vision and wants to help make it happen, but an elephant appears to be blocking the path. In some cases, the elephant is in the person's head, and the challenge is to convince the individual that no external obstacle exists. But in most cases, the blockers are very real.

Sometimes the obstacle is the organizational structure: Narrow job categories can seriously undermine efforts to increase productivity or make it very difficult even to think about customers. Sometimes compensation or performance-appraisal systems make people choose between the new vision and their own self-interest. Perhaps worst of all are bosses who refuse to change and who make demands that are inconsistent with the overall effort.

One company began its transformation process with much publicity and actually made good progress through the fourth phase. Then the change effort ground to a halt because the officer in charge of the company's largest division was allowed to undermine most of the new initiatives. He paid lip service to the process but did not change his behavior or encourage his managers to change. He did not reward the unconventional ideas called for in the vision. He allowed human resource systems to remain intact even when they were clearly inconsistent with the new ideals. I think the officer's motives were complex. To some degree, he did not believe the company needed major change. To some degree, he felt personally threatened by all the change. To some degree, he was afraid that he could not produce both change and the expected operating profit. But despite the fact that they backed the renewal effort, the other officers did virtually nothing to stop the one blocker. Again,

the reasons were complex. The company had no history of confronting problems like this. Some people were afraid of the officer. The CEO was concerned that he might lose a talented executive. The net result was disastrous. Lower-level managers concluded that senior management had lied to them about their commitment to renewal, cynicism grew, and the whole effort collapsed.

In the first half of a transformation, no organization has the momentum, power, or time to get rid of all obstacles. But the big ones must be confronted and removed. If the blocker is a person, it is important that he or she be treated fairly and in a way that is consistent with the new vision. Action is essential, both to empower others and to maintain the credibility of the change effort as a whole.

Error 6: Not Systematically Planning for, and Creating, Short-Term Wins

Real transformation takes time, and a renewal effort risks losing momentum if there are no short-term goals to meet and celebrate. Most people won't go on the long march unless they see compelling evidence in 12 to 24 months that the journey is producing expected results. Without short-term wins, too many people give up or actively join the ranks of those people who have been resisting change.

One to two years into a successful transformation effort, you find quality beginning to go up on certain indices or the decline in net income stopping. You find some successful new product introductions or an upward shift in market share. You find an impressive productivity improvement or a statistically higher customer satisfaction rating. But whatever the case, the win is unambiguous. The result is not just a judgment call that can be discounted by those opposing change.

Creating short-term wins is different from hoping for short-term wins. The latter is passive, the former active. In a successful transformation, managers actively look for ways to obtain clear performance improvements, establish

goals in the yearly planning system, achieve the objectives, and reward the people involved with recognition, promotions, and even money. For example, the guiding coalition at a U.S. manufacturing company produced a highly visible and successful new product introduction about 20 months after the start of its renewal effort. The new product was selected about six months into the effort because it met multiple criteria: It could be designed and launched in a relatively short period, it could be handled by a small team of people who were devoted to the new vision, it had upside potential, and the new product-development team could operate outside the established departmental structure without practical problems. Little was left to chance, and the win boosted the credibility of the renewal process.

Managers often complain about being forced to produce short-term wins, but I've found that pressure can be a useful element in a change effort. When it becomes clear to people that major change will take a long time, urgency levels can drop. Commitments to produce short-term wins help keep the urgency level up and force detailed analytical thinking that can clarify or revise visions.

Error 7: Declaring Victory Too Soon

After a few years of hard work, managers may be tempted to declare victory with the first clear performance improvement. While celebrating a win is fine, declaring the war won can be catastrophic. Until changes sink deeply into a company's culture, a process that can take five to ten years, new approaches are fragile and subject to regression.

In the recent past, I have watched a dozen change efforts operate under the reengineering theme. In all but two cases, victory was declared and the expensive consultants were paid and thanked when the first major project was completed after two to three years. Within two more years, the useful changes that had been introduced slowly disappeared. In two of the ten cases, it's hard to find any trace of the reengineering work today.

Over the past 20 years, I've seen the same sort of thing happen to huge

quality projects, organizational development efforts, and more. Typically, the problems start early in the process: The urgency level is not intense enough, the guiding coalition is not powerful enough, and the vision is not clear enough. But it is the premature victory celebration that kills momentum. And then the powerful forces associated with tradition take over.

Ironically, it is often a combination of change initiators and change resisters that creates the premature victory celebration. In their enthusiasm over a clear sign of progress, the initiators go overboard. They are then joined by resisters, who are quick to spot any opportunity to stop change. After the celebration is over, the resisters point to the victory as a sign that the war has been won and the troops should be sent home. Weary troops allow themselves to be convinced that they won. Once home, the foot soldiers are reluctant to climb back on the ships. Soon thereafter, change comes to a halt, and tradition creeps back in.

Instead of declaring victory, leaders of successful efforts use the credibility afforded by short-term wins to tackle even bigger problems. They go after systems and structures that are not consistent with the transformation vision and have not been confronted before. They pay great attention to who is promoted, who is hired, and how people are developed. They include new reengineering projects that are even bigger in scope than the initial ones. They understand that renewal efforts take not months but years. In fact, in one of the most successful transformations that I have ever seen, we quantified the amount of change that occurred each year over a seven-year period. On a scale of one (low) to ten (high), year one received a two, year two a four, year three a three, year four a seven, year five an eight, year six a four, and year seven a two. The peak came in year five, fully 36 months after the first set of visible wins.

Error 8: Not Anchoring Changes in the Corporation's Culture

In the final analysis, change sticks when it becomes “the way we do things around here,” when it seeps into the bloodstream of the corporate body. Until

new behaviors are rooted in social norms and shared values, they are subject to degradation as soon as the pressure for change is removed.

Two factors are particularly important in institutionalizing change in corporate culture. The first is a conscious attempt to show people how the new approaches, behaviors, and attitudes have helped improve performance. When people are left on their own to make the connections, they sometimes create very inaccurate links. For example, because results improved while charismatic Harry was boss, the troops link his mostly idiosyncratic style with those results instead of seeing how their own improved customer service and productivity were instrumental. Helping people see the right connections requires communication. Indeed, one company was relentless, and it paid off enormously. Time was spent at every major management meeting to discuss why performance was increasing. The company newspaper ran article after article showing how changes had boosted earnings.

The second factor is taking sufficient time to make sure that the next generation of top management really does personify the new approach. If the requirements for promotion don't change, renewal rarely lasts. One bad succession decision at the top of an organization can undermine a decade of hard work. Poor succession decisions are possible when boards of directors are not an integral part of the renewal effort. In at least three instances I have seen, the champion for change was the retiring executive, and although his successor was not a resistor, he was not a change champion. Because the boards did not understand the transformations in any detail, they could not see that their choices were not good fits. The retiring executive in one case tried unsuccessfully to talk his board into a less seasoned candidate who better personified the transformation. In the other two cases, the CEOs did not resist the boards' choices, because they felt the transformation could not be undone by their successors. They were wrong. Within two years, signs of renewal began to disappear at both companies.

There are still more mistakes that people make, but these eight are the big ones. I realize that in a short article everything is made to sound a bit too simplistic. In reality, even successful change efforts are messy and full of surprises. But just as a relatively simple vision is needed to guide people through a major change, so a vision of the change process can reduce the error rate. And fewer errors can spell the difference between success and failure.

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Change Through Persuasion

by David A. Garvin and Michael A. Roberto

FACED WITH THE NEED for massive change, most managers respond predictably. They revamp the organization's strategy, then round up the usual set of suspects—people, pay, and processes—shifting around staff, realigning incentives, and rooting out inefficiencies. They then wait patiently for performance to improve, only to be bitterly disappointed. For some reason, the right things still don't happen.

Why is change so hard? First of all, most people are reluctant to alter their habits. What worked in the past is good enough; in the absence of a dire threat, employees will keep doing what they've always done. And when an organization has had a succession of leaders, resistance to change is even stronger. A legacy of disappointment and distrust creates an environment in which employees automatically condemn the next turnaround champion to failure, assuming that he or she is "just like all the others." Calls for sacrifice and self-discipline are met with cynicism, skepticism, and knee-jerk resistance.

Our research into organizational transformation has involved settings as diverse as multinational corporations, government agencies, nonprofits, and high-performing teams like mountaineering expeditions and firefighting crews. We've found that for change to stick, leaders must design and run an effective persuasion campaign—one that begins weeks or months before the actual turnaround plan is set in concrete. Managers must perform significant work up front to ensure that employees will actually listen to tough messages, question old assumptions, and consider new ways of working. This means taking a

series of deliberate but subtle steps to recast employees' prevailing views and create a new context for action. Such a shaping process must be actively managed during the first few months of a turnaround, when uncertainty is high and setbacks are inevitable. Otherwise, there is little hope for sustained improvement.

Like a political campaign, a persuasion campaign is largely one of differentiation from the past. To the typical change-averse employee, all restructuring plans look alike. The trick for turnaround leaders is to show employees precisely how their plans differ from their predecessors'. They must convince people that the organization is truly on its deathbed—or, at the very least, that radical changes are required if it is to survive and thrive. (This is a particularly difficult challenge when years of persistent problems have been accompanied by few changes in the status quo.) Turnaround leaders must also gain trust by demonstrating through word and deed that they are the right leaders for the job and must convince employees that theirs is the correct plan for moving forward.

Accomplishing all this calls for a four-part communications strategy. Prior to announcing a policy or issuing a set of instructions, leaders need to set the stage for acceptance. At the time of delivery, they must create the frame through which information and messages are interpreted. As time passes, they must manage the mood so that employees' emotional states support implementation and follow-through. And at critical intervals, they must provide reinforcement to ensure that the desired changes take hold without backsliding.

In this article, we describe this process in more detail, drawing on the example of the turnaround of Beth Israel Deaconess Medical Center (BIDMC) in Boston. Paul Levy, who became CEO in early 2002, managed to bring the failing hospital back from the brink of ruin. We had ringside seats during the first six months of the turnaround. Levy agreed to hold videotaped interviews with us every two to four weeks during that period as we prepared a case study describing his efforts. He also gave us access to his daily calendar, as well as to

assorted e-mail correspondence and internal memorandums and reports. From this wealth of data, we were able to track the change process as it unfolded, without the usual biases and distortions that come from 20/20 hindsight. The story of how Levy tilled the soil for change provides lessons for any CEO in a turnaround situation.

Idea in Brief

When a company is teetering on the brink of ruin, most turnaround leaders revamp strategy, shift around staff, and root out inefficiencies. Then they wait patiently for the payoff—only to suffer bitter disappointment as the expected improvements fail to materialize.

How to make change stick? Conduct a four-stage persuasion campaign: 1) Prepare your organization's cultural "soil" months before setting your turnaround plan in concrete—by convincing employees that your company can survive only through radical change. 2) Present your plan—explaining in detail its purpose and expected impact. 3) After executing the plan, manage employees' emotions by acknowledging the pain of change—while keeping people focused on the hard work ahead. 4) As the turnaround starts generating results, reinforce desired behavioral changes to prevent backsliding.

Using this four-part process, the CEO of Beth Israel Deaconess Medical Center (BIDMC) brought the failing hospital back from near-certain death. Hemorrhaging \$58 million in losses in 2001, BIDMC reported a \$37.4 million net gain from operations in 2004. Revenues rose, while costs shrank. Morale soared—as reflected by a drop in nursing turnover from between 15% and 16% in 2002 to just 3% by 2004.

Setting the Stage

Paul Levy was an unlikely candidate to run BIDMC. He was not a doctor and had never managed a hospital, though he had previously served as the

executive dean for administration at Harvard Medical School. His claim to fame was his role as the architect of the Boston Harbor Cleanup, a multibillion-dollar pollution-control project that he had led several years earlier. (Based on this experience, Levy identified a common yet insidiously destructive organizational dynamic that causes dedicated teams to operate in counterproductive ways, which he described in “The Nut Island Effect: When Good Teams Go Wrong,” March 2001.) Six years after completing the Boston Harbor project, Levy approached the BIDMC board and applied for the job of cleaning up the troubled hospital.

Idea in Practice

Use these steps to persuade your workforce to embrace and execute needed change:

Set the Stage for Acceptance

Develop a bold message that provides compelling reasons to do things differently.

Example: On his first day as Beth Israel Deaconess Medical Center’s CEO, Paul Levy publicized the possibility that BIDMC would be sold to a for-profit institution. He delivered an all-hands-on-deck e-mail to the staff citing the hospital’s achievements while confirming that the threat of sale was real. The e-mail also signaled actions he would take, including layoffs, and described his open management style (hallway chats, lunches with staff). In addition, Levy circulated a third-party, warts-and-all report on BIDMC’s plight on the hospital’s intranet—so staff could no longer claim ignorance.

Frame the Turnaround Plan

Present your turnaround plan in a way that helps people interpret your ideas correctly.

Example: Levy augmented his several-hundred-page plan with an e-mail that evoked BIDMC’s mission and uncompromising values and reaffirmed the importance of remaining an academic medical center. He provided further details about the plan,

emphasizing needed tough measures based on the third-party report. He also explained past plans' deficiencies, contrasting earlier efforts' top-down methods with his plan's collaborative approach. Employees thus felt the plan belonged to them.

Manage the Mood

Strike the right notes of optimism and realism to make employees feel cared for while also keeping them focused on your plan's execution.

Example: Levy acknowledged the pain of layoffs, then urged employees to look forward to "[setting] an example for what a unique academic medical center like ours means for this region." He also issued progress updates while reminding people that BIDMC still needed to control costs. As financial performance picked up, he lavishly praised the staff.

Prevent Backsliding

Provide opportunities for employees to practice desired behaviors repeatedly. If necessary, publicly criticize disruptive, divisive behaviors.

Example: Levy had established meeting rules requiring staff to state their objections to decisions and to "disagree without being disagreeable." When one medical chief e-mailed Levy complaining about a decision made during a meeting—and copied the other chiefs and board chairman—Levy took action. He responded with an e-mail to the same audience, publicly reprimanding the chief for his tone, lack of civility, and failure to follow the rule about speaking up during meetings.

Despite his lack of hospital management experience, Levy was appealing to the board. The Boston Harbor Cleanup was a difficult, highly visible change effort that required deft political and managerial skills. Levy had stood firm in the face of tough negotiations and often-heated public resistance and had instilled accountability in city and state agencies. He was also a known quantity to the board, having served on a BIDMC steering committee formed by the

board chairman in 2001.

Levy saw the prospective job as one of public service. BIDMC was the product of a difficult 1996 merger between two hospitals—Beth Israel and Deaconess—each of which had distinguished reputations, several best-in-the-world departments and specializations, and deeply devoted staffs. The problems began after the merger. A misguided focus on clinical practice rather than backroom integration, a failure to cut costs, and the repeated inability to execute plans and adapt to changing conditions in the health care marketplace all contributed to BIDMC's dismal performance.

By the time the board settled on Levy, affairs at BIDMC had reached the nadir. The hospital was losing \$50 million a year. Relations between the administration and medical staff were strained, as were those between management and the board of directors. Employees felt demoralized, having witnessed the rapid decline in their institution's once-legendary status and the disappointing failure of its past leaders. A critical study was conducted by the Hunter Group, a leading health-care consulting firm. The report, detailing the dire conditions at the hospital and the changes needed to turn things around, had been completed but not yet released. Meanwhile, the state attorney general, who was responsible for overseeing charitable trusts, had put pressure on the board to sell the failing BIDMC to a for-profit institution.

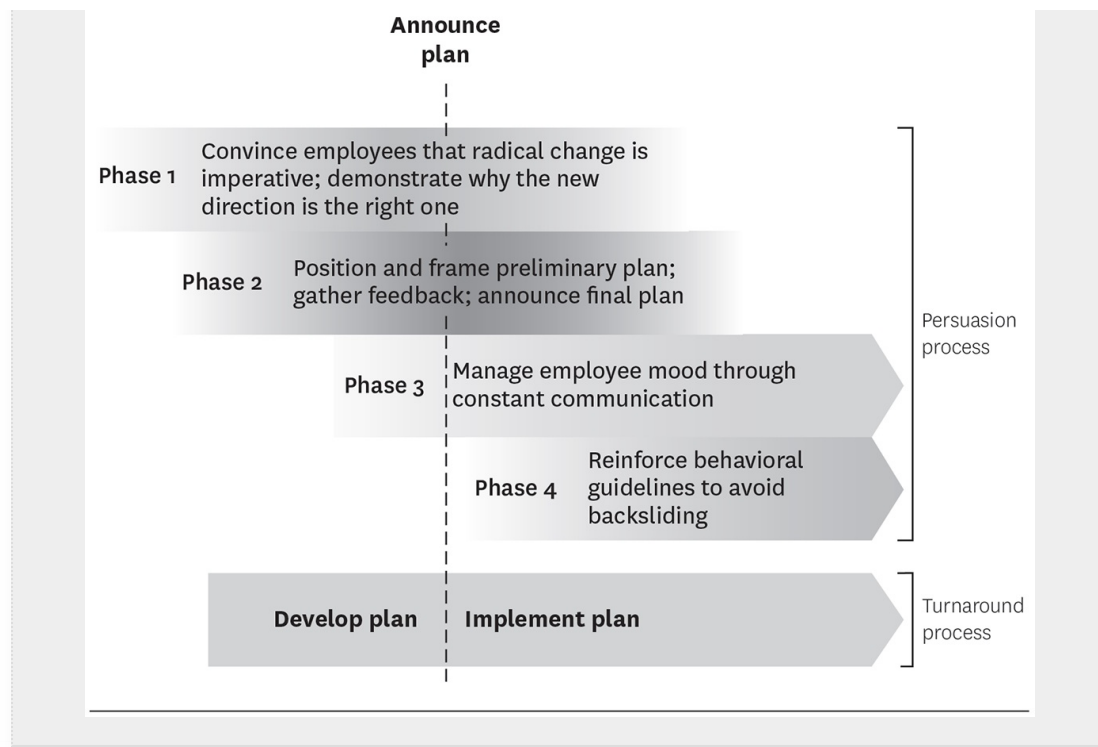
Like many CEOs recruited to fix a difficult situation, Levy's first task was to gain a mandate for the changes ahead. He also recognized that crucial negotiations were best conducted before he took the job, when his leverage was greatest, rather than after taking the reins. In particular, he moved to secure the cooperation of the hospital board by flatly stating his conditions for employment. He told the directors, for example, that should they hire him, they could no longer interfere in day-to-day management decisions. In his second and third meetings with the board's search committee, Levy laid out his timetable and intentions. He insisted that the board decide on his appointment quickly so that he could be on the job before the release of the Hunter report. He told the committee that he intended to push for a smaller,

more effective group of directors. Though the conditions were somewhat unusual, the board was convinced that Levy had the experience to lead a successful turnaround, and they accepted his terms. Levy went to work on January 7, 2002.

The next task was to set the stage with the hospital staff. Levy was convinced that the employees, hungry for a turnaround, would do their best to cooperate with him if he could emulate and embody the core values of the hospital culture, rather than impose his personal values. He chose to act as the managerial equivalent of a good doctor—that is, as one who, in dealing with a very ill patient, delivers both the bad news and the chances of success honestly and imparts a realistic sense of hope, without sugar coating.

The four phases of a persuasion campaign

A typical turnaround process consists of two stark phases: plan development, followed by an implementation that may or may not be welcomed by the organization. For the turnaround plan to be widely accepted and adopted, however, the CEO must develop a separate persuasion campaign, the goal of which is to create a continuously receptive environment for change. The campaign begins well before the CEO's first day on the job—or, if the CEO is long established, well before formal development work begins—and continues long after the final plan is announced.



Like any leader facing a turnaround, Levy also knew he had to develop a bold message that provided compelling reasons to do things differently and then cast that message in capital letters to signal the arrival of a new order. To give his message teeth, he linked it to an implicit threat. Taking his cue from his private discussions with the state attorney general, whom he had persuaded to keep the hospital open for the time being, Levy chose to publicize the very real possibility the hospital would be sold. While he realized he risked frightening the staff and the patients with this bad news, he believed that a strong wake-up call was necessary to get employees to face up to the situation.

During his first morning on the job, Levy delivered an all-hands-on-deck e-mail to the staff. The memo contained four broad messages. It opened with the good news, pointing out that the organization had much to be proud of (“This is a wonderful institution, representing the very best in academic medicine: exemplary patient care, extraordinary research, and fine teaching”). Second, Levy noted that the threat of sale was real (“This is our last chance”). Third, he signaled the kinds of actions employees could expect him to take (“There will be a reduction in staff”). And finally, he described the open management style he would adopt. He would manage by walking around—

lunching with staff in the cafeteria, having impromptu conversations in the hallways, talking with employees at every opportunity to discover their concerns. He would communicate directly with employees through e-mail rather than through intermediaries. He also noted that the Hunter report would be posted on the hospital intranet, where all employees would have the opportunity to review its recommendations and submit comments for the final turnaround plan. The direct, open tone of the e-mail memo signaled exactly how Levy's management style would differ from that of his predecessors.

In the afternoon, he disclosed BIDMC's situation in interviews with the *Boston Globe* and the *Boston Herald*, the city's two major newspapers. He told reporters the same thing he had told the hospital's employees: that, in the absence of a turnaround, the hospital would be sold to a for-profit chain and would therefore lose its status as a Harvard teaching hospital. Staving off a sale would require tough measures, including the laying off of anywhere from 500 to 700 employees. Levy insisted that there would be no nursing layoffs, in keeping with the hospital's core values of high-quality patient care. The newspaper reports, together with the memo circulated that morning, served to immediately reset employee expectations while dramatically increasing staff cooperation and willingness to accept whatever new initiatives might prove necessary to the hospital's survival.

Two days later, the critical Hunter report came out and was circulated via the hospital's intranet. Because the report had been produced by an objective third party, employees were open to its unvarnished, warts-and-all view of the hospital's current predicament. The facts were stark, and the staff could no longer claim ignorance. Levy received, and personally responded to, more than 300 e-mail suggestions for improvement in response to the report, many of which he later included in the turnaround plan.

Creating the Frame

Once the stage has been set for acceptance, effective leaders need to help employees interpret proposals for change. Complex plans can be interpreted in

any number of ways; not all of them ensure acceptance and favorable outcomes. Skilled leaders therefore use “frames” to provide context and shape perspective for new proposals and plans. By framing the issues, leaders help people digest ideas in particular ways. A frame can take many forms: It can be a company-wide presentation that prepares employees before an unexpected change, for example, or a radio interview that provides context following an unsettling layoff.

Levy used one particularly effective framing device to help employees interpret a preliminary draft of the turnaround plan. This device took the form of a detailed e-mail memo accompanying the dense, several-hundred-page plan. The memo explained, in considerable detail, the plan’s purpose and expected impact.

The first section of the memo sought to mollify critics and reduce the fears of doctors and nurses. Its tone was positive and uplifting; it discussed BIDMC’s mission, strategy, and uncompromising values, emphasizing the hospital’s “warm, caring environment.” This section of the letter also reaffirmed the importance of remaining an academic medical center, as well as reminding employees of their shared mission and ideals. The second part of the letter told employees what to expect, providing further details about the turnaround plan. It emphasized that tough measures and goals would be required but noted that the specific recommendations were based, for the most part, on the advice in the Hunter report, which employees had already reviewed. The message to employees was, “You’ve already seen and endorsed the Hunter report. There are no future surprises.”

The third part of the letter anticipated and responded to prospective concerns; this had the effect of circumventing objections. This section explicitly diagnosed past plans and explained their deficiencies, which were largely due to their having been imposed top-down, with little employee ownership, buy-in, or discussion. Levy then offered a direct interpretation of what had gone wrong. Past plans, he said, had underestimated the size of the financial problem, set unrealistic expectations for new revenue growth, and

failed to test implementation proposals. This section of the letter also drove home the need for change at a deeper, more visceral level than employees had experienced in the past. It emphasized that this plan was a far more collective effort than past proposals had been, because it incorporated many employee suggestions.

By framing the turnaround proposal this way, Levy accomplished two things. First, he was able to convince employees that the plan belonged to them. Second, the letter served as the basis for an ongoing communication platform. Levy reiterated its points at every opportunity—not only with employees but also in public meetings and in discussions with the press.

Managing the Mood

Turnarounds are depressing events, especially when they involve restructuring and downsizing. Relationships are disrupted, friends move on, and jobs disappear. In such settings, managing the mood of the organization becomes an essential leadership skill. Leaders must pay close attention to employees' emotions—the ebb and flow of their feelings and moods—and work hard to preserve a receptive climate for change. Often, this requires a delicate balancing act between presenting good and bad news in just the right proportion. Employees need to feel that their sacrifices have not been in vain and that their accomplishments have been recognized and rewarded. At the same time, they must be reminded that complacency is not an option. The communication challenge is daunting. One must strike the right notes of optimism and realism and carefully calibrate the timing, tone, and positioning of every message.

Paul Levy's challenge was threefold: to give remaining employees time to grieve and recover from layoffs and other difficult measures; to make them feel that he cared for and supported them; and to ensure that the turnaround plan proceeded apace. The process depended on mutual trust and employees' desire to succeed. "I had to calibrate the push and pull of congratulations and pressure, but I also depended on the staff's underlying value system and sense

of mission,” he said. “They were highly motivated, caring individuals who had stuck with the place through five years of hell. They wanted to do good.”

The first step was to acknowledge employees’ feelings of depression while helping them look to the future. Immediately after the first round of layoffs, people were feeling listless and dejected; Levy knew that releasing the final version of the turnaround plan too soon after the layoffs could be seen as cold. In an e-mail he sent to all employees a few days later, Levy explicitly empathized with employees’ feelings (“This week is a sad one . . . it is hard for those of us remaining . . . offices are emptier than usual”). He then urged employees to look forward and concluded on a strongly optimistic note (“. . . our target is not just survival: It is to thrive and set an example for what a unique academic medical center like ours means for this region”). His upbeat words were reinforced by a piece of good luck that weekend when the underdog New England Patriots won their first Super Bowl championship in dramatic fashion in the last 90 seconds of the game. When Levy returned to work the following Monday, employees were saying, “If the Patriots can do it, we can, too.”

Dysfunctional Routines

Six Ways to Stop Change in Its Tracks

Just as people are creatures of habit, organizations thrive on routines. Management teams, for example, routinely cut budgets after performance deviates from plan. Routines—predictable, virtually automatic behaviors—are unstated, self-reinforcing, and remarkably resilient. Because they lead to more efficient cognitive processing, they are, for the most part, functional and highly desirable.

A culture of “no”

In organizations dominated by cynics and critics, there is always a good reason not to do something. Piling on criticism is an easy way to avoid taking risks and claim false superiority. Lou Gerstner gets credit for naming this routine, which he found on his arrival at IBM, but it is common in many organizations. Another CEO described her team’s response to new initiatives by likening it to a skeet shoot: “Someone would yell, ‘Pull!’ there

would be a deafening blast, and the idea would be in pieces on the ground.” This routine has two sources: a culture that overvalues criticism and analysis, and complex decision-making processes requiring multiple approvals, in which anybody can say “no” but nobody can say “yes.” It is especially likely in organizations that are divided into large subunits or segments, led by local leaders with great power who are often unwilling to comply with directives from above.

The dog and pony show must go on

Some organizations put so much weight on process that they confuse ends and means, form and content. How you present a proposal becomes more important than what you propose. Managers construct presentations carefully and devote large amounts of time to obtaining sign-offs. The result is death by PowerPoint. Despite the appearance of progress, there’s little real headway.

The grass is always greener

To avoid facing challenges in their core business, some managers look to new products, new services, and new lines of business. At times, such diversification is healthy. But all too often these efforts are merely an avoidance tactic that keeps tough problems at arm’s length.

Dysfunctional routines, by contrast, are barriers to action and change. Some are outdated behaviors that were appropriate once but are now unhelpful. Others manifest themselves in knee-jerk reactions, passivity, unproductive foot-dragging, and, sometimes, active resistance.

Dysfunctional routines are persistent, but they are not unchangeable. Novelty—the perception that current circumstances are truly different from those that previously prevailed—is one of the most potent forces for dislodging routines. To overcome them, leaders must clearly signal that the context has changed. They must work directly with employees to recognize and publicly examine dysfunctional routines and substitute desired behaviors.

After the meeting ends, debate begins

This routine is often hard to spot because so much of it takes place under cover. Cordial, apparently cooperative meetings are followed by resistance. Sometimes, resisters are covert; often, they end-run established forums entirely and take their concerns directly to the top. The result? Politics

triumphs over substance, staff meetings become empty rituals, and meddling becomes the norm.

Ready, aim, aim. . .

Here, the problem is the organization's inability to settle on a definitive course of action. Staff members generate a continual stream of proposals and reports; managers repeatedly tinker with each one, fine tuning their choices without ever making a final decision. Often called "analysis paralysis," this pattern is common in perfectionist cultures where mistakes are career threatening and people who rock the boat drown.

This too shall pass

In organizations where prior leaders repeatedly proclaimed a state of crisis but then made few substantive changes, employees tend to be jaded. In such situations, they develop a heads-down, bunker mentality and a reluctance to respond to management directives. Most believe that the wisest course of action is to ignore new initiatives, work around them, or wait things out.

The next task was to keep employees focused on the continuing hard work ahead. On April 12, two months into the restructuring process, Levy sent out a "Frequently Asked Questions" e-mail giving a generally favorable view of progress to date. At the same time, he spoke plainly about the need to control costs and reminded employees that merit pay increases would remain on hold. This was hardly the rosy picture that most employees were hoping for, of course. But Levy believed sufficient time had passed that employees could accommodate a more realistic and tough tone on his part.

A month later, everything changed. Operational improvements that were put in place during the first phase of the turnaround had begun to take hold. Financial performance was well ahead of budget, with the best results since the merger. In another e-mail, Levy praised employees lavishly. He also convened a series of open question-and-answer forums, where employees heard more details about the hospital's tangible progress and received kudos for their accomplishments.

Reinforcing Good Habits

Without a doubt, the toughest challenge faced by leaders during a turnaround is to avoid backsliding into dysfunctional routines—habitual patterns of negative behavior by individuals and groups that are triggered automatically and unconsciously by familiar circumstances or stimuli. (For more on how such disruptive patterns work, see the sidebar “Dysfunctional Routines: Six Ways to Stop Change in Its Tracks.”) Employees need help maintaining new behaviors, especially when their old ways of working are deeply ingrained and destructive. Effective change leaders provide opportunities for employees to practice desired behaviors repeatedly, while personally modeling new ways of working and providing coaching and support.

In our studies of successful turnarounds, we’ve found that effective leaders explicitly reinforce organizational values on a constant basis, using actions to back up their words. Their goal is to change behavior, not just ways of thinking. For example, a leader can talk about values such as openness, tolerance, civility, teamwork, delegation, and direct communication in meetings and e-mails. But the message takes hold only if he or she also signals a dislike of disruptive, divisive behaviors by pointedly—and, if necessary, publicly—criticizing them.

At Beth Israel Deaconess Medical Center, the chiefs of medicine, surgery, orthopedics, and other key functions presented Levy with special behavioral challenges, particularly because he was not a doctor. Each medical chief was in essence a “mini-dean,” the head of a largely self-contained department with its own faculty, staff, and resources. As academic researchers, they were rewarded primarily for individual achievement. They had limited experience solving business or management problems.

In dealing with the chiefs, Levy chose an approach that blended with a strong dose of discipline with real-time, public reinforcement. He developed guidelines for behavior and insisted that everyone in the hospital measure up to them. In one of his earliest meetings with the chiefs, Levy presented a simple set of “meeting rules,” including such chestnuts as “state your

objections” and “disagree without being disagreeable,” and led a discussion about them, demonstrating the desired behaviors through his own leadership of the meeting. The purpose of these rules was to introduce new standards of interpersonal behavior and, in the process, to combat several dysfunctional routines.

One serious test of Levy’s ability to reinforce these norms came a month and a half after he was named CEO. After a staff meeting at which all the department chairs were present, one chief—who had remained silent—sent an e-mail to Levy complaining about a decision made during the meeting. The e-mail copied the other chiefs as well as the chairman of the board. Many CEOs would choose to criticize such behavior privately. But Levy responded in an e-mail to the same audience, publicly denouncing the chief for his tone, his lack of civility, and his failure to speak up earlier in the process, as required by the new meeting rules. It was as close to a public hanging as anyone could get. Several of the chiefs privately expressed their support to Levy; they too had been offended by their peer’s presumptuousness. More broadly, the open criticism served to powerfully reinforce new norms while curbing disruptive behavior.

Even as they must set expectations and reinforce behaviors, effective change leaders also recognize that many employees simply do not know how to make decisions as a group or work cooperatively. By delegating critical decisions and responsibilities, a leader can provide employees with ample opportunities to practice new ways of working; in such cases, employees’ performance should be evaluated as much on their adherence to the new standards and processes as on their substantive choices. In this spirit, Levy chose to think of himself primarily as a kind of appeals court judge. When employees came to him seeking his intervention on an issue or situation, he explained, he would “review the process used by the ‘lower court’ to determine if it followed the rules. If so, the decision stands.” He did not review cases *de novo* and substitute his judgment for that of the individual department or unit. He insisted that employees work through difficult issues

themselves, even when they were not so inclined, rather than rely on him to tell them what to do. At other times, he intervened personally and coached employees when they lacked basic skills. When two members of his staff disagreed on a proposed course of action, Levy triggered an open, emotional debate, then worked with the participants and their bosses behind the scenes to resolve the differences. At the next staff meeting, he praised the participants' willingness to disagree publicly, reemphasizing that vigorous debate was healthy and desirable and that confrontation was not to be avoided. In this way, employees gained experience in working through their problems on their own.

Performance, of course, is the ultimate measure of a successful turnaround. On that score, BIDMC has done exceedingly well since Levy took the helm. The original restructuring plan called for a three-year improvement process, moving from a \$58 million loss in 2001 to breakeven in 2004. At the end of the 2004 fiscal year, performance was far ahead of plan, with the hospital reporting a \$37.4 million net gain from operations. Revenues were up, while costs were sharply reduced. Decision making was now crisper and more responsive, even though there was little change in the hospital's senior staff or medical leadership. Morale, not surprisingly, was up as well. To take just one indicator, annual nursing turnover, which was 15% to 16% when Levy became CEO, had dropped to 3% by mid-2004. Pleased with the hospital's performance, the board signed Levy to a new three-year contract.

Heads, Hearts, and Hands

It's clear that the key to Paul Levy's success at Beth Israel Deaconess Medical Center is that he understood the importance of making sure the cultural soil had been made ready before planting the seeds of change. In a receptive environment, employees not only understand why change is necessary; they're also emotionally committed to making it happen, and they faithfully execute the required steps.

On a cognitive level, employees in receptive environments are better able to

let go of competing, unsubstantiated views of the nature and extent of the problems facing their organizations. They hold the same, objective views of the causes of poor performance. They acknowledge the seriousness of current financial, operational, and marketplace difficulties. And they take responsibility for their own contributions to those problems. Such a shared, fact-based diagnosis is crucial for moving forward.

On an emotional level, employees in receptive environments identify with the organization and its values and are committed to its continued existence. They believe that the organization stands for something more than profitability, market share, or stock performance and is therefore worth saving. Equally important, they trust the leader, believing that he or she shares their values and will fight to preserve them. Leaders earn considerable latitude from employees—and their proposals usually get the benefit of the doubt—when their hearts are thought to be in the right place.

Workers in such environments also have physical, hands-on experience with the new behaviors expected of them. They have seen the coming changes up close and understand what they are getting into. In such an atmosphere where it's acceptable for employees to wrestle with decisions on their own and practice unfamiliar ways of working, a leader can successfully allay irrational fears and undercut the myths that so often accompany major change efforts.

There is a powerful lesson in all this for leaders. To create a receptive environment, persuasion is the ultimate tool. Persuasion promotes understanding; understanding breeds acceptance; acceptance leads to action. Without persuasion, even the best of turnaround plans will fail to take root.

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Leading Change When Business Is Good

An Interview with *Samuel J. Palmisano*. by *Paul Hemp and Thomas A. Stewart*

IN JULY 2003, International Business Machines Corporation conducted a 72-hour experiment whose outcome was as uncertain as anything going on in its research labs. Six months into a top-to-bottom review of its management organization, IBM held a three-day discussion via the corporate intranet about the company's values. The forum, dubbed ValuesJam, joined thousands of employees in a debate about the very nature of the computer giant and what it stood for.

Over the three days, an estimated 50,000 of IBM's employees—including CEO Sam Palmisano—checked out the discussion, posting nearly 10,000 comments about the proposed values. The jam had clearly struck a chord.

But it was a disturbingly dissonant one. Some comments were merely cynical. One had the subject line: "The only value in IBM today is the stock price." Another read, "Company values (ya right)." Others, though, addressed fundamental management issues. "I feel we talk a lot about trust and taking risks. But at the same time, we have endless audits, mistakes are punished and not seen as a welcome part of learning, and managers (and others) are consistently checked," wrote one employee. "There appears to be a great reluctance among our junior executive community to challenge the views of our senior execs," said another. "Many times I have heard expressions like, 'Would you tell Sam that his strategy is wrong!!?'" Twenty-four hours into the exercise, at least one senior executive wanted to pull the plug.

But Palmisano wouldn't hear of it. And then the mood began to shift. After a day marked by critics letting off steam, the countercritics began to weigh in. While acknowledging

the company's shortcomings, they argued that much of IBM's culture and values was worth preserving. "Shortly after joining IBM 18 years ago," wrote one, "I was asked to serve on a jury. When I approached the bench and answered [the lawyers'] questions, I was surprised when the judge said, 'You guys can pick whoever else you want, but I want this IBMer on that jury.' I have never felt so much pride. His statement said it all: integrity, excellence, and quality." Comments like these became more frequent, criticism became more constructive, and the ValuesJam conversation stabilized.

The question of what was worth preserving and what needed to be changed was at the heart of ValuesJam. In 1914—when the company was making tabulating machines, scales for weighing meat, and cheese slicers—president Thomas Watson, Sr., decreed three corporate principles, called the Basic Beliefs: "respect for the individual," "the best customer service," and "the pursuit of excellence." They would inform IBM's culture, and help drive its success, for more than half a century.

By 2002, when Palmisano took over as CEO, much had happened to Big Blue. In the early 1990s, the company had suffered the worst reversal in its history and then, under Lou Gerstner, had fought its way back, transformed from a mainframe maker into a robust provider of integrated hardware, networking, and software solutions. Palmisano felt that the Basic Beliefs could still serve the company—but now as the foundation for a new set of corporate values that could energize employees even more than its near-death experience had. Looking for a modern-day equivalent, Palmisano first queried 300 of his senior executives, then quickly opened up the discussion, through a survey of over a thousand employees, to get a sense of how people at all levels, functions, and locations would articulate IBM's values and their aspirations for the company. Out of this research grew the propositions that were debated in ValuesJam.

Idea in Brief

It's easy to fire up employees' passion for change when your business is about to go up in flames. Lou Gerstner knew this when he seized IBM's helm in 1993 and saved the faltering giant by transforming it from a mainframe maker into a provider of integrated solutions.

But how do you maintain people's commitment to

change when business is **good**? **You** know your company must constantly adapt if it wants to maintain its competitive edge. Yet without an obvious threat on the horizon, your **employees** may grow complacent.

How to build a workforce of relentless change agents? Replace command-and-control with **values-based management**: Instead of galvanizing people through fear of failure, energize them through hope and aspiration. Inspire them to pursue a common purpose based on values **they** help to define. Ask them what's blocking them from living those values—and launch change initiatives to remove obstacles.

As enduring companies like IBM have discovered, values-based management enables your people to respond quickly, flexibly, and creatively to a never-ending stream of strategic challenges.

After—and even during—the jam, company analysts pored over the postings, mining the million-word text for key themes. Finally, a small team that included Palmisano came up with a revised set of corporate values. The CEO announced the new values to employees in an intranet broadcast in November 2003: “dedication to every client’s success,” “innovation that matters—for our company and for the world,” “trust and personal responsibility in all relationships.” Earthshaking? No, but imbued with legitimacy and packed with meaning and implications for IBM.

To prove that the new values were more than window dressing, Palmisano immediately made some changes. He called on the director of a major business unit—e-business hosting services for the U.S. industrial sector—and charged her with identifying gaps between the values and company practices. He bluntly told his 15 direct reports that they had better follow suit. Another online jam was held in October 2004 (this one informally dubbed a “logjam”) in which employees were asked to identify organizational barriers to innovation and revenue growth.

Idea in Practice

To create your values-based management system:

Gather Employees' Input on Values

Assess the strategic challenges facing your company. Propose values you believe will help your firm meet those challenges. Collect employees' feedback on your ideas.

Example: IBM CEO Sam Palmisano knew that the IT industry was reintegrating: Customers wanted packages of computer products and services from single firms. Despite its far-flung, diverse 320,000-strong workforce, the company had to offer customized solutions at a single price. To achieve the required cooperation, IBM needed a shared set of values to guide people's decision making.

Using feedback from top managers and employees, Palmisano's team developed three working value statements—"Commitment to the customer," "Excellence through innovation," and "Integrity that earns trust." IBM posted these on its intranet and invited employees to debate them. Over three days, 50,000 debated the merits of the value statements.

Analyze Employees' Input

Examine employees' input for themes.

Example: Many IBMers criticized the "integrity that earns trust" statement as vague, outdated, and inwardly focused. They wanted more specific guidance on how to behave with each other and with external stakeholders.

Revise Your Values

Based on the themes in employees' input, create a revised set of values. Gather employees' input again.

Example: Palmisano's team revised the earlier value statements to read: "Dedication to every client's success," "Innovation that matters—for our company and for the world," and "Trust and personal responsibility in all relationships." The team published the revised statements on the intranet and once more invited feedback.

Identify Obstacles to Living the Values

Examine employees' responses to identify what's preventing your company from living its agreed-upon

values.

Example: IBMers praised the revised value statements—often in highly emotional language—but wondered whether IBM was willing and able to live those values. They understood the need to reintegrate the company but lamented obstacles—such as frustrating financial controls—that prevented them from serving customers quickly.

Launch Change Initiatives to Remove Obstacles

Initiate change programs that enable people to live the values.

Example: IBM allocated \$5,000 a year to individual managers to use, no questions asked, in order to generate business, develop client relationships, or respond to fellow IBMers' emergency needs. A pilot program run with 700 client-facing teams showed that they spent the money intelligently. The program was expanded to all 22,000 IBM first-line managers. The initiative demonstrated to employees that IBM lives by its values.

Although Palmisano, by his own account, is building on a strategy laid down by Gerstner, the leadership styles of the two men are very different. Under Gerstner, there was little expansive talk about IBM's heritage. He was an outsider, a former CEO of RJR Nabisco and an ex-McKinsey consultant, who was faced with the daunting task of righting a sinking ship. In fact, he famously observed, shortly after taking over, that "the last thing IBM needs right now is a vision." Palmisano, by contrast, is a true-blue IBMer, who started at the company in 1973 as a salesman in Baltimore. Like many of his generation who felt such acute shame when IBM was brought to its knees in the early 1990s, he clearly has a visceral attachment to the firm—and to the hope that it may someday regain its former greatness. At the same time, the erstwhile salesman is, in the words of a colleague, "a results-driven, make-it-rain, close-the-deal sort of guy": not the first person you'd expect to hold forth on a subjective topic like "trust."

In this edited conversation with HBR senior editor Paul Hemp and HBR's editor, Thomas A. Stewart, Palmisano talks about the strategic importance of values to IBM. He

begins by explaining why—and how—hard financial metrics and soft corporate values can coexist.

Corporate values generally are feel-good statements that have almost no effect on a company's operations. What made—what makes—you think they can be more than this?

Look at the portrait of Tom Watson, Sr., in our lobby. You've never seen such a stern man. The eyes in the painting stare right through you. This was *not* a soft individual. He was a capitalist. He wanted IBM to make money, lots of it. But he was perceptive enough to build the company in a way that would ensure its prosperity long after he left the scene. His three Basic Beliefs successfully steered this company through persistent change and repeated reinvention for more than 50 years.

An organic system, which is what a company is, needs to adapt. And we think values—that's what we call them today at IBM, but you can call them "beliefs" or "principles" or "precepts" or even "DNA"—are what enable you to do that. They let you change everything, from your products to your strategies to your business model, but remain true to your essence, your basic mission and identity.

Unfortunately, over the decades, Watson's Basic Beliefs became distorted and took on a life of their own. "Respect for the individual" became entitlement: not fair work for all, not a chance to speak out, but a guaranteed job and culture-dictated promotions. "The pursuit of excellence" became arrogance: We stopped listening to our markets, to our customers, to each other. We were so successful for so long that we could never see another point of view. And when the market shifted, we almost went out of business. We had to cut a workforce of more than 400,000 people in half. Over the course of several years, we wiped out the equivalent of a medium-sized northeastern city—say, Providence, Rhode Island.

If you lived through this, as I did, it was easy to see how the company's values had become part of the problem. But I believe values can once again help guide us through major change and meet some of the formidable challenges we face.

For instance, I feel that a strong value system is crucial to bringing together and motivating a workforce as large and diverse as ours has become. We have nearly one-third of a million employees serving clients in 170 countries. Forty percent of those people don't report daily to an IBM site; they work on the client's premises, from home, or they're mobile. And, perhaps most significant, given IBM's tradition of hiring and training young people for a lifetime of work, half of today's employees have been with the company for fewer than five years because of recent acquisitions and our relatively new practice of hiring seasoned professionals. In a modest hiring year, we now add 20,000 to 25,000 people.

In effect, gradually repopulating Providence, Rhode Island!

Exactly. So how do you channel this diverse and constantly changing array of talent and experience into a common purpose? How do you get people to *passionately* pursue that purpose?

You could employ all kinds of traditional, top-down management processes. But they wouldn't work at IBM—or, I would argue, at an increasing number of twenty-first-century companies. You just can't impose command-and-control mechanisms on a large, highly professional workforce. I'm not only talking about our scientists, engineers, and consultants. More than 200,000 of our employees have college degrees. The CEO can't say to them, "Get in line and follow me." Or "*I've* decided what *your* values are." They're too smart for that. And as you know, smarter people tend to be, well, a little more challenging; you might even say cynical.

But even if our people did accept this kind of traditional, hierarchical management system, our clients wouldn't. As we learned at IBM over the years, a top-down system can create a smothering bureaucracy that doesn't allow for the speed, the flexibility, the innovation that clients expect today.

So you're saying that values are about how employees behave when management isn't there, which it can't be—which it shouldn't be—given IBM's size and the need for people to make decisions quickly. You're basically talking about using values to manage.

Yes. A values-based management system. Let me cast the issue in a slightly different light. When you think about it, there's no optimal way to organize IBM. We traditionally were viewed as a large, successful, "well-managed" company. That was a compliment. But in today's fast-changing environment, it's a problem. You can easily end up with a bureaucracy of people overanalyzing problems and slowing down the decision-making process.

Think of our organizational matrix. Remember, we operate in 170 countries. To keep it simple, let's say we have 60 or 70 major product lines. We have more than a dozen customer segments. Well, if you mapped out the entire 3-D matrix, you'd get more than 100,000 cells—cells in which you have to close out P&Ls every day, make decisions, allocate resources, make trade-offs. You'll drive people crazy trying to centrally manage every one of those intersections.

So if there's no way to optimize IBM through organizational structure or by management dictate, you have to empower people while ensuring that they're making the right calls the right way. And by "right," I'm not talking about ethics and legal compliance alone; those are table stakes. I'm talking about decisions that support and give life to IBM's strategy and brand, decisions that shape a culture. That's why values, for us, aren't soft. They're the basis of what we do, our mission as a company. They're a touchstone for decentralized decision making. It used to be a rule of thumb that "people don't do what you expect; they do what you inspect." My point is that it's just not possible to inspect everyone anymore. But you also can't just let go of the reins and let people do what they want without guidance or context. You've got to create a management system that empowers people and provides a basis for decision making that is consistent with who we are at IBM.

How do the new values help further IBM's strategy?

In two main ways. Back some 12 years ago, three-fifths of our business was in computer hardware and roughly two-fifths was in software and services. Today, those numbers are more than reversed. Well, if three-fifths of your business is manufacturing, management is basically supervisory: "You do this.

You do that.” But that no longer works when your business is primarily based on knowledge. And your business model also changes dramatically.

For one thing, people—rather than products—become your brand. Just as our products have had to be consistent with the IBM brand promise, now more than ever, so do our people. One way to ensure that is to inform their behavior with a globally consistent set of values.

Second, the IT industry has continued to shift toward reintegration. We all know the story of how the industry fragmented in the 1980s and 1990s, with separate companies selling the processors, the storage devices, and the software that make up a computer system—almost killing IBM, the original vertically integrated computer company. Now customers are demanding a package of computer products and services from a single company, a company that can offer them an integrated solution to their business problems. This is a big opportunity for IBM. We probably have a wider array of computer products and services and know-how than anyone. But it’s also a challenge. How can we get our people in far-flung business units with different financial targets and incentives working together in teams that can offer at a single price a comprehensive and customized solution—one that doesn’t show the organizational seams?

Companies usually face the issue of workforce integration after a huge merger. We needed to integrate our existing workforce as a strategic response to the reintegration of the industry. It won’t surprise you that I didn’t think the answer lay in a new organizational structure or in more management oversight. What you need to foster this sort of cooperation is a common set of guidelines about how we make decisions, day in and day out. In other words, values.

And what happens when the strategy changes?

Ah, that’s why the right set of values is so important. There’s always going to be another strategy on the horizon as the market changes, as technologies come and go. So we wanted values that would foster an organization able to quickly execute a new strategy. At the same time, we wanted values that, like Watson’s Basic Beliefs, would be enduring, that would guide the company

through economic cycles and geopolitical shifts, that would transcend changes in products, technologies, employees, and leaders.

How did IBM distill new values from its past traditions and current employee feedback?

The last time IBM examined its values was nearly a century ago. Watson was an entrepreneur, leading what was, in today's lingo, a start-up. So in 1914, he simply said, "Here are our beliefs. Learn them. Live them." That was appropriate for his day, and there's no question it worked. But 90 years later, we couldn't have someone in headquarters sitting up in bed in the middle of the night and saying, "Here are our new values!" We couldn't be casual about tinkering with the DNA of a company like IBM. We had to come up with a way to get the employees to create the value system, to determine the company's principles. Watson's Basic Beliefs, however distorted they might have become over the years, had to be the starting point.

After getting input from IBM's top 300 executives and conducting focus groups with more than a thousand employees—a statistically representative cross-section—we came up with three perfectly sound values. [For a detailed description of how IBM got from the Basic Beliefs to its new set of values, see the sidebar "Continuity and Change."] But I knew we'd eventually throw out the statements to everyone in the company to debate. That's where ValuesJam came in—this live, companywide conversation on our intranet.

What was your own experience during the jam? Did you have the feeling you'd opened Pandora's box?

I logged in from China. I was pretty jet-lagged and couldn't sleep, so I jumped in with postings on a lot of stuff, particularly around client issues. [For a selection of Palmisano's postings during the Values-Jam, see the sidebar "Sam Joins the Fray."] And yes, the electronic argument was hot and contentious and messy. But you had to get comfortable with that. Understand, we had done three or four big online jams before this, so we had some idea of how lively they can be. Even so, none of those could have prepared us for the emotions unleashed by this topic.

You had to put your ego aside—not easy for a CEO to do—and realize that this was the best thing that could have happened. You could say, “Oh my God, I’ve unleashed this incredible negative energy.” Or you could say, “Oh my God, I now have this incredible mandate to drive even more change in the company.”

When Lou Gerstner came here in 1993, there was clearly a burning platform. In fact, the whole place was in flames. There was even talk of breaking up the company. And he responded brilliantly. Here’s this outsider who managed to marshal the collective urgency of tens of thousands of people like me to save this company and turn it around: without a doubt one of the greatest saves in business history. But the trick then wasn’t creating a sense of urgency—we had that. Maybe you needed to shake people out of being shell-shocked. But most IBMers were willing to do whatever it took to save the company, not to mention their own jobs. And there was a lot of pride at stake. Lou’s task was mostly to convince people that he was making the right changes.

Once things got better, though, there was another kind of danger: that we would slip back into complacency. As our financial results improved dramatically and we began outperforming our competitors, people—already weary from nearly a decade of change—would say, “Well, why do I have to do things differently now? The leadership may be different, but the strategy is fundamentally sound. Why do I have to change?” This is, by the way, a problem that everyone running a successful company wrestles with.

So the challenge shifted. Instead of galvanizing people through fear of failure, you have to galvanize them through hope and aspiration. You lay out the opportunity to become a great company again—the greatest in the world, which is what IBM used to be. And you hope people feel the same need, the urgency you do, to get there. Well, I think IBMers today do feel that urgency. Maybe the jam’s greatest contribution was to make that fact unambiguously clear to all of us, very visibly, in public.

IBM'S NEW VALUES GREW OUT OF A LONG TRADITION. In

1914, Thomas Watson, Sr., the founder of the modern International Business Machines Corporation, laid out three principles known as the **Basic Beliefs**:

- Respect for the individual
- The best customer service
- The pursuit of excellence

Although these beliefs played a significant role in driving IBM's success over most of the twentieth century, they eventually were subsumed—and, in effect, redefined—by a sense of entitlement and arrogance within the organization. That, according to CEO Sam Palmisano, contributed to the company's failure to respond to market changes in the early 1990s and to its near demise.

In February 2003, just under a year after taking over as CEO, at a meeting of IBM's top 300 managers, Palmisano raised the idea of reinventing the company's values as a way to manage and reintegrate the sprawling and diverse enterprise. He put forth **four concepts**, three of them drawn from Watson's Basic Beliefs, as possible bases for the new values:

- Respect
- Customer
- Excellence
- Innovation

These were “test marketed” through surveys and focus groups with more than 1,000 IBM employees. The notion of “respect” was thrown out because of its connotations of the past. It was also decided that statements rather than just words would be more compelling.

Out of this process grew the three **proposed values** discussed during the July 2003 online forum, ValuesJam:

- Commitment to the customer
- Excellence through innovation
- Integrity that earns trust

Using a specially tailored “jamalyzer” tool—based on IBM's e-classifier software, but turbocharged with additional capabilities designed to process constantly changing content—IBM analysts crunched the million-plus words posted during the ValuesJam. Some themes emerged. For example, many people said that a silo mentality pitted the business units against one another, to the

detriment of IBM as a whole. Several people characterized this as a trust issue. But the proposed value “integrity that earns trust” was criticized as being too vague. Some thought it was just another way of saying “respect for the individual,” one of the original Basic Beliefs that many now viewed as outdated. And the notion of trust was seen as being too inwardly focused—management trusting its employees—and not prescriptive enough in terms of how employees should behave with each other or with parties outside the company.

Drawing on this analysis, the results of pre- and post-jam surveys, and a full reading of the raw transcripts, a small team, with input from Palmisano, arrived at a revised set of ***new corporate values***:

- **Dedication to every client’s success**
- **Innovation that matters—for our company and for the world**
- **Trust and personal responsibility in all relationships**

These were published on the company intranet in November 2003.

What were the chief points of debate—or contention?

There was actually remarkable agreement on *what* we all value. The debate, as it turned out, wasn’t over the values themselves so much. The debate was about whether IBM today is willing and able to live them.

For instance, people seemed to understand the need to reintegrate the company, but there were complaints—legitimate complaints—about things that are getting in the way. People would describe extremely frustrating situations. They’d say something like: “I’m in Tokyo, prototyping software for a client, and I need a software engineer based in Austin *right now* to help in a blade server configuration. But I can’t just say, ‘Please come to Tokyo and help.’ I need to get a charge code first so I can pay his department for his time!”

There’s a collective impatience that we’ve been tapping into to drive the change needed to make IBM everything that all of us aspire for it to be. I’m convinced that we wouldn’t have gotten to this point if we hadn’t found a way to engage the entire IBM population in a genuine, candid conversation.

Sam Joins the Fray

IBM CEO SAM PALMISANO was in China on business during ValuesJam, and he logged on from there. Following are some of his comments (typos included) on a number of topics raised by employees during the online forum:

YES, values matter!!!! (6 reply)

Samuel J. Palmisano 29 Jul 2003 20:00 GMT

Good discussion about the need for values/principles/beliefs, etc. people can be very cynical and sarcastic about this kind of topic, but I appreciate the thoughtful constructive comments I'm seeing. Personally, I believe "values" should embrace a company's broader role in the world—with customers, society, culture, etc. - as well as how its people work together.. I hope this Jam elevates IBM's ambitions about its mission in the 21st century.. WE have a unique opportunity for IBM to set the pace for ALL companies, not just the techs.

doing the right thing for customers . . . (21 reply)

Samuel J. Palmisano 29 Jul 2003 20:07 GMT

Early in my career when I was in the field in Baltimore, one of our systems failed for a health care customer. The customer went to manual processes, but said they would start losing patients within hours if the system couldn't be fixed. The branch mgr called one of our competitors and ordered another system. so two teams of IBMERS worked side by side.. one to fix the system, the others to bring up the new one. the mgr never asked Hq what to do.. it was a great lesson in how far this company will go to help a customer in time of need. btw, we fixed the system in time.

integrity/trust in ALL our relationships matter!!!! (44 reply)

Samuel J. Palmisano 29 Jul 2003 20:12 GMT

very interesting discussion . . . one thing I'm noticing, and it was in the broadcast feedback too: not too many of you are talking about integrity and trust when it comes to our OTHER relationships that are key to IBM's success—customers, communities where we live, owners of the company etc. any thoughts on why that's so? maybe we're too inwardly focused?

a world without IBM???? (35 reply)

Samuel J. Palmisano 29 Jul 2003 20:20 GMT

No IBM? the industry would stop growing because no one would invent anything that ran for more than THREE MINUTES.. no IBM means no grownups . . . no IBM means no truly global company that brings economic growth, respect progress to societies

everywhere . . . no iBM means no place to work for hundreds of thousands of people who want more than a job, they want to ,MAKE A DIFFERENCE in the world.

suggestion for Sam (9 reply)

Samuel J. Palmisano 29 Jul 2003 20:25 GMT

steve, you make good points about how/when we win . . . we can blow up more burecracy if we all behave like mature adutls and take into account ALL OF THE INTERESTS of IBm FIRST.. customers, employees, shareholders, doing whats right for the LONG TERM intersts of the company. mgrs have an important role to play in encouraing this kind of behavior . . . you have my support.

By the way, having a global, universally accessible intranet like ours certainly helps, but the technology isn't the point. I think we would've found a way to have this companywide dialogue if the Web didn't exist. [For an explanation of how the jam worked, see the sidebar "[Managing ValuesJam.](#)"]

What happened after the jam?

Well, we got a mountain of employee comments. The team analyzed all of it, and it was clear that the proposed value statements needed to change to reflect some of the nuances and emotion people expressed. So, drawing on this analysis, along with other employee feedback, a small team settled on IBM's new corporate values.

The first value is "dedication to every client's success." At one level, that's pretty straightforward: Bring together all of IBM's capability—in the laboratory, in the field, in the back office, wherever—to help solve difficult problems clients can't solve themselves. But this is also a lot more than the familiar claim of unstinting customer service. "Client success" isn't just "the customer is always right." It means maintaining a long-term relationship where what happens after the deal is more important than what happens before it's signed. It means a persistent focus on outcomes. It means having skin in the game of your client's success, up to and including how your contracts are structured and what triggers your getting paid.

The second is "innovation that matters—for our company and for the world." When employees talked about IBM making a difference in the world,

they included more than our work of inventing and building great products. They talked about how their work touches people and society, how we can help save lives—say, through our cutting-edge work with the Mayo Clinic or by helping governments fight terrorism with our data technology. This kind of innovation is a major reason we are able to attract great scientists. They can do cool stuff and maybe make more money in Silicon Valley—for a while, anyway—but they can do work that actually changes business and society at IBM. And it's also about what I mentioned before: a continually experimental attitude toward IBM itself. Over most of our 90 years, with the exception of that one period when we became arrogant and complacent, this company never stopped questioning assumptions, trying out different models, testing the limits—whether in technology or business or in progressive workforce policies. Employees reminded us that those things are innovations that matter at least as much as new products.

The third value is “trust and personal responsibility in all relationships.” There's a lot in that statement, too. Interestingly, the feedback from employees on this value has focused on relationships among people at IBM. But we're also talking about the company's relationships with suppliers, with investors, with governments, with communities.

We published the values in their final form—along with some elaboration on them and some direct employee postings from the jam—in November 2003. Over the next ten days, more than 200,000 people downloaded the online document. The responses just flooded in, both in the form of postings on the intranet and in more than a thousand e-mails sent directly to me, telling us in often sharp language just where IBM's operations fell short of, or clashed with, these ideals. Some of the comments were painful to read. But, again, they exhibited something every leader should welcome: People here aren't complacent about the company's future. And the comments were, by and large, extremely thoughtful.

IBM HAD EXPERIMENTED before with jam sessions—relatively unstructured employee discussions around broad topics—both on the corporate intranet and in face-to-face off-site brainstorming sessions. But the 72-hour Values-Jam, held in July 2003, was the most ambitious, focusing as it did on the very nature and future of IBM.

One thing was clear: You wouldn't be able to orchestrate a forum like this, the verbal equivalent of an improvisational jam session among jazz musicians. In the words of CEO Sam Palmisano, "It just took off." But, much like a musical jam, the dialogue was informed by a number of themes:

Forum 1. Company Values

Do company values exist? If so, what is involved in establishing them? Most companies today have values statements. But what would a company look and act like that truly lived its beliefs? Is it important for IBM to agree on a set of lasting values that drive everything it does?

Forum 2. A First Draft

What values are essential to what IBM needs to become? Consider this list: 1. Commitment to the customer. 2. Excellence through innovation. 3. Integrity that earns trust. How might these values change the way we act or the decisions we make? Is there some important aspect or nuance that is missing?

Forum 3. A Company's Impact

If our company disappeared tonight, how different would the world be tomorrow? Is there something about our company that makes a unique contribution to the world?

Forum 4. The Gold Standard

When is IBM at its best? When have you been proudest to be an IBMer? What happened, and what was uniquely meaningful about it? And what do we need to do—or change—to be the gold standard going forward?

What did you do with this feedback?

We collected and collated it. Then I printed all of it out—the stack of paper was about three feet high—and took it home to read over one weekend. On Monday morning, I walked into our executive committee meeting and threw it on the table. I said, "You guys ought to read every one of these comments, because if you think we've got this place plumbed correctly, think again."

Don't get me wrong. The passion in these e-mails was positive as well as negative. People would say, literally, "I'm weeping. These values describe the company I joined, the company I believe in. We can truly make this place great again. But we've got all these things in our way. . . ." The raw emotion of some of the e-mails was really something.

Now, if you've unleashed all this frustration and energy, if you've invited people to feel hope about something they really care about, you'd better be prepared to do something in response. So, in the months since we finalized the values, we've announced some initiatives that begin to close the gaps.

One I have dubbed our "\$100 million bet on trust." We kept hearing about situations like our colleague in Tokyo who needed help from the engineer in Austin, cases in which employees were unable to respond quickly to client needs because of financial control processes that required several levels of management approval. The money would usually be approved, but too late. So we allocated managers up to \$5,000 annually they could spend, no questions asked, to respond to extraordinary situations that would help generate business or develop client relationships or to respond to an IBMer's emergency need. We ran a pilot for a few months with our 700 client-facing teams, and they spent the money intelligently. There were lots of examples of teams winning deals and delighting clients with a small amount of "walk around money" to spend at their discretion. So, based on the success of that pilot, we expanded the program to all 22,000 IBM first-line managers.

You can do the math: \$5,000 times 22,000 managers is a big number. I'm sure there were people in the company who said, "We need to get this under control." But they're not the CEO. Yes, you need financial controls. Yes, not every dollar spent from this Managers' Value Fund will yield some tangible return. But I'm confident that allowing line managers to take some reasonable risks, and trusting them with those decisions, will pay off over time. The program also makes a point: that we live by our values.

The value of "trust and personal responsibility in all relationships"—including those with IBM's shareholders—led to another initiative: a change in

the way we grant top executive stock options. After getting a lot of outside experts to study this (and concluding that the complicated algorithms they recommended were wonderful, if you wanted to hire the outsiders as permanent consultants, but terrible if you wanted a simple formula that aligned executive behavior with shareholder interests), we settled on a straightforward idea. Senior executives will benefit from their options only after shareholders have realized at least 10% growth in their investments—that is, the strike price is 10% higher than the market price on the day the options are issued. Look at it this way: IBM's market value would have to increase by \$17 billion from that date before any of the execs realize a penny of benefit. We think we are the first large company to take such a radical step—and it grew out of our values.

Let me give you one more example. It may not sound like a big deal, but for us, it was radical. We overhauled the way we set prices. We heard time and again from employees about how difficult it was to put together a client-friendly, cross-IBM solution, one involving a variety of products and services at a single, all-inclusive price. We couldn't do it. Every brand unit had its own P&L, and all the people who determine prices had been organized by brand. Remember those 100,000 cells in our 3-D matrix? Our people were pulling their cross-IBM bids apart, running them through our financial-accounting system as separate bids for individual products and services. This was nuts, because it's our ability to offer everything—hardware, software, services, and financing—that gives us a real advantage. When we bid on each of the parts separately, we go head-to-head against rivals by product: EMC in storage, say, or Accenture in services. This was tearing out the very heart of our strategy of integration, not to mention our unique kind of business-plus-technology innovation.

Let me give you a humorous (if somewhat discouraging) illustration. Every senior executive has responsibility for at least one major client—we call them “partnership accounts.” Our former CFO John Joyce, who now heads IBM's services business, put together a deal for his account that involved some

hardware, some software, and some services. He was told he couldn't price it as an integrated solution. And he's the CFO! So we figured out a way to set a single price for each integrated offering.

This sounds like a great business move. But what does it have to do with values? Wouldn't you ultimately have decided you had to do that in any case?

To be honest, we'd been debating the pricing issue at the executive level for a long time. But we hadn't done anything about it. The values initiative forced us to confront the issue, and it gave us the impetus to make the change. You know, there are always ingrained operations and habits of mind in any organization—I don't care whether it's a business or a university or a government. Well, the values and the jam were great inertia-busting vehicles. A small business in this place is \$15 billion, and a big one is \$40 billion. So you have senior vice presidents running Fortune 500-sized companies who aren't necessarily looking for bright ideas from the CEO or some task force every day. But when you hear from so many of our people on the front lines, you can't just ignore it. They're crying out: "We say we value 'client success,' and we want to grow our business. This one thing is getting in the way of both!" You've got to pay attention—if not to me, then to them.

So we took the pricers—the people who set the prices for client bids—and we said to them, "You work for IBM. When there's a cross-IBM bid with multiple products, you price it on the IBM income statement, not on the income statements of each product." Needless to say, this involved a series of very difficult meetings with senior executives. There was a huge debate among the finance people about all the reasons why we couldn't do it: "It will be too much work to reallocate all the costs and revenue of a project back to individual profit centers." And they're right: It isn't easy, especially when we now have to certify everything. But the CFO was with me on this: After all, he'd seen the problem firsthand! And we made the change, so that now when we make a truly cross-IBM bid, we can optimize it for the client and for us.

This brings us back to the tension between soft values and hard financial metrics. In the long

run, they shouldn't conflict. But along the way, they're going to be jabbing at each other. After all, people still have to make their numbers.

Certainly, there's no getting around that in a commercial enterprise. But I think values inject balance in the company's culture and management system: balance between the short-term transaction and the long-term relationship, balance between the interests of shareholders, employees, and clients. In every case, you have to make a call. Values help you make those decisions, not on an ad hoc basis, but in a way that is consistent with your culture and brand, with who you are as a company.

Look at how we compensate our managing directors, who are responsible for our largest client relationships. We decided to take half their comp and calculate it not on an annual basis but on a rolling three-year basis. We ask clients to score the managing director's performance at the end of a project or engagement, which might last longer than a single year, and that plays a big part in his bonus. So a big piece of his compensation is based on a combination of the project's profitability—whether the manager made his annual numbers—and on the client's satisfaction over a longer-term horizon. The managing director can't trade off one for the other.

So we've tried to keep balance in the system, to make sure that things aren't completely oriented toward short-term financials. But you're absolutely right: There are times when people will argue, "Well, jeez, you guys are pushing us in both directions." It's a valid debate. I think, though, that the best place to have that debate is at the lowest level of your organization, because that's where these decisions are being made and having an impact. Thousands of these interactions go on every day that none of us at the top will ever, or should ever, know about. But you hope that the values are providing a counterweight to the drive for short-term profitability in all those interactions. In the long term, I think, whether or not you have a values-driven culture is what makes you a winner or a loser.

You've had the new values in place for just about a year now. They've already created strong emotions and high expectations. What's the prognosis?

We're just starting down the road on what is probably a ten- to 15-year process. I was back in Asia not long ago, and I did one of these town hall-style meetings with IBM employees and talked about the values. Probably two-thirds of the people clearly knew about them, had read about them. But a third of the people—you could look at their faces and see it—hadn't even heard of the values. Or at least the values hadn't resonated with them yet. So we have work to do. Not just in getting everyone to memorize three pithy statements. We need to do a heck of a lot to close the gaps between our stated values and the reality of IBM today. That's the point of it all.

I know that not everyone on my executive team is as enthusiastic about the values initiative as I am—though they'd never admit it! But people on the senior team who lived through IBM's near-death experience will do anything not to go back to that. The blow to everyone's pride when IBM became the laughingstock of the business world was almost too much to bear. I have zero resistance from the senior team to initiatives that can save us from a return to that. And our values work is one of the most important of those initiatives.

Then look at the employee response to ValuesJam. There is an unmistakable yearning for this to be a great company. I mean, why have people joined IBM over the years? There are a lot of places to make money, if that's what drives you. Why come here?

I believe it's because they want to be part of a progressive company that makes a difference in the world. They want to be in the kind of company that supports research that wins Nobel Prizes, that changes the way people think about business itself, that is willing to take firm positions on unpopular issues based on principle.

You know, back in the 1950s, Watson, Jr., wrote the governors of southern states that IBM would not adhere to separate-but-equal laws, and then the company codified an equal-opportunity policy years before it was mandated by law. I've got to believe that a company that conceives of itself that way, and that seriously manages itself accordingly, has strong appeal to a lot of people. We can't offer them the promise of instant wealth, which they may get at a

startup, or a job for life, as in the old days. But we can offer them something worth believing in and working toward.

If we get most people in this company excited about that, they're going to pull the rest of the company with them. If they become dedicated to these values and what we're trying to accomplish, I can go to sleep at night confident of our future.

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Radical Change, the Quiet Way

by Debra E. Meyerson

AT ONE POINT OR ANOTHER, many managers experience a spang of conscience—a yearning to confront the basic or hidden assumptions, interests, practices, or values within an organization that they feel are stodgy, unfair, even downright wrong. A vice president wishes that more people of color would be promoted. A partner at a consulting firm thinks new MBAs are being so overworked that their families are hurting. A senior manager suspects his company, with some extra cost, could be kinder to the environment. Yet many people who want to drive changes like these face an uncomfortable dilemma. If they speak out too loudly, resentment builds toward them; if they play by the rules and remain silent, resentment builds inside them. Is there any way, then, to rock the boat without falling out of it?

Over the past 15 years, I have studied hundreds of professionals who spend the better part of their work lives trying to answer this question. Each one of the people I've studied differs from the organizational status quo in some way—in values, race, gender, or sexual preference, perhaps (see the sidebar “How the Research Was Done”). They all see things a bit differently from the “norm.” But despite feeling at odds with aspects of the prevailing culture, they genuinely like their jobs and want to continue to succeed in them, to effectively use their differences as the impetus for constructive change. They believe that direct, angry confrontation will get them nowhere, but they don't sit by and allow frustration to fester. Rather, they work quietly to challenge prevailing wisdom and gently provoke their organizational cultures to adapt. I

call such change agents *tempered radicals* because they work to effect significant changes in moderate ways.

How the Research Was Done

THIS ARTICLE IS BASED ON a multipart research effort that I began in 1986 with Maureen Scully, a professor of management at the Center for Gender in Organizations at Simmons Graduate School of Management in Boston. We had observed a number of people in our own occupation—academia—who, for various reasons, felt at odds with the prevailing culture of their institutions. Initially, we set out to understand how these individuals sustained their sense of self amid pressure to conform and how they managed to uphold their values without jeopardizing their careers. Eventually, this research broadened to include interviews with individuals in a variety of organizations and occupations: business people, doctors, nurses, lawyers, architects, administrators, and engineers at various levels of seniority in their organizations.

Since 1986, I have observed and interviewed dozens of tempered radicals in many occupations and conducted focused research with 236 men and women, ranging from mid-level professionals to CEOs. The sample was diverse, including people of different races, nationalities, ages, religions, and sexual orientations, and people who hold a wide range of values and change agendas. Most of these people worked in one of three publicly traded corporations—a financial services organization, a high-growth computer components corporation, and a company that makes and sells consumer products. In this portion of the research, I set out to learn more about the challenges tempered radicals face and discover their strategies for surviving, thriving, and fomenting change. The sum of this research resulted in the spectrum of strategies described in this article.

In so doing, they exercise a form of leadership within organizations that is more localized, more diffuse, more modest, and less visible than traditional forms—yet no less significant. In fact, top executives seeking to institute cultural or organizational change—who are, perhaps, moving tradition-bound organizations down new roads or who are concerned about reaping the full potential of marginalized employees—might do well to seek out these tempered radicals, who may be hidden deep within their own organizations.

Because such individuals are both dedicated to their companies and masters at changing organizations at the grassroots level, they can prove extremely valuable in helping top managers to identify fundamental causes of discord, recognize alternative perspectives, and adapt to changing needs and circumstances. In addition, tempered radicals, given support from above and a modicum of room to experiment, can prove to be excellent leaders. (For more on management's role in fostering tempered radicals, see the sidebar "Tempered Radicals as Everyday Leaders.")

Idea in Brief

How do you rock your corporate boat—without falling out? You know your firm needs constructive change, but here's your dilemma: If you push your agenda too hard, resentment builds against you. If you remain silent, resentment builds inside you.

What's a manager to do? Become a **tempered radical**—an informal leader who quietly challenges prevailing wisdom and provokes cultural transformation. These radicals bear no banners and sound no trumpets. Their seemingly innocuous changes barely inspire notice. But like steady drops of water, they gradually erode granite.

Tempered radicals embody contrasts. Their commitments are firm, but their means flexible. They yearn for rapid change, but trust in patience. They often work alone, yet unite others. Rather than pressing their agendas, they start conversations. And instead of battling powerful foes, they seek powerful friends. The overall effect? Evolutionary—but relentless—change.

Since the actions of tempered radicals are not, by design, dramatic, their leadership may be difficult to recognize. How, then, do people who run organizations, who want to nurture this diffuse source of cultural adaptation, find and develop these latent leaders? One way is to appreciate the variety of modes in which tempered radicals operate, learn from them, and support their

efforts.

To navigate between their personal beliefs and the surrounding cultures, tempered radicals draw principally on a spectrum of incremental approaches, including four I describe here. I call these *disruptive self-expression*, *verbal jujitsu*, *variable-term opportunism*, and *strategic alliance building*. Disruptive self-expression, in which an individual simply acts in a way that feels personally right but that others notice, is the most inconspicuous way to initiate change. Verbal jujitsu turns an insensitive statement, action, or behavior back on itself. Variable-term opportunists spot, create, and capitalize on short- and long-term opportunities for change. And with the help of strategic alliances, an individual can push through change with more force.

Idea in Practice

Tempered radicals use these tactics:

Disruptive Self-Expression

Demonstrate your values through your language, dress, office décor, or behavior. People notice and talk—often becoming brave enough to try the change themselves. The more people talk, the greater the impact.

Example: Stressed-out manager John Ziwak began arriving at work earlier so he could leave by 6:00 p.m. to be with family. He also refused evening business calls. As his stress eased, his performance improved. Initially skeptical, colleagues soon accommodated, finding more efficient ways of working and achieving balance in their own lives.

Verbal Jujitsu

Redirect negative statements or actions into positive change.

Example: Sales manager Brad Williams noticed that the new marketing director's peers ignored her during meetings. When one of them co-opted a thought she had already expressed, Williams said: "I'm glad George picked up on Sue's concerns. Sue, did George correctly capture what you were thinking?" No

one ignored Sue again.

Variable-Term Opportunism

Be ready to capitalize on unexpected opportunities for short-term change, as well as orchestrate deliberate, longer term change.

Example: Senior executive Jane Adams joined a company with a dog-eat-dog culture. To insinuate her collaborative style, she shared power with direct reports, encouraged them to also delegate, praised them publicly, and invited them to give high-visibility presentations. Her division gained reputation as an exceptional training ground for building experience, responsibility, and confidence.

Strategic Alliance Building

Gain clout by working with allies. Enhance your legitimacy and implement change more quickly and directly than you could alone. Don't make "opponents" enemies—they're often your best source of support and resources.

Example: Paul Wielgus started a revolution in his bureaucratic global spirits company—by persuading the opposition to join him. Others derided the training department Wielgus formed to boost employee creativity, and an auditor scrutinized the department for unnecessary expense. Rather than getting defensive, Paul treated the auditor as an equal and sold him on the program's value. The training spread, inspiring employees and enhancing productivity throughout the company.

Each of these approaches can be used in many ways, with plenty of room for creativity and wit. Self-expression can be done with a whisper; an employee who seeks more racial diversity in the ranks might wear her dashiki to company parties. Or it can be done with a roar; that same employee might wear her dashiki to the office every day. Similarly, a person seeking stricter environmental policies might build an alliance by enlisting the help of one person, the more powerful the better. Or he might post his stance on the

company intranet and actively seek a host of supporters. Taken together, the approaches form a continuum of choices from which tempered radicals draw at different times and in various circumstances.

But before looking at the approaches in detail, it's worth reconsidering, for a moment, the ways in which cultural change happens in the workplace.

How Organizations Change

Research has shown that organizations change primarily in two ways: through drastic action and through evolutionary adaptation. In the former case, change is discontinuous and often forced on the organization or mandated by top management in the wake of major technological innovations, by a scarcity or abundance of critical resources, or by sudden changes in the regulatory, legal, competitive, or political landscape. Under such circumstances, change may happen quickly and often involves significant pain. Evolutionary change, by contrast, is gentle, incremental, decentralized, and over time produces a broad and lasting shift with less upheaval.

Tempered Radicals as Everyday Leaders

IN THE COURSE OF THEIR DAILY actions and interactions, tempered radicals teach important lessons and inspire change. In so doing, they exercise a form of leadership within organizations that is less visible than traditional forms—but just as important.

The trick for organizations is to locate and nurture this subtle form of leadership. Consider how Barry Coswell, a conservative, yet open-minded lawyer who headed up the securities division of a large, distinguished financial services firm, identified, protected, and promoted a tempered radical within his organization. Dana, a left-of-center, first-year attorney, came to his office on her first day of work after having been fingerprinted—a standard practice in the securities industry. The procedure had made Dana nervous: What would happen when her new employer discovered that she had done jail time for participating in a 1960s-era civil rights protest? Dana quickly understood that her only hope of survival was to be honest about her background and principles. Despite the difference in their political proclivities, she decided to give Barry the benefit of the doubt. She marched into his office and confessed to having gone to jail for sitting in front of a bus.

"I appreciate your honesty," Barry laughed, "but unless you've broken a securities law, you're probably okay." In return for her small confidence, Barry shared stories of his own about growing up in a poor county and about his life in the military. The story swapping allowed them to put aside ideological disagreements and to develop a deep respect for each other. Barry sensed a budding leader in Dana. Here was a woman who operated on the strength of her convictions and was honest about it but was capable of discussing her beliefs without self-righteousness. She didn't pound tables. She was a good conversationalist. She listened attentively. And she was able to elicit surprising confessions from him.

Barry began to accord Dana a level of protection, and he encouraged her to speak her mind, take risks, and most important, challenge his assumptions. In one instance, Dana spoke up to defend a female junior lawyer who was being evaluated harshly and, Dana believed, inequitably. Dana observed that different standards were being applied to male and female lawyers, but her colleagues dismissed her "liberal" concerns. Barry cast a glance at Dana, then said to the staff, "Let's look at this and see if we are being too quick to judge." After the meeting, Barry and Dana held a conversation about double standards and the pervasiveness of bias. In time, Barry initiated a policy to seek out minority legal counsel, both in-house and at outside legal firms. And Dana became a senior vice president.

In Barry's ability to recognize, mentor, and promote Dana there is a key lesson for executives who are anxious to foster leadership in their organizations. It suggests that leadership development may not rest with expensive external programs or even with the best intentions of the human resources department. Rather it may rest with the open-minded recognition that those who appear to rock the boat may turn out to be the most effective of captains.

The power of evolutionary approaches to promote cultural change is the subject of frequent discussion. For instance, in "We Don't Need Another Hero" (HBR, September 2001), Joseph L. Badaracco, Jr., asserts that the most effective moral leaders often operate beneath the radar, achieving their reforms without widespread notice. Likewise, tempered radicals gently and continually push against prevailing norms, making a difference in small but steady ways and setting examples from which others can learn. The changes they inspire are so incremental that they barely merit notice—which is exactly

why they work so well. Like drops of water, these approaches are innocuous enough in themselves. But over time and in accumulation, they can erode granite.

Consider, for example, how a single individual slowly—but radically—altered the face of his organization. Peter Grant¹ was a black senior executive who held some 18 positions as he moved up the ladder at a large West Coast bank. When he first joined the company as a manager, he was one of only a handful of people of color on the professional staff. Peter had a private, long-term goal: to bring more women and racial minorities into the fold and help them succeed. Throughout his 30-year career running the company's local banks, regional offices, and corporate operations, one of his chief responsibilities was to hire new talent. Each time he had the opportunity, Peter attempted to hire a highly qualified member of a minority. But he did more than that—every time he hired someone, he asked that person to do the same. He explained to the new recruits the importance of hiring women and people of color and why it was their obligation to do likewise.

Whenever minority employees felt frustrated by bias, Peter would act as a supportive mentor. If they threatened to quit, he would talk them out of it. “I know how you feel, but think about the bigger picture here,” he’d say. “If you leave, nothing here will change.” His example inspired viral behavior in others. Many stayed and hired other minorities; those who didn’t carried a commitment to hire minorities into their new companies. By the time Peter retired, more than 3,500 talented minority and female employees had joined the bank.

Peter was the most tempered, yet the most effective, of radicals. For many years, he endured racial slurs and demeaning remarks from colleagues. He waited longer than his peers for promotions; each time he did move up he was told the job was too big for him and he was lucky to have gotten it. “I worked my rear end off to make them comfortable with me,” he said, late in his career. “It wasn’t *luck*.” He was often angry, but lashing out would have been the path of least emotional resistance. So without attacking the system, advancing a

bold vision, or wielding great power, Peter chipped away at the organization's demographic base using the full menu of change strategies described below.

Disruptive Self-Expression

At the most tempered end of the change continuum is the kind of self-expression that quietly disrupts others' expectations. Whether waged as a deliberate act of protest or merely as a personal demonstration of one's values, disruptive self-expression in language, dress, office decor, or behavior can slowly change the atmosphere at work. Once people take notice of the expression, they begin to talk about it. Eventually, they may feel brave enough to try the same thing themselves. The more people who talk about the transgressive act or repeat it, the greater the cultural impact.

Consider the case of John Ziwak, a manager in the business development group of a high-growth computer components company. As a hardworking business school graduate who'd landed a plum job, John had every intention of working 80-hour weeks on the fast track to the top. Within a few years, he married a woman who also held a demanding job; soon, he became the father of two. John found his life torn between the competing responsibilities of home and work. To balance the two, John shifted his work hours—coming into the office earlier in the morning so that he could leave by 6 pm. He rarely scheduled late-afternoon meetings and generally refused to take calls at home in the evening between 6:30 and 9. As a result, his family life improved, and he felt much less stress, which in turn improved his performance at work.

At first, John's schedule raised eyebrows; availability was, after all, an unspoken key indicator of commitment to the company. "If John is unwilling to stay past 6," his boss wondered, "is he really committed to his job? Why should I promote him when others are willing and able to work all the time?" But John always met his performance expectations, and his boss didn't want to lose him. Over time, John's colleagues adjusted to his schedule. No one set up conference calls or meetings involving him after 5. One by one, other employees began adopting John's "6 o' clock rule"; calls at home, particularly

during dinner hour, took place only when absolutely necessary. Although the 6 o' clock rule was never formalized, it nonetheless became par for the course in John's department. Some of John's colleagues continued to work late, but they all appreciated these changes in work practice and easily accommodated them. Most people in the department felt more, not less, productive during the day as they adapted their work habits to get things done more efficiently—for example, running meetings on schedule and monitoring interruptions in their day. According to John's boss, the employees appreciated the newfound balance in their lives, and productivity in the department did not suffer in the least.

Tempered radicals know that even the smallest forms of disruptive self-expression can be exquisitely powerful. The story of Dr. Frances Conley offers a case in point. By 1987, Dr. Conley had already established herself as a leading researcher and neurosurgeon at Stanford Medical School and the Palo Alto Veteran's Administration hospital. But as one of very few women in the profession, she struggled daily to maintain her feminine identity in a macho profession and her integrity amid gender discrimination. She had to keep her cool when, for example, in the middle of directing a team of residents through complicated brain surgery, a male colleague would stride into the operating room to say, "Move over, honey." "Not only did that undermine my authority and expertise with the team," Dr. Conley recalled later, "but it was unwarranted—and even dangerous. That kind of thing would happen all the time."

Despite the frustration and anger she felt, Dr. Conley at that time had no intention of making a huge issue of her gender. She didn't want the fact that she was a woman to compromise her position, or vice versa. So she expressed herself in all sorts of subtle ways, including in what she wore. Along with her green surgical scrubs, she donned white lace ankle socks—an unequivocal expression of her femininity. In itself, wearing lace ankle socks could hardly be considered a Gandhian act of civil disobedience. The socks merely said, "I can be a neurosurgeon and be feminine." But they spoke loudly enough in the

stolid masculinity of the surgical environment, and, along with other small actions on her part, they sparked conversation in the hospital. Nurses and female residents frequently commented on Dr. Conley's style. "She is as demanding as any man and is not afraid to take them on," they would say, in admiration. "But she is also a woman and not ashamed of it."

Ellen Thomas made a comparable statement with her hair. As a young African-American consultant in a technical services business, she navigated constantly between organizational pressures to fit in and her personal desire to challenge norms that made it difficult for her to be herself. So from the beginning of her employment, Ellen expressed herself by wearing her hair in neat cornrow braids. For Ellen, the way she wore her hair was not just about style; it was a symbol of her racial identity.

Once, before making an important client presentation, a senior colleague advised Ellen to unbraid her hair "to appear more professional." Ellen was miffed, but she didn't respond. Instead, she simply did not comply. Once the presentation was over and the client had been signed, she pulled her colleague aside. "I want you to know why I wear my hair this way," she said calmly. "I'm a black woman, and I happen to like the style. And as you just saw," she smiled, "my hairstyle has nothing to do with my ability to do my job."

Does leaving work at 6 PM or wearing lacy socks or cornrows force immediate change in the culture? Of course not; such acts are too modest. But disruptive self-expression does do two important things. First, it reinforces the tempered radical's sense of the importance of his or her convictions. These acts are self-affirming. Second, it pushes the status quo door slightly ajar by introducing an alternative *modus operandi*. Whether they are subtle, unspoken, and recognizable by only a few or vocal, visible, and noteworthy to many, such acts, in aggregation, can provoke real reform.

Verbal Jujitsu

Like most martial arts, jujitsu involves taking a force coming at you and redirecting it to change the situation. Employees who practice verbal jujitsu

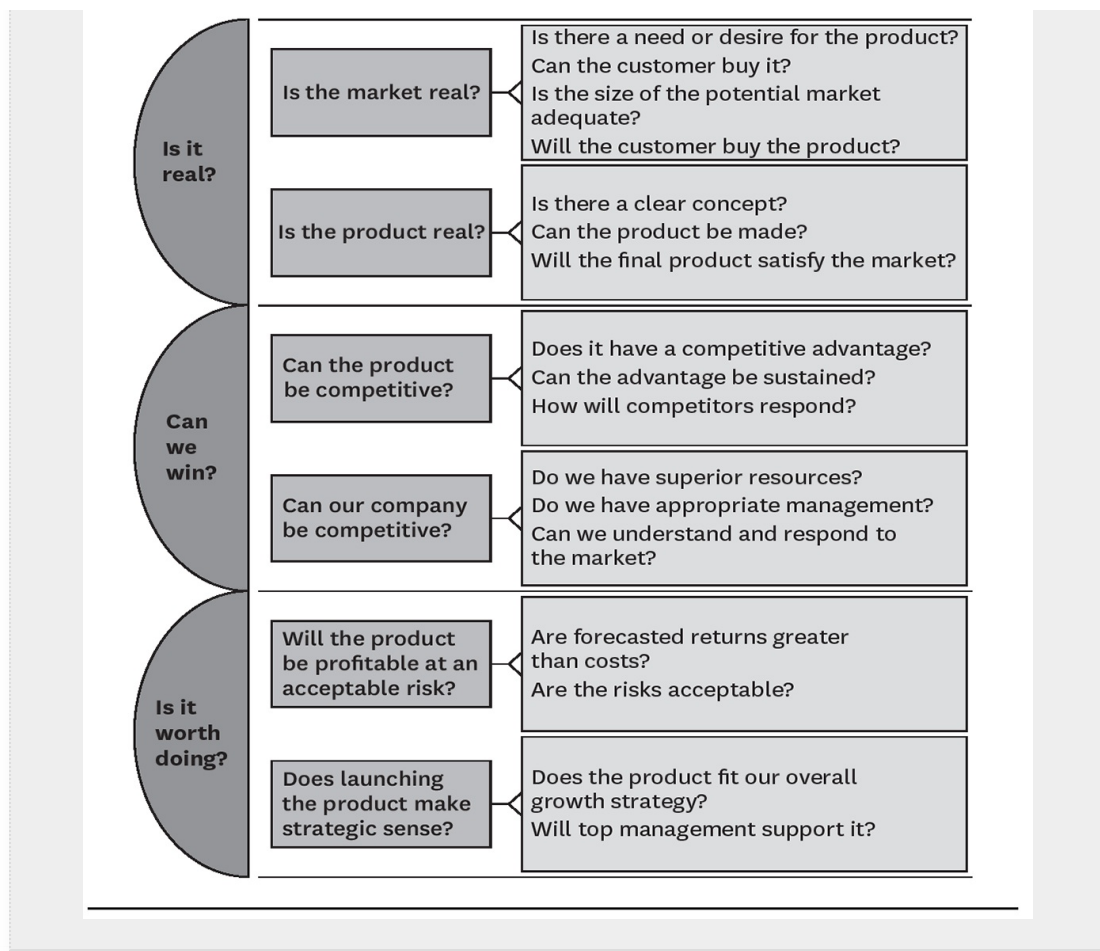
react to undesirable, demeaning statements or actions by turning them into opportunities for change that others will notice.

One form of verbal jujitsu involves calling attention to the opposition's own rhetoric. I recall a story told by a man named Tom Novak, an openly gay executive who worked in the San Francisco offices of a large financial services institution. As Tom and his colleagues began seating themselves around a table for a meeting in a senior executive's large office, the conversation briefly turned to the topic of the upcoming Gay Freedom Day parade and to so-called gay lifestyles in general. Joe, a colleague, said loudly, "I can appreciate that some people choose a gay lifestyle. I just don't understand why they have to flaunt it in people's faces."

A Spectrum of Tempered Change Strategies

THE TEMPERED RADICAL'S SPECTRUM of strategies is anchored on the left by ***disruptive self-expression***: subtle acts of private, individual style. A slightly more public form of expression, ***verbal jujitsu***, turns the opposition's negative expression or behavior into opportunities for change. Further along the spectrum, the tempered radical uses ***variable-term opportunism*** to recognize and act on short- and long-term chances to motivate others. And through ***strategic alliance building***, the individual works directly with others to bring about more extensive change. The more conversations an individual's action inspires and the more people it engages, the stronger the impetus toward change becomes.

In reality, people don't apply the strategies in the spectrum sequentially or even necessarily separately. Rather, these tools blur and overlap. Tempered radicals remain flexible in their approach, "heating up" or "cooling off" each as conditions warrant.



Stung, Tom was tempted to keep his mouth shut and absorb the injury, but that would have left him resentful and angry. He could have openly condemned Joe's bias, but that would have made him look defensive and self-righteous. Instead, he countered Joe with an altered version of Joe's own argument, saying calmly, "I know what you mean, Joe. I'm just wondering about that big picture of your wife on your desk. There's nothing wrong with being straight, but it seems that you are the one announcing your sexuality." Suddenly embarrassed, Joe responded with a simple, "Touché."

Managers can use verbal jujitsu to prevent talented employees, and their valuable contributions, from becoming inadvertently marginalized. That's what happened in the following story. Brad Williams was a sales manager at a high-technology company. During a meeting one day, Brad noticed that Sue, the new marketing director, had tried to interject a few comments, but everything she said was routinely ignored. Brad waited for the right moment to correct the situation. Later on in the meeting, Sue's colleague George raised similar

concerns about distributing the new business's products outside the country. The intelligent remark stopped all conversation. During the pause, Brad jumped in: "That's an important idea," he said. "I'm glad George picked up on Sue's concerns. Sue, did George correctly capture what you were thinking?"

With this simple move, Brad accomplished a number of things. First, by indirectly showing how Sue had been silenced and her idea co-opted, he voiced an unspoken fact. Second, by raising Sue's visibility, he changed the power dynamic in the room. Third, his action taught his colleagues a lesson about the way they listened—and didn't. Sue said that after that incident she was no longer passed over in staff meetings.

In practicing verbal jujitsu, both Tom and Brad displayed considerable self-control and emotional intelligence. They listened to and studied the situation at hand, carefully calibrating their responses to disarm without harming. In addition, they identified the underlying issues (sexual bias, the silencing of newcomers) without sounding accusatory and relieved unconscious tensions by voicing them. In so doing, they initiated small but meaningful changes in their colleagues' assumptions and behavior.

Variable-Term Opportunism

Like jazz musicians, who build completely new musical experiences from old standards as they go along, tempered radicals must be creatively open to opportunity. In the short-term, that means being prepared to capitalize on serendipitous circumstances; in the longterm, it often means something more proactive. The first story that follows illustrates the former case; the second is an example of the latter.

Tempered radicals like Chris Morgan know that rich opportunities for reform can often appear suddenly, like a \$20 bill found on a sidewalk. An investment manager in the audit department of a New York conglomerate, Chris made a habit of doing whatever he could to reduce waste. To save paper, for example, he would single-space his documents and put them in a smaller font before pressing the "Print" button, and he would use both sides

of the paper. One day, Chris noticed that the company cafeteria packaged its sandwiches in Styrofoam boxes that people opened and immediately tossed. He pulled the cafeteria manager aside. “Mary,” he said with a big smile, “those turkey-on-focaccia sandwiches look delicious today! I was wondering, though . . . would it be possible to wrap sandwiches only when people asked you to?” By making this very small change, Chris pointed out, the cafeteria would save substantially on packaging costs.

Chris gently rocked the boat by taking the following steps. First, he picked low-hanging fruit, focusing on something that could be done easily and without causing a lot of stir. Next, he attacked the problem not by criticizing Mary’s judgment but by enrolling her in his agenda (praising her tempting sandwiches, then making a gentle suggestion). Third, he illuminated the advantages of the proposed change by pointing out the benefits to the cafeteria. And he started a conversation that, through Mary, spread to the rest of the cafeteria staff. Finally, he inspired others to action: Eventually, the cafeteria staff identified and eliminated 12 other wasteful practices.

Add up enough conversations and inspire enough people and, sooner or later, you get real change. A senior executive named Jane Adams offers a case in point. Jane was hired in 1995 to run a 100-person, mostly male software-development division in an extremely fast-growing, pre-IPO technology company. The CEO of the company was an autocrat who expected his employees to emulate his dog-eat-dog management style. Although Jane was new to the job and wanted very much to fit in and succeed, turf wars and command-and-control tactics were anathema to her. Her style was more collaborative; she believed in sharing power. Jane knew that she could not attack the company’s culture by arguing with the CEO; rather, she took charge of her own division and ran it her own way. To that end, she took every opportunity to share power with subordinates. She instructed each of her direct reports to delegate responsibility as much as possible. Each time she heard about someone taking initiative in making a decision, she would praise that person openly before his or her manager. She encouraged people to take

calculated risks and to challenge her.

When asked to give high-visibility presentations to the company's executive staff, she passed the opportunities to those who had worked directly on the project. At first, senior executives raised their eyebrows, but Jane assured them that the presenter would deliver. Thus, her subordinates gained experience and won credit that, had they worked for someone else, they would likely never have received.

Occasionally, people would tell Jane that they noticed a refreshing contrast between her approach and the company's prevailing one. "Thanks, I'm glad you noticed," she would say with a quiet smile. Within a year, she saw that several of her own direct reports began themselves to lead in a more collaborative manner. Soon, employees from other divisions, hearing that Jane's was one of the best to work for, began requesting transfers. More important, Jane's group became known as one of the best training grounds and Jane as one of the best teachers and mentors of new talent. Nowhere else did people get the experience, responsibility, and confidence that she cultivated in her employees.

For Chris Morgan, opportunity was short-term and serendipitous. For Jane Adams, opportunity was more long-term, something to be mined methodically. In both cases, though, remaining alert to such variable-term opportunities and being ready to capitalize on them were essential.

Strategic Alliance Building

So far, we have seen how tempered radicals, more or less working alone, can effect change. What happens when these individuals work with allies? Clearly, they gain a sense of legitimacy, access to resources and contacts, technical and task assistance, emotional support, and advice. But they gain much more—the power to move issues to the forefront more quickly and directly than they might by working alone.

When one enlists the help of like-minded, similarly tempered coworkers, the strategic alliance gains clout. That's what happened when a group of senior

women at a large professional services firm worked with a group of men sympathetic to their cause. The firm's executive management asked the four-woman group to find out why it was so hard for the company to keep female consultants on staff. In the course of their investigation, the women discussed the demanding culture of the firm: a 70-hour work week was the norm, and most consultants spent most of their time on the road, visiting clients. The only people who escaped this demanding schedule were part-time consultants, nearly all of whom happened to be women with families. These part-timers were evaluated according to the same performance criteria—including the expectation of long hours—as full-time workers. Though many of the part-timers were talented contributors, they consistently failed to meet the time criterion and so left the company. To correct the problem, the senior women first gained the ear of several executive men who, they knew, regretted missing time with their own families. The men agreed that this was a problem and that the company could not continue to bleed valuable talent. They signed on to help address the issue and, in a matter of months, the evaluation system was adjusted to make success possible for all workers, regardless of their hours.

Tempered radicals don't allow preconceived notions about "the opposition" to get in their way. Indeed, they understand that those who represent the majority perspective are vitally important to gaining support for their cause. Paul Wielgus quietly started a revolution at his company by effectively persuading the opposition to join him. In 1991, Allied Domecq, the global spirits company whose brands include Courvoisier and Beefeater, hired Paul as a marketing director in its brewing and wholesaling division. Originally founded in 1961 as the result of a merger of three British brewing and pub-owning companies, the company had inherited a bureaucratic culture. Tony Hales, the CEO, recognized the need for dramatic change inside the organization and appreciated Paul's talent and fresh perspective. He therefore allowed Paul to quit his marketing job, report directly to the CEO, and found a nine-person learning and training department that ran programs to help participants shake off stodgy thinking and boost their creativity. Yet despite

the department's blessing from on high and a two-year record of success, some managers thought of it as fluff. In fact, when David, a senior executive from the internal audit department, was asked to review cases of unnecessary expense, he called Paul on the carpet.

Paul's strategy was to treat David not as a threat but as an equal, even a friend. Instead of being defensive during the meeting, Paul used the opportunity to sell his program. He explained that the trainers worked first with individuals to help unearth their personal values, then worked with them in teams to develop new sets of group values that they all believed in. Next, the trainers aligned these personal and departmental values with those of the company as a whole. "You wouldn't believe the changes, David," he said, enthusiastically. "People come out of these workshops feeling so much more excited about their work. They find more meaning and purpose in it, and as a consequence are happier and much more productive. They call in sick less often, they come to work earlier in the morning, and the ideas they produce are much stronger." Once David understood the value of Paul's program, the two began to talk about holding the training program in the internal audit department itself.

Paul's refusal to be frightened by the system, his belief in the importance of his work, his search for creative and collaborative solutions, his lack of defensiveness with an adversary, and his ability to connect with the auditor paved the way for further change at Allied Domecq. Eventually, the working relationship the two men had formed allowed the internal audit department to transform its image as a policing unit into something more positive. The new Audit Services department came to be known as a partner, rather than an enforcer, in the organization as a whole. And as head of the newly renamed department, David became a strong supporter of Paul's work.

Tempered radicals understand that people who represent the majority perspective can be important allies in more subtle ways as well. In navigating the course between their desire to undo the status quo and the organizational requirements to uphold it, tempered radicals benefit from the advice of

insiders who know just how hard to push. When a feminist who wants to change the way her company treats women befriends a conservative Republican man, she knows he can warn her of political minefields. When a Latino manager wants his company to put a Spanish-language version of a manual up on the company's intranet, he knows that the white, monolingual executive who runs operations may turn out to be an excellent advocate.

Of course, tempered radicals know that not everyone is an ally, but they also know it's pointless to see those who represent the status quo as enemies. The senior women found fault with an inequitable evaluation system, not with their male colleagues. Paul won David's help by giving him the benefit of the doubt from the very beginning of their relationship. Indeed, tempered radicals constantly consider all possible courses of action: "Under what conditions, for what issues, and in what circumstances does it make sense to join forces with others?"; "How can I best use this alliance to support my efforts?"

Clearly, there is no one right way to effect change. What works for one individual under one set of circumstances may not work for others under different conditions. The examples above illustrate how tempered radicals use a spectrum of quiet approaches to change their organizations. Some actions are small, private, and muted; some are larger and more public. Their influence spreads as they recruit others and spawn conversations. Top managers can learn a lot from these people about the mechanics of evolutionary change.

Tempered radicals bear no banners; they sound no trumpets. Their ends are sweeping, but their means are mundane. They are firm in their commitments, yet flexible in the ways they fulfill them. Their actions may be small but can spread like a virus. They yearn for rapid change but trust in patience. They often work individually yet pull people together. Instead of stridently pressing their agendas, they start conversations. Rather than battling powerful foes, they seek powerful friends. And in the face of setbacks, they keep going. To do all this, tempered radicals understand revolutionary change for what it is—a

phenomenon that can occur suddenly but more often than not requires time, commitment, and the patience to endure.

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Notes

1. With the exception of those in the VA hospital and Allied Domecq cases, all the names used through this article are fictitious.

Tipping Point Leadership

by W. Chan Kim and Renée Mauborgne

IN FEBRUARY 1994, William Bratton was appointed police commissioner of New York City. The odds were against him. The New York Police Department, with a \$2 billion budget and a workforce of 35,000 police officers, was notoriously difficult to manage. Turf wars over jurisdiction and funding were rife. Officers were underpaid relative to their counterparts in neighboring communities, and promotion seemed to bear little relationship to performance. Crime had gotten so far out of control that the press referred to the Big Apple as the Rotten Apple. Indeed, many social scientists had concluded, after three decades of increases, that New York City crime was impervious to police intervention. The best the police could do was react to crimes once they were committed.

Yet in less than two years, and without an increase in his budget, Bill Bratton turned New York into the safest large city in the nation. Between 1994 and 1996, felony crime fell 39%; murders, 50%; and theft, 35%. Gallup polls reported that public confidence in the NYPD jumped from 37% to 73%, even as internal surveys showed job satisfaction in the police department reaching an all-time high. Not surprisingly, Bratton's popularity soared, and in 1996, he was featured on the cover of *Time*. Perhaps most impressive, the changes have outlasted their instigator, implying a fundamental shift in the department's organizational culture and strategy. Crime rates have continued to fall: Statistics released in December 2002 revealed that New York's overall crime rate is the lowest among the 25 largest cities in the United States.

The NYPD turnaround would be impressive enough for any police chief. For Bratton, though, it is only the latest of no fewer than five successful turnarounds in a 20-year career in policing. In the hope that Bratton can repeat his New York and Boston successes, Los Angeles has recruited him to take on the challenge of turning around the LAPD. (For a summary of his achievements, see the table “Bratton in action.”)

So what makes Bill Bratton tick? As management researchers, we have long been fascinated by what triggers high performance or suddenly brings an ailing organization back to life. In an effort to find the common elements underlying such leaps in performance, we have built a database of more than 125 business and nonbusiness organizations. Bratton first caught our attention in the early 1990s, when we heard about his turnaround of the New York Transit Police. Bratton was special for us because in all of his turnarounds, he succeeded in record time despite facing all four of the hurdles that managers consistently claim block high performance: an organization wedded to the status quo, limited resources, a demotivated staff, and opposition from powerful vested interests. If Bratton could succeed against these odds, other leaders, we reasoned, could learn a lot from him.

Over the years, through our professional and personal networks and the rich public information available on the police sector, we have systematically compared the strategic, managerial, and performance records of Bratton’s turnarounds. We have followed up by interviewing the key players, including Bratton himself, as well as many other people who for professional—or sometimes personal—reasons tracked the events.

Our research led us to conclude that all of Bratton’s turnarounds are textbook examples of what we call tipping point leadership. The theory of tipping points, which has its roots in epidemiology, is well known; it hinges on the insight that in any organization, once the beliefs and energies of a critical mass of people are engaged, conversion to a new idea will spread like an epidemic, bringing about fundamental change very quickly. The theory suggests that such a movement can be unleashed only by agents who make

unforgettable and unarguable calls for change, who concentrate their resources on what really matters, who mobilize the commitment of the organization's key players, and who succeed in silencing the most vocal naysayers. Bratton did all of these things in all of his turnarounds.

Idea in Brief

How can you overcome the hurdles facing any organization struggling to change: addiction to the status quo, limited resources, demotivated employees, and opposition from powerful vested interests?

Take lessons from police chief Bill Bratton, who's pulled the trick off five times. Most dramatically, he transformed the U.S.'s most dangerous city—New York—into its safest. Bratton used **tipping point leadership** to make unarguable calls for change, concentrate resources on what really mattered, mobilize key players' commitment, and silence naysayers.

Not every executive has Bratton's personality, but most have his potential—if they follow his success formula.

Most managers only dream of pulling off the kind of performance leaps Bratton delivered. Even Jack Welch needed some ten years and tens of millions of dollars of restructuring and training to turn GE into the powerhouse it is today. Few CEOs have the time and money that Welch had, and most—even those attempting relatively mild change—are soon daunted by the scale of the hurdles they face. Yet we have found that the dream can indeed become a reality. For what makes Bratton's turnarounds especially exciting to us is that his approach to overcoming the hurdles standing in the way of high performance has been remarkably consistent. His successes, therefore, are not just a matter of personality but also of method, which suggests that they can be replicated. Tipping point leadership is learnable.

In the following pages, we'll lay out the approach that has enabled Bratton to overcome the forces of inertia and reach the tipping point. We'll show first

how Bratton overcame the cognitive hurdles that block companies from recognizing the need for radical change. Then we'll describe how he successfully managed around the public sector's endemic constraints on resources, which he even turned to his advantage. In the third section, we'll explain how Bratton overcame the motivational hurdles that had discouraged and demoralized even the most eager police officers. Finally, we'll describe how Bratton neatly closed off potentially fatal resistance from vocal and powerful opponents. (For a graphic summary of the ideas expressed in this article, see the figure "[Tipping point leadership at a glance.](#)")

Idea in Practice

Four Steps to the Tipping Point

1. Break through the cognitive hurdle.

To make a compelling case for change, don't just point at the numbers and demand better ones. Your abstract message won't stick. Instead, make key managers **experience** your organization's problems.

Example: New Yorkers once viewed subways as the most dangerous places in their city. But the New York Transit Police's senior staff pooh-poohed public fears—because none had ever ridden subways. To shatter their complacency, Bratton required all NYTP officers—himself included—to commute by subway. Seeing the jammed turnstiles, youth gangs, and derelicts, they grasped the need for change—and embraced responsibility for it.

2. Sidestep the resource hurdle.

Rather than trimming your ambitions (dooming your company to mediocrity) or fighting for more resources (draining attention from the underlying problems), concentrate **current** resources on areas **most** needing change.

Example: Since the majority of subway crimes occurred at only a few stations, Bratton focused manpower there—instead of putting a cop on every subway line, entrance, and exit.

3. Jump the motivational hurdle.

To turn a mere strategy into a movement, people must recognize what needs to be done and yearn to do it themselves. But don't try reforming your whole organization; that's cumbersome and expensive. Instead, motivate **key influencers**—persuasive people with multiple connections. Like bowling kingpins hit straight on, they topple all the other pins. Most organizations have several key influencers who share common problems and concerns—making it easy to identify and motivate them.

Example: Bratton put the NYPD's key influencers—precinct commanders—under a spotlight during semiweekly crime strategy review meetings, where peers and superiors grilled commanders about precinct performance. Results? A culture of performance, accountability, and learning that commanders replicated down the ranks.

Also make challenges attainable. Bratton exhorted staff to make NYC's streets safe "block by block, precinct by precinct, and borough by borough."

4. Knock over the political hurdle.

Even when organizations reach their tipping points, powerful vested interests resist change. Identify and silence key naysayers early by putting a respected senior insider on your top team.

Example: At the NYPD, Bratton appointed 20-year veteran cop John Timoney as his number two. Timoney knew the key players and how they played the political game. Early on, he identified likely saboteurs and resisters among top staff—prompting a changing of the guard.

Also, silence opposition with indisputable facts. When Bratton proved his proposed crime-reporting system required less than 18 minutes a day, time-crunched precinct commanders adopted it.

Break Through the Cognitive Hurdle

In many turnarounds, the hardest battle is simply getting people to agree on

the causes of current problems and the need for change. Most CEOs try to make the case for change simply by pointing to the numbers and insisting that the company achieve better ones. But messages communicated through numbers seldom stick. To the line managers—the very people the CEO needs to win over—the case for change seems abstract and remote. Those whose units are doing well feel that the criticism is not directed at them, that the problem is top management’s. Managers of poorly performing units feel that they have been put on notice—and people worried about job security are more likely to be scanning the job market than trying to solve the company’s problems.

Bratton in action

The New York Police Department was not Bill Bratton’s first turnaround. The table describes his biggest challenges and achievements during his 20 years as a policy reformer.

Domain	Boston Police District 4	Massachusetts Bay Transit Authority (MBTA)	Boston Metropolitan Police (“The Mets”)	New York Transit Police (NYTP)	New York Police Department (NYPD)
Years	1977–1982	1983–1986	1986–1990	1990–1992	1994–1996
Position	Sergeant, lieutenant	Superintendent	Superintendent	Chief of police	Commissioner
Setting	Assaults, drug dealing, prostitution, public drinking, and graffiti were endemic to the area. The Boston public shied away from attending baseball games and other events and from shopping in the Fenway neighborhood for fear of being robbed or attacked or having their cars stolen.	Subway crime had been on the rise for the past five years. The media dubbed the Boston subway the Terror Train. The <i>Boston Globe</i> published a series on police incompetence in the MBTA.	The Mets lacked modern equipment, procedures, and discipline. Physical facilities were crumbling. Accountability, discipline, and morale were low in the 600-person Mets workforce.	Crime had risen 25% per year in the past three years—twice the overall rate for the city. Subway use by the public had declined sharply; polls indicated that New Yorkers considered the subway the most dangerous place in the city. There were 170,000 fare evaders per day, costing the city \$80 million annually. Aggressive panhandling and vandalism were endemic. More than 5,000 people were living in the subway system.	The middle class was fleeing to the suburbs in search of a better quality of life. There was public despair in the face of the high crime rate. Crime was seen as part of a breakdown of social norms. The budget for policing was shrinking. The NYPD budget (aside from personnel) was being cut by 35%. The staff was demoralized and relatively underpaid.

Domain	Boston Police District 4	Massachusetts Bay Transit Authority (MBTA)	Boston Metropolitan Police ("The Mets")	New York Transit Police (NYTP)	New York Police Department (NYPD)
Results	Crime throughout the Fenway area was dramatically reduced. Tourists, residents, and investment returned as an entire area of the city rebounded.	Crime on the MBTA decreased by 27%; arrests rose to 1,600 per year from 600. The MBTA police met more than 800 standards of excellence to be accredited by the National Commission on Accreditation for Police Agencies. It was only the 13th police department in the country to meet this standard. Equipment acquired during his tenure: 55 new mid-size cars, new uniforms, and new logos. Ridership began to grow.	Employee morale rose as Bratton instilled accountability, protocol, and pride. In three years, the Metropolitan Police changed from a dispirited, doing nothing, reactive organization with a poor self-image and an even worse public image to a very proud, proactive department. Equipment acquired during his tenure: 100 new vehicles, a helicopter, and a state-of-the-art radio system.	In two years, Bratton reduced felony crime by 22%, with robberies down by 40%. Increased confidence in the subway led to increased ridership. Fare evasion was cut in half. Equipment acquired during his tenure: a state-of-the-art communication system, advanced handguns for officers, and new patrol cars (the number of cars doubled).	Overall crime fell by 17%. Felony crime fell by 39%. Murders fell by 50%. Theft fell by 35% (robberies were down by one-third, burglaries by one-quarter). There were 200,000 fewer victims a year than in 1990. By the end of Bratton's tenure, the NYPD had a 73% positive rating, up from 37% four years earlier.

For all these reasons, tipping point leaders like Bratton do not rely on numbers to break through the organization's cognitive hurdles. Instead, they put their key managers face-to-face with the operational problems so that the managers cannot evade reality. Poor performance becomes something they witness rather than hear about. Communicating in this way means that the message—performance is poor and needs to be fixed—sticks with people, which is essential if they are to be convinced not only that a turnaround is necessary but that it is something they can achieve.

When Bratton first went to New York to head the transit police in April 1990, he discovered that none of the senior staff officers rode the subway. They commuted to work and traveled around in cars provided by the city. Comfortably removed from the facts of underground life—and reassured by statistics showing that only 3% of the city's major crimes were committed in the subway—the senior managers had little sensitivity to riders' widespread concern about safety. In order to shatter the staff's complacency, Bratton

began requiring that all transit police officials—beginning with himself—ride the subway to work, to meetings, and at night. It was many staff officers' first occasion in years to share the ordinary citizen's subway experience and see the situation their subordinates were up against: jammed turnstiles, aggressive beggars, gangs of youths jumping turnstiles and jostling people on the platforms, winos and homeless people sprawled on benches. It was clear that even if few major crimes took place in the subway, the whole place reeked of fear and disorder. With that ugly reality staring them in the face, the transit force's senior managers could no longer deny the need for a change in their policing methods.

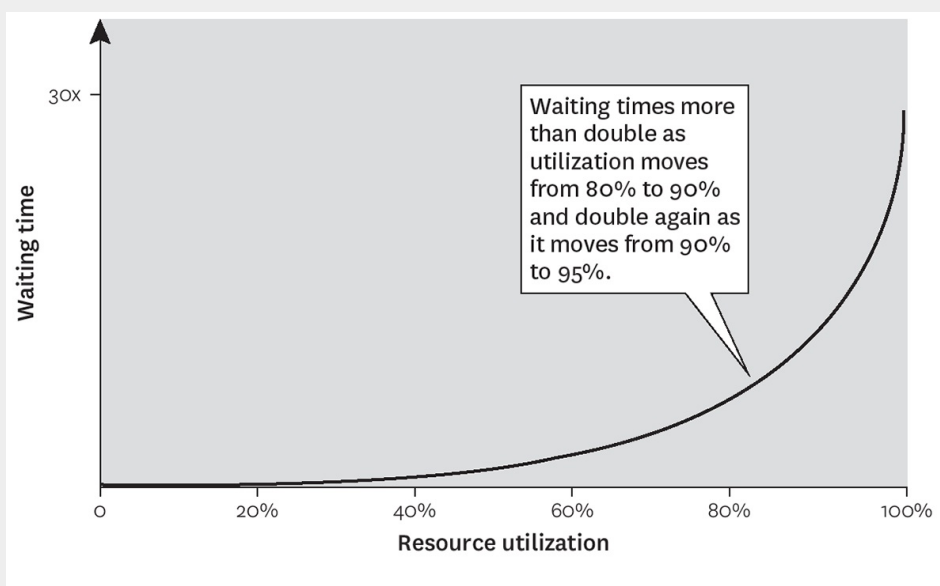
Bratton uses a similar approach to help sensitize his superiors to his problems. For instance, when he was running the police division of the Massachusetts Bay Transit Authority (MBTA), which runs the Boston-area subway and buses, the transit authority's board decided to purchase small squad cars that would be cheaper to buy and run. Instead of fighting the decision, Bratton invited the MBTA's general manager for a tour of the district. He picked him up in a small car just like the ones that were to be ordered. He jammed the seats forward to let the general manager feel how little legroom a six-foot cop would have, then drove him over every pothole he could find. Bratton also put on his belt, cuffs, and gun for the trip so the general manager could see how little space there was for the tools of the officer's trade. After just two hours, the general manager wanted out. He said he didn't know how Bratton could stand being in such a cramped car for so long on his own—let alone if there were a criminal in the backseat. Bratton got the larger cars he wanted.

Tipping point leadership at a glance

Leaders like Bill Bratton use a four-step process to bring about rapid, dramatic, and lasting change with limited resources. The cognitive and resource hurdles shown here represent the obstacles that organizations face in reorienting and formulating strategy. The motivational and political hurdles prevent a strategy's rapid execution. Tipping all four hurdles

leads to rapid strategy reorientation and execution.

Overcoming these hurdles is, of course, a continuous process because the innovation of today soon becomes the conventional norm of tomorrow.



Bratton reinforces direct experiences by insisting that his officers meet the communities they are protecting. The feedback is often revealing. In the late 1970s, Boston's Police District 4, which included Symphony Hall, the Christian Science Mother Church, and other cultural institutions, was experiencing a surge in crime. The public was increasingly intimidated; residents were selling and leaving, pushing the community into a downward spiral. The Boston police performance statistics, however, did not reflect this reality. District 4 police, it seemed, were doing a splendid job of rapidly clearing 911 calls and tracking down perpetrators of serious crimes. To solve this paradox, Bratton had the unit organize community meetings in schoolrooms and civic centers so that citizens could voice their concerns to district sergeants and detectives. Obvious as the logic of this practice sounds, it was the first time in Boston's police history that anyone had attempted such an initiative—mainly because the practice up to that time had argued for detachment between police and the community in order to decrease the chances of police corruption.

The limitations of that practice quickly emerged. The meetings began with a

show-and-tell by the officers: 'This is what we are working on and why. But afterward, when citizens were invited to discuss the issues that concerned them, a huge perception gap came to light. While the police officers took pride in solving serious offenses like grand larceny and murder, few citizens felt in any danger from these crimes. They were more troubled by constant minor irritants: prostitutes, panhandlers, broken-down cars left on the streets, drunks in the gutters, filth on the sidewalks. The town meetings quickly led to a complete overhaul of the police priorities for District 4. Bratton has used community meetings like this in every turnaround since.

Bratton's internal communications strategy also plays an important role in breaking through the cognitive hurdles. Traditionally, internal police communication is largely based on memos, staff bulletins, and other documents. Bratton knows that few police officers have the time or inclination to do more than throw these documents into the wastebasket. Officers rely instead on rumor and media stories for insights into what headquarters is up to. So Bratton typically calls on the help of expert communication outsiders. In New York, for instance, he recruited John Miller, an investigative television reporter known for his gutsy and innovative style, as his communication czar. Miller arranged for Bratton to communicate through video messages that were played at roll calls, which had the effect of bringing Bratton—and his opinions—closer to the people he had to win over. At the same time, Miller's journalistic savvy made it easier for the NYPD to ensure that press interviews and stories echoed the strong internal messages Bratton was sending.

Sidestep the Resource Hurdle

Once people in an organization accept the need for change and more or less agree on what needs to be done, leaders are often faced with the stark reality of limited resources. Do they have the money for the necessary changes? Most reformist CEOs do one of two things at this point. They trim their ambitions, dooming the company to mediocrity at best and demoralizing the workforce all over again, or they fight for more resources from their bankers and

shareholders, a process that can take time and divert attention from the underlying problems.

That trap is completely avoidable. Leaders like Bratton know how to reach the organization's tipping point without extra resources. They can achieve a great deal with the resources they have. What they do is concentrate their resources on the places that are most in need of change and that have the biggest possible payoffs. This idea, in fact, is at the heart of Bratton's famous (and once hotly debated) philosophy of zero-tolerance policing.

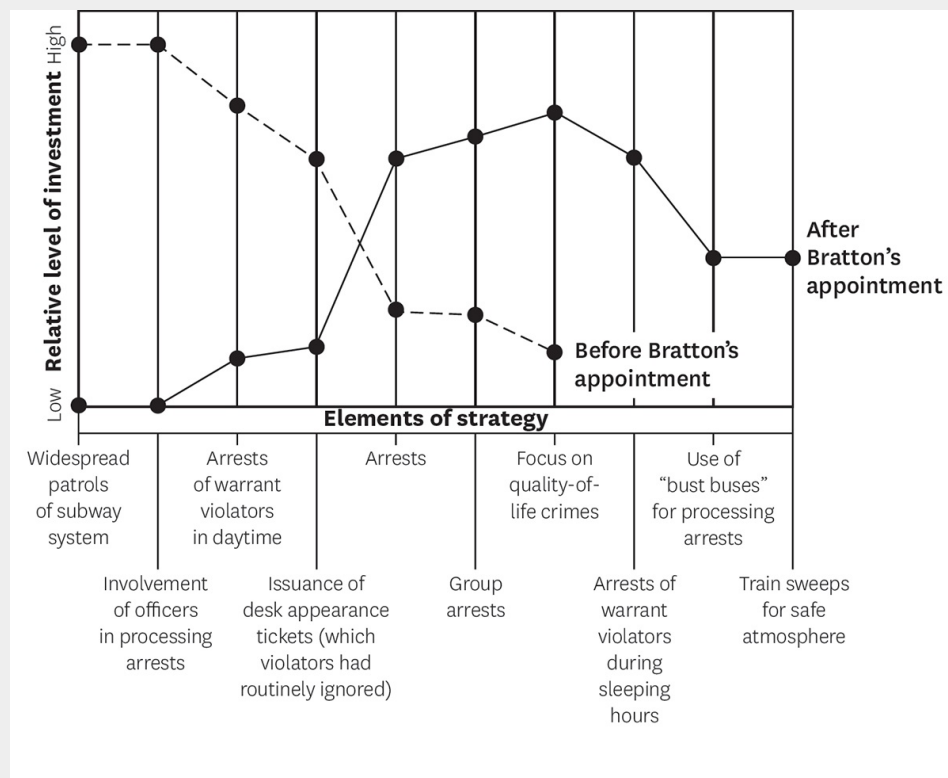
Having won people over to the idea of change, Bratton must persuade them to take a cold look at what precisely is wrong with their operating practices. It is at this point that he turns to the numbers, which he is adept at using to force through major changes. Take the case of the New York narcotics unit. Bratton's predecessors had treated it as secondary in importance, partly because they assumed that responding to 911 calls was the top priority. As a result, less than 5% of the NYPD's manpower was dedicated to fighting narcotics crimes.

At an initial meeting with the NYPD's chiefs, Bratton's deputy commissioner of crime strategy, Jack Maple, asked people around the table for their estimates of the percentage of crimes attributable to narcotics use. Most said 50%; others, 70%; the lowest estimate was 30%. On that basis, a narcotics unit consisting of less than 5% of the police force was grossly understaffed, Maple pointed out. What's more, it turned out that the narcotics squad largely worked Monday through Friday, even though drugs were sold in large quantities—and drug-related crimes persistently occurred—on the weekends. Why the weekday schedule? Because it had always been done that way; it was an unquestioned *modus operandi*. Once these facts were presented, Bratton's call for a major reallocation of staff and resources within the NYPD was quickly accepted.

The strategy canvas of transit:

How Bratton refocused resources

In comparing strategies across companies, we like to use a tool we call the strategy canvas, which highlights differences in strategies and resource allocation. The strategy canvas shown here compares the strategy and allocation of resources of the New York Transit Police before and after Bill Bratton's appointment as chief. The vertical axis shows the relative level of resource allocation. The horizontal axis shows the various elements of strategy in which the investments were made. Although a dramatic shift in resource allocation occurred and performance rose dramatically, overall investment of resources remained more or less constant. Bratton did this by de-emphasizing or virtually eliminating some traditional features of transit police work while increasing emphasis on others or creating new ones. For example, he was able to reduce the time police officers spent processing suspects by introducing mobile processing centers known as "bust buses."



A careful examination of the facts can also reveal where changes in key policies can reduce the need for resources, as Bratton demonstrated during his tenure as chief of New York's transit police. His predecessors had lobbied hard for the money to increase the number of subway cops, arguing that the only way to stop muggers was to have officers ride every subway line and patrol each of the system's 700 exits and entrances. Bratton, by contrast,

believed that subway crime could be resolved not by throwing more resources at the problem but by better targeting those resources. To prove the point, he had members of his staff analyze where subway crimes were being committed. They found that the vast majority occurred at only a few stations and on a couple of lines, which suggested that a targeted strategy would work well. At the same time, he shifted more of the force out of uniform and into plain clothes at the hot spots. Criminals soon realized that an absence of uniforms did not necessarily mean an absence of cops.

Distribution of officers was not the only problem. Bratton's analysis revealed that an inordinate amount of police time was wasted in processing arrests. It took an officer up to 16 hours per arrest to book the suspect and file papers on the incident. What's more, the officers so hated the bureaucratic process that they avoided making arrests in minor cases. Bratton realized that he could dramatically increase his available policing resources—not to mention the officers' motivation—if he could somehow improvise around this problem. His solution was to park “bust buses”—old buses converted into arrest-processing centers—around the corner from targeted subway stations. Processing time was cut from 16 hours to just one. Innovations like that enabled Bratton to dramatically reduce subway crime—even without an increase in the number of officers on duty at any given time. (The figure “The strategy canvas of transit: How Bratton refocused resources” illustrates how radically Bratton refocused the transit police's resources.)

Bratton's drive for data-driven policing solutions led to the creation of the famous Compstat crime database. The database, used to identify hot spots for intense police intervention, captures weekly crime and arrest activity—including times, locations, and associated enforcement activities—at the precinct, borough, and city levels. The Compstat reports allowed Bratton and the entire police department to easily discern established and emerging hot spots for efficient resource targeting and retargeting.

In addition to refocusing the resources he already controls, Bratton has proved adept at trading resources he doesn't need for those he does. The

chiefs of public-sector organizations are reluctant to advertise excess resources, let alone lend them to other agencies, because acknowledged excess resources tend to get reallocated. So over time, some organizations end up well endowed with resources they don't need—even if they are short of others. When Bratton took over as chief of the transit police, for example, his general counsel and policy adviser, Dean Esserman, now police chief of Providence, Rhode Island, discovered that the transit unit had more unmarked cars than it needed but was starved of office space. The New York Division of Parole, on the other hand, was short of cars but had excess office space. Esserman and Bratton offered the obvious trade. It was gratefully accepted by the parole division, and transit officials were delighted to get the first floor of a prime downtown building. The deal stoked Bratton's credibility within the organization, which would make it easier for him to introduce more fundamental changes later, and it marked him, to his political bosses, as a man who could solve problems.

Jump the Motivational Hurdle

Alerting employees to the need for change and identifying how it can be achieved with limited resources are necessary for reaching an organization's tipping point. But if a new strategy is to become a movement, employees must not only recognize what needs to be done, they must also want to do it. Many CEOs recognize the importance of getting people motivated to make changes, but they make the mistake of trying to reform incentives throughout the whole organization. That process takes a long time to implement and can prove very expensive, given the wide variety of motivational needs in any large company.

One way Bratton solves the motivation problem is by singling out the key influencers—people inside or outside the organization with disproportionate power due to their connections with the organization, their ability to persuade, or their ability to block access to resources. Bratton recognizes that these influencers act like kingpins in bowling: When you hit them just right, all the pins topple over. Getting the key influencers motivated frees an organization

from having to motivate everyone, yet everyone in the end is touched and changed. And because most organizations have relatively small numbers of key influencers, and those people tend to share common problems and concerns, it is relatively easy for CEOs to identify and motivate them.

Bratton's approach to motivating his key influencers is to put them under a spotlight. Perhaps his most significant reform of the NYPD's operating practices was instituting a semiweekly strategy review meeting that brought the top brass together with the city's 76 precinct commanders. Bratton had identified the commanders as key influential people in the NYPD, because each one directly managed 200 to 400 officers. Attendance was mandatory for all senior staff, including three-star chiefs, deputy commissioners, and borough chiefs. Bratton was there as often as possible.

At the meetings, which took place in an auditorium at the police command center, a selected precinct commander was called before a panel of the senior staff (the selected officer was given only two days' notice, in order to keep all the commanders on their toes). The commander in the spotlight was questioned by both the panel and other commanders about the precinct's performance. He or she was responsible for explaining projected maps and charts that showed, based on the Compstat data, the precinct's patterns of crimes and when and where the police responded. The commander would be required to provide a detailed explanation if police activity did not mirror crime spikes and would also be asked how officers were addressing the precinct's issues and why performance was improving or deteriorating. The meetings allowed Bratton and his senior staff to carefully monitor and assess how well commanders were motivating and managing their people and how well they were focusing on strategic hot spots.

The meetings changed the NYPD's culture in several ways. By making results and responsibilities clear to everyone, the meetings helped to introduce a culture of performance. Indeed, a photo of the commander who was about to be grilled appeared on the front page of the handout that each meeting participant received, emphasizing that the commander was accountable for the

precinct's results. An incompetent commander could no longer cover up his failings by blaming his precinct's results on the shortcomings of neighboring precincts, because his neighbors were in the room and could respond. By the same token, the meetings gave high achievers a chance to be recognized both for making improvements in their own precincts and for helping other commanders. The meetings also allowed police leaders to compare notes on their experiences; before Bratton's arrival, precinct commanders hardly ever got together as a group. Over time, this management style filtered down through the ranks, as the precinct commanders tried out their own versions of Bratton's meetings. With the spotlight shining brightly on their performance, the commanders were highly motivated to get all the officers under their control marching to the new strategy.

The great challenges in applying this kind of motivational device, of course, are ensuring that people feel it is based on fair processes and seeing to it that they can draw lessons from both good and bad results. Doing so increases the organization's collective strength and everyone's chance of winning. Bratton addresses the issue of fair process by engaging all key influencers in the procedures, setting clear performance expectations, and explaining why these strategy meetings, for example, are essential for fast execution of policy. He addresses the issue of learning by insisting that the team of top brass play an active role in meetings and by being an active moderator himself. Precinct commanders can talk about their achievements or failures without feeling that they are showing off or being shown up. Successful commanders aren't seen as bragging, because it's clear to everyone that they were asked by Bratton's top team to show, in detail, how they achieved their successes. And for commanders on the receiving end, the sting of having to be taught a lesson by a colleague is mitigated, at least, by their not having to suffer the indignity of asking for it. Bratton's popularity soared when he created a humorous video satirizing the grilling that precinct commanders were given; it showed the cops that he understood just how much he was asking of them.

Bratton also uses another motivational lever: framing the reform challenge

itself. Framing the challenge is one of the most subtle and sensitive tasks of the tipping point leader; unless people believe that results are attainable, a turnaround is unlikely to succeed. On the face of it, Bratton's goal in New York was so ambitious as to be scarcely believable. Who would believe that the city could be made one of the safest in the country? And who would want to invest time and energy in chasing such an impossible dream?

To make the challenge seem manageable, Bratton framed it as a series of specific goals that officers at different levels could relate to. As he put it, the challenge the NYPD faced was to make the streets of New York safe "block by block, precinct by precinct, and borough by borough." Thus framed, the task was both all encompassing and doable. For the cops on the street, the challenge was making their beats or blocks safe—no more. For the commanders, the challenge was making their precincts safe—no more. Borough heads also had a concrete goal within their capabilities: making their boroughs safe—no more. No matter what their positions, officers couldn't say that what was being asked of them was too tough. Nor could they claim that achieving it was out of their hands. In this way, responsibility for the turnaround shifted from Bratton to each of the thousands of police officers on the force.

Knock Over the Political Hurdle

Organizational politics is an inescapable reality in public and corporate life, a lesson Bratton learned the hard way. In 1980, at age 34 one of the youngest lieutenants in Boston's police department, he had proudly put up a plaque in his office that said: "Youth and skill will win out every time over age and treachery." Within just a few months, having been shunted into a dead-end position due to a mixture of office politics and his own brashness, Bratton took the sign down. He never again forgot the importance of understanding the plotting, intrigue, and politics involved in pushing through change. Even if an organization has reached the tipping point, powerful vested interests will resist the impending reforms. The more likely change becomes, the more

fiercely and vocally these negative influencers—both internal and external—will fight to protect their positions, and their resistance can seriously damage, even derail, the reform process.

Bratton anticipates these dangers by identifying and silencing powerful naysayers early on. To that end, he always ensures that he has a respected senior insider on the top team. At the NYPD, for instance, Bratton appointed John Timoney, now Miami's police commissioner, as his number two. Timoney was a cop's cop, respected and feared for his dedication to the NYPD and for the more than 60 decorations he had received. Twenty years in the ranks had taught him who all the key players were and how they played the political game. One of the first tasks Timoney carried out was to report to Bratton on the likely attitudes of the top staff toward Bratton's concept of zero-tolerance policing, identifying those who would fight or silently sabotage the new initiatives. This led to a dramatic changing of the guard.

Of course, not all naysayers should face the ultimate sanction—there might not be enough people left to man the barricades. In many cases, therefore, Bratton silences opposition by example and indisputable fact. For instance, when first asked to compile detailed crime maps and information packages for the strategy review meetings, most precinct commanders complained that the task would take too long and waste valuable police time that could be better spent fighting crime. Anticipating this argument, deputy commissioner Jack Maple set up a reporting system that covered the city's most crime-ridden areas. Operating the system required no more than 18 minutes a day, which worked out, as he told the precinct commanders, to less than 1% of the average precinct's workload. Try to argue with that.

Often the most serious opposition to reform comes from outside. In the public sector, as in business, an organization's change of strategy has an impact on other organizations—partners and competitors alike. The change is likely to be resisted by those players if they are happy with the status quo and powerful enough to protest the changes. Bratton's strategy for dealing with such opponents is to isolate them by building a broad coalition with the other

independent powers in his realm. In New York, for example, one of the most serious threats to his reforms came from the city's courts, which were concerned that zero-tolerance policing would result in an enormous number of small-crimes cases clogging the court schedule.

To get past the opposition of the courts, Bratton solicited the support of no less a personage than the mayor, Rudolph Giuliani, who had considerable influence over the district attorneys, the courts, and the city jail on Rikers Island. Bratton's team demonstrated to the mayor that the court system had the capacity to handle minor "quality of life" crimes, even though doing so would presumably not be palatable for them.

The mayor decided to intervene. While conceding to the courts that a crackdown campaign would cause a short-term spike in court work, he also made clear that he and the NYPD believed it would eventually lead to a workload reduction for the courts. Working together in this way, Bratton and the mayor were able to maneuver the courts into processing quality-of-life crimes. Seeing that the mayor was aligned with Bratton, the courts appealed to the city's legislators, advocating legislation to exempt them from handling minor-crime cases on the grounds that such cases would clog the system and entail significant costs to the city. Bratton and the mayor, who were holding weekly strategy meetings, added another ally to their coalition by placing their case before the press, in particular the *New York Times*. Through a series of press conferences and articles and at every interview opportunity, the issue of zero tolerance was put at the front and center of public debate with a clear, simple message: If the courts did not help crack down on quality-of-life crimes, the city's crime rates would not improve. It was a matter not of saving dollars but of saving the city.

Bratton's alliance with the mayor's office and the city's leading media institution successfully isolated the courts. The courts could hardly be seen as publicly opposing an initiative that would not only make New York a more attractive place to live but would ultimately reduce the number of cases brought before them. With the mayor speaking aggressively in the press about

the need to pursue quality-of-life crimes and the city's most respected—and liberal—newspaper giving credence to the policy, the costs of fighting Bratton's strategy were daunting. Thanks to this savvy politicking, one of Bratton's biggest battles was won, and the legislation was not enacted. The courts would handle quality-of-life crimes. In due course, the crime rates did indeed come tumbling down.

Of course, Bill Bratton, like any leader, must share the credit for his successes. Turning around an organization as large and as wedded to the status quo as the NYPD requires a collective effort. But the tipping point would not have been reached without him—or another leader like him. And while we recognize that not every executive has the personality to be a Bill Bratton, there are many who have that potential once they know the formula for success. It is that formula that we have tried to present, and we urge managers who wish to turn their companies around, but have limited time and resources, to take note. By addressing the hurdles to tipping point change described in these pages, they will stand a chance of achieving the same kind of results for their shareholders as Bratton has delivered to the citizens of New York.

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A Survival Guide for Leaders

by Ronald A. Heifetz and Marty Linsky

THINK OF THE MANY top executives in recent years who, sometimes after long periods of considerable success, have crashed and burned. Or think of individuals you have known in less prominent positions, perhaps people spearheading significant change initiatives in their organizations, who have suddenly found themselves out of a job. Think about yourself: In exercising leadership, have *you* ever been removed or pushed aside?

Let's face it, to lead is to live dangerously. While leadership is often depicted as an exciting and glamorous endeavor, one in which you inspire others to follow you through good times and bad, such a portrayal ignores leadership's dark side: the inevitable attempts to take you out of the game.

Those attempts are sometimes justified. People in top positions must often pay the price for a flawed strategy or a series of bad decisions. But frequently, something more is at work. We're not talking here about conventional office politics; we're talking about the high-stake risks you face whenever you try to lead an organization through difficult but necessary change. The risks during such times are especially high because change that truly transforms an organization, be it a multibillion-dollar company or a ten-person sales team, demands that people give up things they hold dear: daily habits, loyalties, ways of thinking. In return for these sacrifices, they may be offered nothing more than the possibility of a better future.

We refer to this kind of wrenching organizational transformation as "adaptive change," something very different from the "technical change" that

occupies people in positions of authority on a regular basis. Technical problems, while often challenging, can be solved applying existing know-how and the organization's current problem-solving processes. Adaptive problems resist these kinds of solutions because they require individuals throughout the organization to alter their ways; as the people themselves are the problem, the solution lies with them. (See the sidebar "Adaptive Versus Technical Change: Whose Problem Is It?") Responding to an adaptive challenge with a technical fix may have some short-term appeal. But to make real progress, sooner or later those who lead must ask themselves and the people in the organization to face a set of deeper issues—and to accept a solution that may require turning part or all of the organization upside down.

It is at this point that danger lurks. And most people who lead in such a situation—swept up in the action, championing a cause they believe in—are caught unawares. Over and over again, we have seen courageous souls blissfully ignorant of an approaching threat until it was too late to respond.

The hazard can take numerous forms. You may be attacked directly in an attempt to shift the debate to your character and style and avoid discussion of your initiative. You may be marginalized, forced into the position of becoming so identified with one issue that your broad authority is undermined. You may be seduced by your supporters and, fearful of losing their approval and affection, fail to demand they make the sacrifices needed for the initiative to succeed. You may be diverted from your goal by people overwhelming you with the day-to-day details of carrying it out, keeping you busy and preoccupied.

Each one of these thwarting tactics—whether done consciously or not—grows out of people's aversion to the organizational disequilibrium created by your initiative. By attempting to undercut you, people strive to restore order, maintain what is familiar to them, and protect themselves from the pains of adaptive change. They want to be comfortable again, and you're in the way.

It's exciting—even glamorous—to lead others through good times and bad. But leadership also has its dark side: the inevitable attempts to take you out of the game when you're steering your organization through difficult change.

Leading change requires asking people to confront painful issues and give up habits and beliefs they hold dear. Result? Some people try to eliminate change's visible agent—you. Whether they attack you personally, undermine your authority, or seduce you into seeing things their way, their goal is the same: to derail you, easing *their* pain and restoring familiar order.

How to resist attempts to remove you—and continue to propel change forward? Manage your hostile **environment**—your organization and its people—and your own **vulnerabilities**.

So how do you protect yourself? Over a combined 50 years of teaching and consulting, we have asked ourselves that question time and again—usually while watching top-notch and well-intentioned folks get taken out of the game. On occasion, the question has become painfully personal; we as individuals have been knocked off course or out of the action more than once in our own leadership efforts. So we are offering what we hope are some pragmatic answers that grow out of these observations and experiences. We should note that while our advice clearly applies to senior executives, it also applies to people trying to lead change initiatives from positions of little or no formal organizational authority.

This “survival guide” has two main parts. The first looks outward, offering tactical advice about relating to your organization and the people in it. It is designed to protect you from those trying to push you aside before you complete your initiative. The second looks inward, focusing on your own human needs and vulnerabilities. It is designed to keep you from bringing yourself down.

A Hostile Environment

Leading major organizational change often involves radically reconfiguring a complex network of people, tasks, and institutions that have achieved a kind of *modus vivendi*, no matter how dysfunctional it appears to you. When the status quo is upset, people feel a sense of profound loss and dashed expectations. They may go through a period of feeling incompetent or disloyal. It's no wonder they resist the change or try to eliminate its visible agent. We offer here a number of techniques—relatively straightforward in concept but difficult to execute—for minimizing these external threats.

Idea in Practice

Managing Your Environment

To minimize threats to eliminate you:

Operate in and above the fray.

Observe what's happening to your initiative, **as** it's happening. Frequently move back and forth from the dance floor to the balcony, asking, "What's really going on here?" "Who's defending old habits?"

Court the uncommitted.

The uncommitted but wary are crucial to your success. Show your intentions are serious, for example, by dismissing individuals who can't make required changes. And practice what you preach.

Example: The editor of the ***St. Petersburg Times*** wanted to create a harder-hitting newspaper. He knew that reporters—no longer sparing interviewees from warranted criticism—faced intense public pressure. He subjected **himself** to the same by insisting a story about his drunk-driving arrest appear on the paper's front page.

Cook the conflict.

Keep the heat high enough to motivate, but low enough to prevent explosions. **Raise the temperature** to make people confront hidden conflicts and other tough issues. Then **lower the heat** to reduce destructive turmoil. Slow the pace of change. Deliver humor, breaks, and images of a brighter future.

Place the work where it belongs.

Resist resolving conflicts yourself—people will blame **you** for whatever turmoil results. Mobilize **others** to solve problems.

Example: When a star Chicago Bulls basketball player sat out a play, miffed because he wasn't tapped to take the game's final shot, the coach let the **team** handle the insubordination. An emotional conversation led by a team veteran reunited the players, who took the NBA series to a seventh game.

Managing Yourself

To avoid self-destructing during difficult change:

Restrain your desire for control and need for importance

Order for its own sake prevents organizations from handling contentious issues. And an inflated self-image fosters unhealthy dependence on you.

Example: Ken Olson, head of once-mighty Digital Equipment Corporation, encouraged such dependence that colleagues rarely challenged him. When he shunned the PC market (believing few people wanted PCs), top managers went along—initiating DEC's downfall.

Anchor yourself.

- Use a safe place (e.g., a friend's kitchen table) or routine (a daily walk) to repair psychological damage and recalibrate your moral compass.
- Acquire a confidant (**not** an ally from your organization) who supports you—not necessarily your initiative.
- Read attacks as reactions to your professional role, not to you personally. You'll remain calmer and keep people engaged.

Operate in and above the fray

The ability to maintain perspective in the midst of action is critical to lowering resistance. Any military officer knows the importance of maintaining the

capacity for reflection, especially in the “fog of war.” Great athletes must simultaneously play the game and observe it as a whole. We call this skill “getting off the dance floor and going to the balcony,” an image that captures the mental activity of stepping back from the action and asking, “What’s really going on here?”

Leadership is an improvisational art. You may be guided by an overarching vision, clear values, and a strategic plan, but what you actually do from moment to moment cannot be scripted. You must respond as events unfold. To use our metaphor, you have to move back and forth from the balcony to the dance floor, over and over again throughout the days, weeks, months, and years. While today’s plan may make sense now, tomorrow you’ll discover the unanticipated effects of today’s actions and have to adjust accordingly. Sustaining good leadership, then, requires first and foremost the capacity to see what is happening to you and your initiative as it is happening and to understand how today’s turns in the road will affect tomorrow’s plans.

But taking a balcony perspective is extremely tough to do when you’re fiercely engaged down below, being pushed and pulled by the events and people around you—and doing some pushing and pulling of your own. Even if you are able to break away, the practice of stepping back and seeing the big picture is complicated by several factors. For example, when you get some distance, you still must accurately interpret what you see and hear. This is easier said than done. In an attempt to avoid difficult change, people will naturally, even unconsciously, defend their habits and ways of thinking. As you seek input from a broad range of people, you’ll constantly need to be aware of these hidden agendas. You’ll also need to observe your own actions; seeing yourself objectively as you look down from the balcony is perhaps the hardest task of all.

Fortunately, you can learn to be both an observer and a participant at the same time. When you are sitting in a meeting, practice by watching what is happening while it is happening—even as you are part of what is happening. Observe the relationships and see how people’s attention to one another can

vary: supporting, thwarting, or listening. Watch people's body language. When you make a point, resist the instinct to stay perched on the edge of your seat, ready to defend what you said. A technique as simple as pushing your chair a few inches away from the table after you speak may provide the literal as well as metaphorical distance you need to become an observer.

Court the uncommitted

It's tempting to go it alone when leading a change initiative. There's no one to dilute your ideas or share the glory, and it's often just plain exciting. It's also foolish. You need to recruit partners, people who can help protect you from attacks and who can point out potentially fatal flaws in your strategy or initiative. Moreover, you are far less vulnerable when you are out on the point with a bunch of folks rather than alone. You also need to keep the opposition close. Knowing what your opponents are thinking can help you challenge them more effectively and thwart their attempts to upset your agenda—or allow you to borrow ideas that will improve your initiative. Have coffee once a week with the person most dedicated to seeing you fail.

Adaptive Versus Technical Change: Whose Problem Is It?

THE IMPORTANCE—AND DIFFICULTY—of distinguishing between adaptive and technical change can be illustrated with an analogy. When your car has problems, you go to a mechanic. Most of the time, the mechanic can fix the car. But if your car troubles stem from the way a family member drives, the problems are likely to recur. Treating the problems as purely technical ones—taking the car to the mechanic time and again to get it back on the road—masks the real issues. Maybe you need to get your mother to stop drinking and driving, get your grandfather to give up his driver's license, or get your teenager to be more cautious. Whatever the underlying problems, the mechanic can't solve them. Instead, changes in the family need to occur, and that won't be easy. People will resist the moves, even denying that such problems exist. That's because even those not directly affected by an adaptive change typically experience discomfort when someone upsets a group's or an organization's equilibrium.

Such resistance to adaptive change certainly happens in business. Indeed, it's the classic error: Companies treat adaptive challenges

as if they were technical problems. For example, executives attempt to improve the bottom line by cutting costs across the board. Not only does this avoid the need to make tough choices about which areas should be trimmed, it also masks the fact that the company's real challenge lies in redesigning its strategy.

Treating adaptive challenges as technical ones permits executives to do what they have excelled at throughout their careers: solve other people's problems. And it allows others in the organization to enjoy the primordial peace of mind that comes from knowing that their commanding officer has a plan to maintain order and stability. After all, the executive doesn't have to instigate—and the people don't have to undergo—uncomfortable change. Most people would agree that, despite the selective pain of a cost-cutting exercise, it is less traumatic than reinventing a company.

But while relationships with allies and opponents are essential, the people who will determine your success are often those in the middle, the uncommitted who nonetheless are wary of your plans. They have no substantive stake in your initiative, but they do have a stake in the comfort, stability, and security of the status quo. They've seen change agents come and go, and they know that your initiative will disrupt their lives and make their futures uncertain. You want to be sure that this general uneasiness doesn't evolve into a move to push you aside.

These people will need to see that your intentions are serious—for example, that you are willing to let go of those who can't make the changes your initiative requires. But people must also see that you understand the loss you are asking them to accept. You need to name the loss, be it a change in time-honored work routines or an overhaul of the company's core values, and explicitly acknowledge the resulting pain. You might do this through a series of simple statements, but it often requires something more tangible and public—recall Franklin Roosevelt's radio “fireside chats” during the Great Depression—to convince people that you truly understand.

Beyond a willingness to accept casualties and acknowledge people's losses, two very personal types of action can defuse potential resistance to you and your initiatives. The first is practicing what you preach. In 1972, Gene

Patterson took over as editor of the *St. Petersburg Times*. His mandate was to take the respected regional newspaper to a higher level, enhancing its reputation for fine writing while becoming a fearless and hard-hitting news source. This would require major changes not only in the way the community viewed the newspaper but also in the way *Times* reporters thought about themselves and their roles. Because prominent organizations and individuals would no longer be spared warranted criticism, reporters would sometimes be angrily rebuked by the subjects of articles.

Several years after Patterson arrived, he attended a party at the home of the paper's foreign editor. Driving home, he pulled up to a red light and scraped the car next to him. The police officer called to the scene charged Patterson with driving under the influence. Patterson phoned Bob Haiman, a veteran *Times* newsman who had just been appointed executive editor, and insisted that a story on his arrest be run. As Haiman recalls, he tried to talk Patterson out of it, arguing that DUI arrests that didn't involve injuries were rarely reported, even when prominent figures were involved. Patterson was adamant, however, and insisted that the story appear on page one.

Patterson, still viewed as somewhat of an outsider at the paper, knew that if he wanted his employees to follow the highest journalistic standards, he would have to display those standards, even when it hurt. Few leaders are called upon to disgrace themselves on the front page of a newspaper. But adopting the behavior you expect from others—whether it be taking a pay cut in tough times or spending a day working next to employees on a reconfigured production line—can be crucial in getting buy-in from people who might try to undermine your initiative.

The second thing you can do to neutralize potential opposition is to acknowledge your own responsibility for whatever problems the organization currently faces. If you have been with the company for some time, whether in a position of senior authority or not, you've likely contributed in some way to the current mess. Even if you are new, you need to identify areas of your own behavior that could stifle the change you hope to make.

In our teaching, training, and consulting, we often ask people to write or talk about a leadership challenge they currently face. Over the years, we have read and heard literally thousands of such challenges. Typically, in the first version of the story, the author is nowhere to be found. The underlying message: “If only other people would shape up, I could make progress here.” But by too readily pointing your finger at others, you risk making yourself a target. Remember, you are asking people to move to a place where they are frightened to go. If at the same time you’re blaming them for having to go there, they will undoubtedly turn against you.

In the early 1990s, Leslie Wexner, founder and CEO of the Limited, realized the need for major changes at the company, including a significant reduction in the workforce. But his consultant told him that something else had to change: long-standing habits that were at the heart of his self-image. In particular, he had to stop treating the company as if it were his family. The indulgent father had to become the chief personnel officer, putting the right people in the right jobs and holding them accountable for their work. “I was an athlete trained to be a baseball player,” Wexner recalled during a recent speech at Harvard’s Kennedy School. “And one day, someone tapped me on the shoulder and said, ‘Football.’ And I said, ‘No, I’m a baseball player. ‘And he said, ‘Football.’ And I said, ‘I don’t know how to play football. I’m not 6’4”, and I don’t weigh 300 pounds.’ But if no one values baseball anymore, the baseball player will be out of business. So I looked into the mirror and said, ‘Schlemiel, nobody wants to watch baseball. Make the transformation to football.’” His personal makeover—shedding the role of forgiving father to those widely viewed as not holding their own—helped sway other employees to back a corporate makeover. And his willingness to change helped protect him from attack during the company’s long—and generally successful—turnaround period.

Cook the conflict

Managing conflict is one of the greatest challenges a leader of organizational change faces. The conflict may involve resistance to change, or it may involve

clashing viewpoints about how the change should be carried out. Often, it will be latent rather than palpable. That's because most organizations are allergic to conflict, seeing it primarily as a source of danger, which it certainly can be. But conflict is a necessary part of the change process and, if handled properly, can serve as the engine of progress.

Thus, a key imperative for a leader trying to achieve significant change is to manage people's passionate differences in a way that diminishes their destructive potential and constructively harnesses their energy. Two techniques can help you achieve this. First, create a secure place where the conflicts can freely bubble up. Second, control the temperature to ensure that the conflict doesn't boil over—and burn you in the process.

The vessel in which a conflict is simmered—in which clashing points of view mix, lose some of their sharpness, and ideally blend into consensus—will look and feel quite different in different contexts. It may be a protected physical space, perhaps an off-site location where an outside facilitator helps a group work through its differences. It may be a clear set of rules and processes that give minority voices confidence that they will be heard without having to disrupt the proceedings to gain attention. It may be the shared language and history of an organization that binds people together through trying times. Whatever its form, it is a place or a means to contain the roiling forces unleashed by the threat of major change.

But a vessel can withstand only so much strain before it blows. A huge challenge you face as a leader is keeping your employees' stress at a productive level. The success of the change effort—as well as your own authority and even survival—requires you to monitor your organization's tolerance for heat and then regulate the temperature accordingly.

You first need to raise the heat enough that people sit up, pay attention, and deal with the real threats and challenges facing them. After all, without some distress, there's no incentive to change. You can constructively raise the temperature by focusing people's attention on the hard issues, by forcing them to take responsibility for tackling and solving those issues, and by bringing

conflicts occurring behind closed doors out into the open.

But you have to lower the temperature when necessary to reduce what can be counterproductive turmoil. You can turn down the heat by slowing the pace of change or by tackling some relatively straightforward technical aspect of the problem, thereby reducing people's anxiety levels and allowing them to get warmed up for bigger challenges. You can provide structure to the problem-solving process, creating work groups with specific assignments, setting time parameters, establishing rules for decision making, and outlining reporting relationships. You can use humor or find an excuse for a break or a party to temporarily ease tensions. You can speak to people's fears and, more critically, to their hopes for a more promising future. By showing people how the future might look, you come to embody hope rather than fear, and you reduce the likelihood of becoming a lightning rod for the conflict.

The aim of both these tactics is to keep the heat high enough to motivate people but low enough to prevent a disastrous explosion—what we call a “productive range of distress.” Remember, though, that most employees will reflexively want you to turn down the heat; their complaints may in fact indicate that the environment is just right for hard work to get done.

We've already mentioned a classic example of managing the distress of fundamental change: Franklin Roosevelt during the first few years of his presidency. When he took office in 1933, the chaos, tension, and anxiety brought on by the Depression ran extremely high. Demagogues stoked class, ethnic, and racial conflict that threatened to tear the nation apart. Individuals feared an uncertain future. So Roosevelt first did what he could to reduce the sense of disorder to a tolerable level. He took decisive and authoritative action—he pushed an extraordinary number of bills through Congress during his fabled first 100 days—and thereby gave Americans a sense of direction and safety, reassuring them that they were in capable hands. In his fireside chats, he spoke to people's anxiety and anger and laid out a positive vision for the future that made the stress of the current crisis bearable and seem a worthwhile price to pay for progress.

But he knew the problems facing the nation couldn't be solved from the White House. He needed to mobilize citizens and get them to dream up, try out, fight over, and ultimately own the sometimes painful solutions that would transform the country and move it forward. To do that, he needed to maintain a certain level of fermentation and distress. So, for example, he orchestrated conflicts over public priorities and programs among the large cast of creative people he brought into the government. By giving the same assignment to two different administrators and refusing to clearly define their roles, he got them to generate new and competing ideas. Roosevelt displayed both the acuity to recognize when the tension in the nation had risen too high and the emotional strength to take the heat and permit considerable anxiety to persist.

Place the work where it belongs

Because major change requires people across an entire organization to adapt, you as a leader need to resist the reflex reaction of providing people with the answers. Instead, force yourself to transfer, as Roosevelt did, much of the work and problem solving to others. If you don't, real and sustainable change won't occur. In addition, it's risky on a personal level to continue to hold on to the work that should be done by others.

As a successful executive, you have gained credibility and authority by demonstrating your capacity to solve other people's problems. This ability can be a virtue, until you find yourself faced with a situation in which you cannot deliver solutions. When this happens, all of your habits, pride, and sense of competence get thrown out of kilter because you must mobilize the work of others rather than find the way yourself. By trying to solve an adaptive challenge for people, at best you will reconfigure it as a technical problem and create some short-term relief. But the issue will not have gone away.

In the 1994 National Basketball Association Eastern Conference semifinals, the Chicago Bulls lost to the New York Knicks in the first two games of the best-of-seven series. Chicago was out to prove that it was more than just a one-man team, that it could win without Michael Jordan, who had retired at the end of the previous season.

In the third game, the score was tied at 102 with less than two seconds left. Chicago had the ball and a time-out to plan a final shot. Coach Phil Jackson called for Scottie Pippen, the Bulls' star since Jordan had retired, to make the inbound pass to Toni Kukoc for the final shot. As play was about to resume, Jackson noticed Pippen sitting at the far end of the bench. Jackson asked him whether he was in or out. "I'm out," said Pippen, miffed that he was not tapped to take the final shot. With only four players on the floor, Jackson quickly called another time-out and substituted an excellent passer, the reserve Pete Myers, for Pippen. Myers tossed a perfect pass to Kukoc, who spun around and sank a miraculous shot to win the game.

The Bulls made their way back to the locker room, their euphoria deflated by Pippen's extraordinary act of insubordination. Jackson recalls that as he entered a silent room, he was uncertain about what to do. Should he punish Pippen? Make him apologize? Pretend the whole thing never happened? All eyes were on him. The coach looked around, meeting the gaze of each player, and said, "What happened has hurt us. Now you have to work this out."

Jackson knew that if he took action to resolve the immediate crisis, he would have made Pippen's behavior a matter between coach and player. But he understood that a deeper issue was at the heart of the incident: Who were the Chicago Bulls without Michael Jordan? It wasn't about who was going to succeed Jordan, because no one was; it was about whether the players could jell as a team where no one person dominated and every player was willing to do whatever it took to help. The issue rested with the players, not him, and only they could resolve it. It did not matter what they decided at that moment; what mattered was that they, not Jackson, did the deciding. What followed was a discussion led by an emotional Bill Cartwright, a team veteran. According to Jackson, the conversation brought the team closer together. The Bulls took the series to a seventh game before succumbing to the Knicks.

Jackson gave the work of addressing both the Pippen and the Jordan issues back to the team for another reason: If he had taken ownership of the problem, he would have become the issue, at least for the moment. In his

case, his position as coach probably wouldn't have been threatened. But in other situations, taking responsibility for resolving a conflict within the organization poses risks. You are likely to find yourself resented by the faction that you decide against and held responsible by nearly everyone for the turmoil your decision generates. In the eyes of many, the only way to neutralize the threat is to get rid of you.

Despite that risk, most executives can't resist the temptation to solve fundamental organizational problems by themselves. People expect you to get right in there and fix things, to take a stand and resolve the problem. After all, that is what top managers are paid to do. When you fulfill those expectations, people will call you admirable and courageous—even a “leader”—and that is flattering. But challenging your employees' expectations requires greater courage and leadership.

The Dangers Within

We have described a handful of leadership tactics you can use to interact with the people around you, particularly those who might undermine your initiatives. Those tactics can help advance your initiatives and, just as important, ensure that you remain in a position where you can bring them to fruition. But from our own observations and painful personal experiences, we know that one of the surest ways for an organization to bring you down is simply to let you precipitate your own demise.

In the heat of leadership, with the adrenaline pumping, it is easy to convince yourself that you are not subject to the normal human frailties that can defeat ordinary mortals. You begin to act as if you are indestructible. But the intellectual, physical, and emotional challenges of leadership are fierce. So, in addition to getting on the balcony, you need to regularly step into the inner chamber of your being and assess the tolls those challenges are taking. If you don't, your seemingly indestructible self can self-destruct. This, by the way, is an ideal outcome for your foes—and even friends who oppose your initiative—because no one has to feel responsible for your downfall.

Manage your hungers

We all have hungers, expressions of our normal human needs. But sometimes those hungers disrupt our capacity to act wisely or purposefully. Whether inherited or products of our upbringing, some of these hungers may be so strong that they render us constantly vulnerable. More typically, a stressful situation or setting can exaggerate a normal level of need, amplifying our desires and overwhelming our usual self-discipline. Two of the most common and dangerous hungers are the desire for control and the desire for importance.

Everyone wants to have some measure of control over his or her life. Yet some people's need for control is disproportionately high. They might have grown up in a household that was either tightly structured or unusually chaotic; in either case, the situation drove them to become masters at taming chaos not only in their own lives but also in their organizations.

That need for control can be a source of vulnerability. Initially, of course, the ability to turn disorder into order may be seen as an attribute. In an organization facing turmoil, you may seem like a godsend if you are able (and desperately want) to step in and take charge. By lowering the distress to a tolerable level, you keep the kettle from boiling over.

But in your desire for order, you can mistake the means for the end. Rather than ensuring that the distress level in an organization remains high enough to mobilize progress on the issues, you focus on maintaining order as an end in itself. Forcing people to make the difficult trade-offs required by fundamental change threatens a return to the disorder you loathe. Your ability to bring the situation under control also suits the people in the organization, who naturally prefer calm to chaos. Unfortunately, this desire for control makes you vulnerable to, and an agent of, the organization's wish to avoid working through contentious issues. While this may ensure your survival in the short term, ultimately you may find yourself accused, justifiably, of failing to deal with the tough challenges when there was still time to do so.

Most people also have some need to feel important and affirmed by others. The danger here is that you will let this affirmation give you an inflated view of

yourself and your cause. A grandiose sense of self-importance often leads to self-deception. In particular, you tend to forget the creative role that doubt—which reveals parts of reality that you wouldn't otherwise see—plays in getting your organization to improve. The absence of doubt leads you to see only that which confirms your own competence, which will virtually guarantee disastrous missteps.

Another harmful side effect of an inflated sense of self-importance is that you will encourage people in the organization to become dependent on you. The higher the level of distress, the greater their hopes and expectations that you will provide deliverance. This relieves them of any responsibility for moving the organization forward. But their dependence can be detrimental not only to the group but to you personally. Dependence can quickly turn to contempt as your constituents discover your human shortcomings.

Two well-known stories from the computer industry illustrate the perils of dependency—and how to avoid them. Ken Olsen, the founder of Digital Equipment Corporation, built the company into a 120,000-person operation that, at its peak, was the chief rival of IBM. A generous man, he treated his employees extraordinarily well and experimented with personnel policies designed to increase the creativity, teamwork, and satisfaction of his workforce. This, in tandem with the company's success over the years, led the company's top management to turn to him as the sole decision maker on all key issues. His decision to shun the personal computer market because of his belief that few people would ever want to own a PC, which seemed reasonable at the time, is generally viewed as the beginning of the end for the company. But that isn't the point; everyone in business makes bad decisions. The point is, Olsen had fostered such an atmosphere of dependence that his decisions were rarely challenged by colleagues—at least not until it was too late.

Contrast that decision with Bill Gates's decision some years later to keep Microsoft out of the Internet business. It didn't take long for him to reverse his stand and launch a corporate overhaul that had Microsoft's delivery of Internet services as its centerpiece. After watching the rapidly changing

computer industry and listening carefully to colleagues, Gates changed his mind with no permanent damage to his sense of pride and an enhanced reputation due to his nimble change of course.

Anchor yourself

To survive the turbulent seas of a change initiative, you need to find ways to steady and stabilize yourself. First, you must establish a safe harbor where each day you can reflect on the previous day's journey, repair the psychological damage you have incurred, renew your stores of emotional resources, and recalibrate your moral compass. Your haven might be a physical place, such as the kitchen table of a friend's house, or a regular routine, such as a daily walk through the neighborhood. Whatever the sanctuary, you need to use and protect it. Unfortunately, seeking such respite is often seen as a luxury, making it one of the first things to go when life gets stressful and you become pressed for time.

Second, you need a confidant, someone you can talk to about what's in your heart and on your mind without fear of being judged or betrayed. Once the undigested mess is on the table, you can begin to separate, with your confidant's honest input, what is worthwhile from what is simply venting. The confidant, typically not a coworker, can also pump you up when you're down and pull you back to earth when you start taking praise too seriously. But don't confuse confidants with allies: Instead of supporting your current initiative, a confidant simply supports you. A common mistake is to seek a confidant among trusted allies, whose personal loyalty may evaporate when a new issue more important to them than you begins to emerge and take center stage.

Perhaps most important, you need to distinguish between your personal self, which can serve as an anchor in stormy weather, and your professional role, which never will. It is easy to mix up the two. And other people only increase the confusion: Colleagues, subordinates, and even bosses often act as if the role you play is the real you. But that is not the case, no matter how much of yourself—your passions, your values, your talents—you genuinely and laudably pour into your professional role. Ask anyone who has

experienced the rude awakening that comes when they leave a position of authority and suddenly find that their phone calls aren't returned as quickly as they used to be.

That harsh lesson holds another important truth that is easily forgotten: When people attack someone in a position of authority, more often than not they are attacking the role, not the person. Even when attacks on you are highly personal, you need to read them primarily as reactions to how you, in your role, are affecting people's lives. Understanding the criticism for what it is prevents it from undermining your stability and sense of self-worth. And that's important because when you feel the sting of an attack, you are likely to become defensive and lash out at your critics, which can precipitate your downfall.

We hasten to add that criticism may contain legitimate points about how you are performing your role. For example, you may have been tactless in raising an issue with your organization, or you may have turned the heat up too quickly on a change initiative. But, at its heart, the criticism is usually about the issue, not you. Through the guise of attacking you personally, people often are simply trying to neutralize the threat they perceive in your point of view. Does anyone ever attack you when you hand out big checks or deliver good news? People attack your personality, style, or judgment when they don't like the message.

When you take "personal" attacks personally, you unwittingly conspire in one of the common ways you can be taken out of action—you make yourself the issue. Contrast the manner in which presidential candidates Gary Hart and Bill Clinton handled charges of philandering. Hart angrily counterattacked, criticizing the scruples of the reporters who had shadowed him. This defensive personal response kept the focus on his behavior. Clinton, on national television, essentially admitted he had strayed, acknowledging his piece of the mess. His strategic handling of the situation allowed him to return the campaign's focus to policy issues. Though both attacks were extremely personal, only Clinton understood that they were basically attacks on positions

he represented and the role he was seeking to play.

Do not underestimate the difficulty of distinguishing self from role and responding coolly to what feels like a personal attack—particularly when the criticism comes, as it will, from people you care about. But disciplining yourself to do so can provide you with an anchor that will keep you from running aground and give you the stability to remain calm, focused, and persistent in engaging people with the tough issues.

Why Lead?

We will have failed if this “survival manual” for avoiding the perils of leadership causes you to become cynical or callous in your leadership effort or to shun the challenges of leadership altogether. We haven’t touched on the thrill of inspiring people to come up with creative solutions that can transform an organization for the better. We hope we have shown that the essence of leadership lies in the capacity to deliver disturbing news and raise difficult questions in a way that moves people to take up the message rather than kill the messenger. But we haven’t talked about the reasons that someone might want to take these risks.

Of course, many people who strive for high-authority positions are attracted to power. But in the end, that isn’t enough to make the high stakes of the game worthwhile. We would argue that, when they look deep within themselves, people grapple with the challenges of leadership in order to make a positive difference in the lives of others.

When corporate presidents and vice presidents reach their late fifties, they often look back on careers devoted to winning in the marketplace. They may have succeeded remarkably, yet some people have difficulty making sense of their lives in light of what they have given up. For too many, their accomplishments seem empty. They question whether they should have been more aggressive in questioning corporate purposes or creating more ambitious visions for their companies.

Our underlying assumption in this article is that you can lead *and* stay alive

—not just register a pulse, but really be alive. But the classic protective devices of a person in authority tend to insulate them from those qualities that foster an acute experience of living. Cynicism, often dressed up as realism, undermines creativity and daring. Arrogance, often posing as authoritative knowledge, snuffs out curiosity and the eagerness to question. Callousness, sometimes portrayed as the thick skin of experience, shuts out compassion for others.

The hard truth is that it is not possible to know the rewards and joys of leadership without experiencing the pain as well. But staying in the game and bearing that pain is worth it, not only for the positive changes you can make in the lives of others but also for the meaning it gives your own.

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The Real Reason People Won't Change

by Robert Kegan and Lisa Laskow Lahey

EVERY MANAGER IS FAMILIAR with the employee who just won't change. Sometimes it's easy to see why—the employee fears a shift in power, the need to learn new skills, the stress of having to join a new team. In other cases, such resistance is far more puzzling. An employee has the skills and smarts to make a change with ease, has shown a deep commitment to the company, genuinely supports the change—and yet, inexplicably, does nothing.

What's going on? As organizational psychologists, we have seen this dynamic literally hundreds of times, and our research and analysis have recently led us to a surprising yet deceptively simple conclusion. Resistance to change does not reflect opposition, nor is it merely a result of inertia. Instead, even as they hold a sincere commitment to change, many people are unwittingly applying productive energy toward a hidden *competing commitment*. The resulting dynamic equilibrium stalls the effort in what looks like resistance but is in fact a kind of personal immunity to change.

When you, as a manager, uncover an employee's competing commitment, behavior that has seemed irrational and ineffective suddenly becomes stunningly sensible and masterful—but unfortunately, on behalf of a goal that conflicts with what you and even the employee are trying to achieve. You find out that the project leader who's dragging his feet has an unrecognized competing commitment to avoid the even tougher assignment—one he fears he can't handle—that might come his way next if he delivers too successfully on the task at hand. Or you find that the person who won't collaborate despite

a passionate and sincere commitment to teamwork is equally dedicated to avoiding the conflict that naturally attends any ambitious team activity.

In these pages, we'll look at competing commitments in detail and take you through a process to help your employees overcome their immunity to change. The process may sound straightforward, but it is by no means quick or easy. On the contrary, it challenges the very psychological foundations upon which people function. It asks people to call into question beliefs they've long held close, perhaps since childhood. And it requires people to admit to painful, even embarrassing, feelings that they would not ordinarily disclose to others or even to themselves. Indeed, some people will opt not to disrupt their immunity to change, choosing instead to continue their fruitless struggle against their competing commitments.

As a manager, you must guide people through this exercise with understanding and sensitivity. If your employees are to engage in honest introspection and candid disclosure, they must understand that their revelations won't be used against them. The goal of this exploration is solely to help them become more effective, not to find flaws in their work or character. As you support your employees in unearthing and challenging their innermost assumptions, you may at times feel you're playing the role of a psychologist. But in a sense, managers *are* psychologists. After all, helping people overcome their limitations to become more successful at work is at the very heart of effective management.

We'll describe this delicate process in detail, but first let's look at some examples of competing commitments in action.

Shoveling Sand Against the Tide

Competing commitments cause valued employees to behave in ways that seem inexplicable and irremediable, and this is enormously frustrating to managers. Take the case of John, a talented manager at a software company. (Like all examples in this article, John's experiences are real, although we have altered identifying features. In some cases, we've constructed composite examples.)

John was a big believer in open communication and valued close working relationships, yet his caustic sense of humor consistently kept colleagues at a distance. And though he wanted to move up in the organization, his personal style was holding him back. Repeatedly, John was counseled on his behavior, and he readily agreed that he needed to change the way he interacted with others in the organization. But time after time, he reverted to his old patterns. Why, his boss wondered, did John continue to undermine his own advancement?

Idea in Brief

Tearing out your managerial hair over employees who just won't change—especially the ones who are clearly smart, skilled, and deeply committed to your company and your plans for improvement?

Before you throw up your hands in frustration, listen to recent psychological research: These otherwise valued employees aren't **purposefully** subversive or resistant. Instead, they may be unwittingly caught in a **competing commitment**—a subconscious, hidden goal that conflicts with their **stated** commitments. For example: A project leader dragging his feet has an unrecognized competing commitment to avoid tougher assignments that may come his way if he delivers too successfully on the current project.

Competing commitments make people personally immune to change. Worse, they can undermine your best employees'—and your company's—success.

If the thought of tackling these hidden commitments strikes you as a psychological quagmire, you're not alone. However, you can help employees uncover and move beyond their competing commitments—**without** having to “put them on the couch.” But take care: You'll be challenging employees' deepest psychological foundations and questioning their longest-held beliefs.

Why bother, you ask? Consider the rewards: You help talented employees become much more effective and make far more significant contributions to your company. And, you discover what's **really** going on

when people who seem genuinely committed to change dig in their heels.

Idea in Practice

Use these steps to break through an employee's immunity to change:

Diagnose the Competing Commitment

Take two to three hours to explore these questions with the employee:

“What would you like to see changed at work, so you could be more effective, or so work would be more satisfying?” Responses are usually complaints—e.g., Tom, a manager, grumbled, “My subordinates keep me out of the loop.”

“What commitment does your complaint imply?” Complaints indicate what people care about most—e.g., Tom revealed, “I believe in open, candid communication.”

“What are *you* doing, or not doing, to keep your commitment from being more fully realized?” Tom admitted, “When people bring bad news, I tend to shoot the messenger.”

“Imagine doing the *opposite* of the undermining behavior. Do you feel any discomfort, worry, or vague fear?” Tom imagined listening calmly and openly to bad news and concluded, “I’m afraid I’ll hear about a problem I can’t fix.”

“By engaging in this undermining behavior, what worrisome outcome are you committed to preventing?” The answer *is* the competing commitment—what causes them to dig in their heels against change. Tom conceded, *“I’m committed to not learning about problems I can’t fix.”*

Identify the Big Assumption

This is the worldview that colors everything we see and that generates our competing commitment.

People often form big assumptions early in life and then

seldom, if ever, examine them. They're woven into the very fabric of our lives. But only by bringing them into the light can people finally challenge their deepest beliefs and recognize why they're engaging in seemingly contradictory behavior.

To identify the big assumption, guide an employee through this exercise:

Create a sentence stem that inverts the competing commitment, then “fill in the blank.” Tom turned his competing commitment to not hearing about problems he couldn't fix into this big assumption: “I assume that if I *did* hear about problems I can't fix, *people would discover I'm not qualified to do the job.*”

Test—and Consider Replacing—the Big Assumption

By analyzing the circumstances leading up to and reinforcing their big assumptions, employees empower themselves to test those assumptions. They can now carefully and safely experiment with behaving differently than they usually do.

After running several such tests, employees may feel ready to reevaluate the big assumption itself—and possibly even replace it with a new worldview that more accurately reflects their abilities.

At the very least, they'll eventually find more effective ways to support their competing commitment *without* sabotaging other commitments. *They* achieve ever-greater accomplishments—and your *organization* benefits by finally gaining greater access to their talents.

As it happened, John was a person of color working as part of an otherwise all-white executive team. When he went through an exercise designed to help him unearth his competing commitments, he made a surprising discovery about himself. Underneath it all, John believed that if he became too well integrated with the team, it would threaten his sense of loyalty to his own racial group. Moving too close to the mainstream made him feel very uncomfortable, as if he were becoming “one of them” and betraying his family and friends. So when people gathered around his ideas and suggestions, he'd

tear down their support with sarcasm, inevitably (and effectively) returning himself to the margins, where he was more at ease. In short, while John was genuinely committed to working well with his colleagues, he had an equally powerful competing commitment to keeping his distance.

Consider, too, a manager we'll call Helen, a rising star at a large manufacturing company. Helen had been assigned responsibility for speeding up production of the company's most popular product, yet she was spinning her wheels. When her boss, Andrew, realized that an important deadline was only two months away and she hadn't filed a single progress report, he called her into a meeting to discuss the project. Helen agreed that she was far behind schedule, acknowledging that she had been stalling in pulling together the team. But at the same time she showed a genuine commitment to making the project a success. The two developed a detailed plan for changing direction, and Andrew assumed the problem was resolved. But three weeks after the meeting, Helen still hadn't launched the team.

Getting Groups to Change

ALTHOUGH COMPETING COMMITMENTS and big assumptions tend to be deeply personal, groups are just as susceptible as individuals to the dynamics of immunity to change. Face-to-face teams, departments, and even companies as a whole can fall prey to inner contradictions that "protect" them from significant changes they may genuinely strive for. The leadership team of a video production company, for instance, enjoyed a highly collaborative, largely flat organizational structure. A year before we met the group, team members had undertaken a planning process that led them to a commitment of which they were unanimously in favor: In order to ensure that the company would grow in the way the team wished, each of the principals would take responsibility for aggressively overseeing a distinct market segment.

The members of the leadership team told us they came out of this process with a great deal of momentum. They knew which markets to target, they had formed some concrete plans for moving forward, and they had clearly assigned accountability for each market. Yet a year later, the group had to admit it had accomplished very little, despite the enthusiasm. There were lots of rational explanations: "We were unrealistic; we thought we could do new things and still

have time to keep meeting our present obligations.” “We didn’t pursue new clients aggressively enough.” “We tried new things but gave up too quickly if they didn’t immediately pay off.”

Efforts to overcome these barriers—to pursue clients more aggressively, for instance—didn’t work because they didn’t get to the cause of the unproductive behavior. But by seeing the team’s explanations as a potential window into the bigger competing commitment, we were able to help the group better understand its predicament. We asked, “Can you identify even the vaguest fear or worry about what might happen if you *did* more aggressively pursue the new markets? Or if you reduced some of your present activity on behalf of building the new business?” Before long, a different discourse began to emerge, and the other half of a striking groupwide contradiction came into view: The principals were worried that pursuing the plan would drive them apart functionally and emotionally.

“We now realize we are also committed to preserving the noncompetitive, intellectually rewarding, and cocreative spirit of our corporate enterprise,” they concluded. On behalf of this commitment, the team members had to commend themselves on how “noncompetitively” and “cocreatively” they were finding ways to undermine the strategic plans they still believed were the best route to the company’s future success. The team’s big assumptions? “We assumed that pursuing the target-market strategy, with each of us taking aggressive responsibility for a given segment, would create the ‘silos’ we have long happily avoided and would leave us more isolated from one another. We also assumed the strategy would make us more competitively disposed toward one another.” Whether or not the assumptions were true, they would have continued to block the group’s efforts until they were brought to light. In fact, as the group came to discover, there were a variety of moves that would allow the leadership team to preserve a genuinely collaborative collegiality while pursuing the new corporate strategy.

Why was Helen unable to change her behavior? After intense self-examination in a workshop with several of her colleagues, she came to an unexpected conclusion: Although she truly wanted the project to succeed, she had an accompanying, unacknowledged commitment to maintaining a subordinate position in relation to Andrew. At a deep level, Helen was concerned that if she succeeded in her new role—one she was excited about and eager to undertake—she would become more a peer than a subordinate.

She was uncertain whether Andrew was prepared for the turn their relationship would take. Worse, a promotion would mean that she, not Andrew, would be ultimately accountable for the results of her work—and Helen feared she wouldn't be up to the task.

These stories shed some light on the nature of immunity to change. The inconsistencies between John's and Helen's stated goals and their actions reflect neither hypocrisy nor unspoken reluctance to change but the paralyzing effect of competing commitments. Any manager who seeks to help John communicate more effectively or Helen move her project forward, without understanding that each is also struggling unconsciously toward an opposing agenda, is shoveling sand against the tide.

Diagnosing Immunity to Change

Competing commitments aren't distressing only to the boss; they're frustrating to employees as well. People with the most sincere intentions often unwittingly create for themselves Sisyphean tasks. And they are almost always tremendously relieved when they discover just why they feel as if they are rolling a boulder up a hill only to have it roll back down again. Even though uncovering a competing commitment can open up a host of new concerns, the discovery offers hope for finally accomplishing the primary, stated commitment.

A diagnostic test for immunity to change

The most important steps in diagnosing immunity to change are uncovering employees' competing commitments and unearthing their big assumptions. To do so, we ask a series of questions and record key responses in a simple grid. Below we've listed the responses for six people who went through this exercise, including the examples described in the text. The grid paints a picture of the change-immunity system, making sense of a previously puzzling dynamic.

	Stated commitment I am committed to . . .	What am I doing, or not doing, that is keeping my stated commitment from being fully realized?	Competing commitments	Big assumptions
John	. . .high quality communication with my colleagues.	Sometimes I use sarcastic humor to get my point across.	I am committed to maintaining a distance from my white colleagues.	I assume I will lose my authentic connection to my racial group if I get too integrated into the mainstream.
Helen	. . .the new initiative.	I don't push for top performance from my team members or myself; I accept mediocre products and thinking too often; I don't prioritize.	I am committed to not upsetting my relationship with my boss by leaving the mentee role.	I assume my boss will stop supporting me if I move toward becoming his peer; I assume that I don't have what it takes to successfully carry out a cutting-edge project.
Tom	. . .hearing from my subordinates and maximizing the flow of information into my office.	I don't ask questions or ask to be kept in the loop on sensitive or delicate matters; I shoot the messenger when I hear bad news.	I am committed to not learning about things I can't do anything about.	I assume as a leader I should be able to address all problems; I assume I will be seen as incompetent if I can't solve all problems that come up.
Mary	. . .distributed leadership by enabling people to make decisions.	I don't delegate enough; I don't pass on the necessary information to the people I distribute leadership to.	I am committed to having things go my way, to being in control, and to ensuring that the work is done to my high standards.	I assume that other people will waste my time and theirs if I don't step in; I assume others aren't as smart as I am.
Bill	. . .being a team player.	I don't collaborate enough; I make unilateral decisions too often; I don't really take people's input into account.	I am committed to being the one who gets the credit and to avoiding the frustration or conflict that comes with collaboration.	I assume that no one will appreciate me if I am not seen as the source of success; I assume nothing good will come of my being frustrated or in conflict.
Jane	. . .turning around my department.	Too often I let things slide; I'm not proactive enough in getting people to follow through with their tasks.	I am committed to not setting full sail until I have a clear map of how we get our department from here to there.	I assume that if I take my group out into deep waters and discover I am unable to get us to the other side, I will be seen as an incompetent leader who is undeserving of trust or responsibility.

Based on the past 15 years of working with hundreds of managers in a variety of companies, we've developed a three-stage process to help organizations figure out what's getting in the way of change. First, managers guide employees through a set of questions designed to uncover competing

commitments. Next, employees examine these commitments to determine the underlying assumptions at their core. And finally, employees start the process of changing their behavior.

We'll walk through the process fairly quickly below, but it's important to note that each step will take time. Just uncovering the competing commitment will require at least two or three hours, because people need to reflect on each question and the implications of their answers. The process of challenging competing commitments and making real progress toward overcoming immunity to change unfolds over a longer period—weeks or even months. But just getting the commitments on the table can have a noticeable effect on the decisions people make and the actions they take.

Uncovering Competing Commitments

Overcoming immunity to change starts with uncovering competing commitments. In our work, we've found that even though people keep their competing commitments well hidden, you can draw them out by asking a series of questions—as long as the employees believe that personal and potentially embarrassing disclosures won't be used inappropriately. It can be very powerful to guide people through this diagnostic exercise in a group—typically with several volunteers making their own discoveries public—so people can see that others, even the company's star performers, have competing commitments and inner contradictions of their own.

The first question we ask is, *What would you like to see changed at work, so that you could be more effective or so that work would be more satisfying?* Responses to this question are nearly always couched in a complaint—a form of communication that most managers bemoan because of its negative, unproductive tone. But complaints can be immensely useful. People complain only about the things they care about, and they complain the loudest about the things they care about most. With little effort, people can turn their familiar, uninspiring gripes into something that's more likely to energize and motivate them—a commitment, genuinely their own.

To get there, you need to ask a second question: *What commitments does your complaint imply?* A project leader we worked with, we'll call him Tom, had grumbled, "My subordinates keep me out of the loop on important developments in my project." This complaint yielded the statement, "I believe in open and candid communication." A line manager we'll call Mary lamented people's unwillingness to speak up at meetings; her complaint implied a commitment to shared decision making.

While undoubtedly sincere in voicing such commitments, people can nearly always identify some way in which they are in part responsible for preventing them from being fulfilled. Thus, the third question is: *What are you doing, or not doing, that is keeping your commitment from being more fully realized?* Invariably, in our experience, people can identify these undermining behaviors in just a couple of seconds. For example, Tom admitted: "When people bring me bad news, I tend to shoot the messenger." And Mary acknowledged that she didn't delegate much and that she sometimes didn't release all the information people needed in order to make good decisions.

In both cases, there may well have been other circumstances contributing to the shortfalls, but clearly both Tom and Mary were engaging in behavior that was affecting the people around them. Most people recognize this about themselves right away and are quick to say, "I need to stop doing that." Indeed, Tom had repeatedly vowed to listen more openly to potential problems that would slow his projects. However, the purpose of this exercise is not to make these behaviors disappear—at least not now. The purpose is to understand why people behave in ways that undermine their own success.

The next step, then, is to invite people to consider the consequences of forgoing the behavior. We do this by asking a fourth question: *If you imagine doing the opposite of the undermining behavior, do you detect in yourself any discomfort, worry, or vague fear?* Tom imagined himself listening calmly and openly to some bad news about a project and concluded, "I'm afraid I'll hear about a problem that I can't fix, something that I can't do anything about." And Mary? She considered allowing people more latitude and realized that, quite frankly, she

feared people wouldn't make good decisions and she would be forced to carry out a strategy she thought would lead to an inferior result.

The final step is to transform that passive fear into a statement that reflects an active commitment to preventing certain outcomes. We ask, *By engaging in this undermining behavior, what worrisome outcome are you committed to preventing?* The resulting answer is the competing commitment, which lies at the very heart of a person's immunity to change. Tom admitted, "I am committed to not learning about problems I can't fix." By intimidating his staff, he prevented them from delivering bad news, protecting himself from the fear that he was not in control of the project. Mary, too, was protecting herself—in her case, against the consequences of bad decisions. "I am committed to making sure my group does not make decisions that I don't like."

Such revelations can feel embarrassing. While primary commitments nearly always reflect noble goals that people would be happy to shout from the rooftops, competing commitments are very personal, reflecting vulnerabilities that people fear will undermine how they are regarded both by others and themselves. Little wonder people keep them hidden and hasten to cover them up again once they're on the table.

But competing commitments should not be seen as weaknesses. They represent some version of self-protection, a perfectly natural and reasonable human impulse. The question is, if competing commitments are a form of self-protection, what are people protecting themselves from? The answers usually lie in what we call their *big assumptions*—deeply rooted beliefs about themselves and the world around them. These assumptions put an order to the world and at the same time suggest ways in which the world can go out of order. Competing commitments arise from these assumptions, driving behaviors unwittingly designed to keep the picture intact.

Examining the Big Assumption

People rarely realize they hold big assumptions because, quite simply, they accept them as reality. Often formed long ago and seldom, if ever, critically

examined, big assumptions are woven into the very fabric of people's existence. (For more on the grip that big assumptions hold on people, see the sidebar "[Big Assumptions: How Our Perceptions Shape Our Reality](#).") But with a little help, most people can call them up fairly easily, especially once they've identified their competing commitments. To do this, we first ask people to create the beginning of a sentence by inverting the competing commitment, and then we ask them to fill in the blank. For Tom ("I am committed to not hearing about problems I can't fix"), the big assumption turned out to be, "I assume that if I *did* hear about problems I can't fix, people would discover I'm not qualified to do my job." Mary's big assumption was that her teammates weren't as smart or experienced as she and that she'd be wasting her time and others' if she didn't maintain control. Returning to our earlier story, John's big assumption might be, "I assume that if I develop unambivalent relationships with my white coworkers, I will sacrifice my racial identity and alienate my own community."

This is a difficult process, and it doesn't happen all at once, because admitting to big assumptions makes people uncomfortable. The process can put names to very personal feelings people are reluctant to disclose, such as deep-seated fears or insecurities, highly discouraging or simplistic views of human nature, or perceptions of their own superior abilities or intellect. Unquestioning acceptance of a big assumption anchors and sustains an immune system: A competing commitment makes all the sense in the world, and the person continues to engage in behaviors that support it, albeit unconsciously, to the detriment of his or her "official," stated commitment. Only by bringing big assumptions to light can people finally challenge their assumptions and recognize why they are engaging in seemingly contradictory behavior.

Big Assumptions: How Our Perceptions Shape Our Reality

BIG ASSUMPTIONS REFLECT the very human manner in which we invent or shape a picture of the world and then take our inventions for reality. This is easiest to see in children. The delight

we take in their charming distortions is a kind of celebration that they are actively making sense of the world, even if a bit eccentrically. As one story goes, two youngsters had been learning about Hindu culture and were taken with a representation of the universe in which the world sits atop a giant elephant, and the elephant sits atop an even more giant turtle. “I wonder what the turtle sits on,” says one of the children. “I think from then on,” says the other, “it’s turtles all the way down.”

But deep within our amusement may lurk a note of condescension, an implication that this is what distinguishes children from grown-ups. Their meaning-making is subject to youthful distortions, we assume. Ours represents an accurate map of reality.

But does it? Are we really finished discovering, once we have reached adulthood, that our maps don’t match the territory? The answer is clearly no. In our 20 years of longitudinal and cross-sectional research, we’ve discovered that adults must grow into and out of several qualitatively different views of the world if they are to master the challenges of their life experiences (see Robert Kegan, *In Over Our Heads*, Harvard University Press, 1994).

A woman we met from Australia told us about her experience living in the United States for a year. “Not only do you drive on the wrong side of the street over here,” she said, “your steering wheels are on the wrong side, too. I would routinely pile into the right side of the car to drive off, only to discover I needed to get out and walk over to the other side.

“One day,” she continued, “I was thinking about six different things, and I got into the right side of the car, took out my keys, and was prepared to drive off. I looked up and thought to myself, ‘My God, here in the violent and lawless United States, they are even stealing **steering wheels!**’”

Of course, the countervailing evidence was just an arm’s length to her left, but—and this is the main point—**why should she look?** Our big assumptions create a disarming and deluding sense of certainty. If we know where a steering wheel belongs, we are unlikely to look for it some place else. If we know what our company, department, boss, or subordinate can and can’t do, why should we look for countervailing data—even if it is just an arm’s length away?

Questioning the Big Assumption

Once people have identified their competing commitments and the big

assumptions that sustain them, most are prepared to take some immediate action to overcome their immunity. But the first part of the process involves observation, not action, which can be frustrating for high achievers accustomed to leaping into motion to solve problems. Let's take a look at the steps in more detail.

Step 1: Notice and record current behavior

Employees must first take notice of what does and doesn't happen as a consequence of holding big assumptions to be true. We specifically ask people *not* to try to make any changes in their thinking or behavior at this time but just to become more aware of their actions in relation to their big assumptions. This gives people the opportunity to develop a better appreciation for how and in what contexts big assumptions influence their lives. John, for example, who had assumed that working well with his white colleagues would estrange him from his ethnic group, saw that he had missed an opportunity to get involved in an exciting, high-profile initiative because he had mocked the idea when it first came up in a meeting.

Step 2: Look for contrary evidence

Next, employees must look actively for experiences that might cast doubt on the validity of their big assumptions. Because big assumptions are held as fact, they actually inform what people see, leading them to systematically (but unconsciously) attend to certain data and avoid or ignore other data. By asking people to search specifically for experiences that would cause them to question their assumptions, we help them see that they have filtering out certain types of information—information that could weaken the grip of the big assumptions.

When John looked around him, he considered for the first time that an African-American manager in another department had strong working relationships with her mostly white colleagues, yet seemed not to have compromised her personal identity. He also had to admit that when he had been thrown onto an urgent task force the year before, he had worked many

hours alongside his white colleagues and found the experience satisfying; he had felt of his usual ambivalence.

Step 3: Explore the history

In this step, we people to become the “biographers” of their assumptions: How and when did the assumptions first take hold? How long have they been around? What have been some of their critical turning points?

Typically, this step leads people to earlier life experiences, almost always to times before their current jobs and relationships with current coworkers. This reflection usually makes people dissatisfied with the foundations of their big assumptions, especially when they see that these have accompanied them to their current positions and have been coloring their experiences for many years. Recently, a CEO expressed astonishment as she realized she’d been applying the same self-protective stance in her work that she’d developed during a difficult divorce years before. Just as commonly, as was the case for John, people trace their big assumptions to early experiences with parents, siblings, or friends. Understanding the circumstances that influenced the formation of the assumptions can free people to consider whether these beliefs apply to their present selves.

Step 4: Test the assumption

This step entails creating and running a modest test of the big assumption. This is the first time we ask people to consider making changes in their behavior. Each employee should come up with a scenario and run it by a partner who serves as a sounding board. (Left to their own devices, people tend to create tests that are either too risky or so tentative that they don’t actually challenge the assumption and in fact reaf-firm its validity.) After conferring with a partner, John, for instance, volunteered to join a short-term committee looking at his department’s process for evaluating new product ideas. Because the team would dissolve after a month, he would be able to extricate himself fairly quickly if he grew too uncomfortable with the relationships. But the experience would force him to spend a significant

amount of time with several of his white colleagues during that month and would provide him an opportunity to test his sense of the real costs of being a full team member.

Step 5: Evaluate the results

In the last step, employees evaluate the test results, evaluate the test itself, design and run new tests, and eventually question the big assumptions. For John, this meant signing up for other initiatives and making initial social overtures to white coworkers. At the same time, by engaging in volunteer efforts within his community outside of work, he made sure that his ties to his racial group were not compromised.

It is worth noting that revealing a big assumption doesn't necessarily mean it will be exposed as false. But even if a big assumption does contain an element of truth, an individual can often find more effective ways to operate once he or she has had a chance to challenge the assumption and its hold on his or her behavior. Indeed, John found a way to support the essence of his competing commitment—to maintain his bond with his racial group—while minimizing behavior that sabotaged his other stated commitments.

Uncovering Your Own Immunity

As you go through this process with your employees, remember that managers are every bit as susceptible to change immunity as employees are, and your competing commitments and big assumptions can have a significant impact on the people around you. Returning once more to Helen's story: When we went through this exercise with her boss, Andrew, it turned out that he was harboring some contradictions of his own. While he was committed to the success of his subordinates, Andrew at some level assumed that he alone could meet his high standards, and as a result he was laboring under a competing commitment to maintain absolute control over his projects. He was unintentionally communicating this lack of confidence to his subordinates—including Helen—in subtle ways. In the end, Andrew's and Helen's competing commitments were, without their knowledge, mutually reinforcing, keeping

Helen dependent on Andrew and allowing Andrew to control her projects.

Helen and Andrew are still working through this process, but they've already gained invaluable insight into their behavior and the ways they are impeding their own progress. This may seem like a small step, but bringing these issues to the surface and confronting them head-on is challenging and painful—yet tremendously effective. It allows managers to see, at last, what's really going on when people who are genuinely committed to change nonetheless dig in their heels. It's not about identifying unproductive behavior and systematically making plans to correct it, as if treating symptoms would cure a disease. It's not about coaxing or cajoling or even giving poor performance reviews. It's about understanding the complexities of people's behavior, guiding them through a productive process to bring their competing commitments to the surface, and helping them cope with the inner conflict that is preventing them from achieving their goals.

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Cracking the Code of Change

by Michael Beer and Nitin Nohria

THE NEW ECONOMY HAS ushered in great business opportunities—and great turmoil. Not since the Industrial Revolution have the stakes of dealing with change been so high. Most traditional organizations have accepted, in theory at least, that they must either change or die. And even Internet companies such as eBay, Amazon.com, and America Online recognize that they need to manage the changes associated with rapid entrepreneurial growth. Despite some individual successes, however, change remains difficult to pull off, and few companies manage the process as well as they would like. Most of their initiatives—installing new technology, downsizing, restructuring, or trying to change corporate culture—have had low success rates. The brutal fact is that about 70% of all change initiatives fail.

In our experience, the reason for most of those failures is that in their rush to change their organizations, managers end up immersing themselves in an alphabet soup of initiatives. They lose focus and become mesmerized by all the advice available in print and online about why companies should change, what they should try to accomplish, and how they should do it. This proliferation of recommendations often leads to muddle when change is attempted. The result is that most change efforts exert a heavy toll, both human and economic. To improve the odds of success, and to reduce the human carnage, it is imperative that executives understand the nature and process of corporate change much better. But even that is not enough. Leaders need to crack the code of change.

For more than 40 years now, we've been studying the nature of corporate change. And although every business's change initiative is unique, our research suggests there are two archetypes, or theories, of change. These archetypes are based on very different and often unconscious assumptions by senior executives—and the consultants and academics who advise them—about why and how changes should be made. Theory E is change based on economic value. Theory O is change based on organizational capability. Both are valid models; each theory of change achieves some of management's goals, either explicitly or implicitly. But each theory also has its costs—often unexpected ones.

Theory E change strategies are the ones that make all the headlines. In this “hard” approach to change, shareholder value is the only legitimate measure of corporate success. Change usually involves heavy use of economic incentives, drastic layoffs, downsizing, and restructuring. E change strategies are more common than O change strategies among companies in the United States, where financial markets push corporate boards for rapid turnarounds. For instance, when William A. Anders was brought in as CEO of General Dynamics in 1991, his goal was to maximize economic value—however painful the remedies might be. Over the next three years, Anders reduced the workforce by 71,000 people—44,000 through the divestiture of seven businesses and 27,000 through layoffs and attrition. Anders employed common E strategies.

Managers who subscribe to Theory O believe that if they were to focus exclusively on the price of their stock, they might harm their organizations. In this “soft” approach to change, the goal is to develop corporate culture and human capability through individual and organizational learning—the process of changing, obtaining feedback, reflecting, and making further changes. U.S. companies that adopt O strategies, as Hewlett-Packard did when its performance flagged in the 1980s, typically have strong, long-held, commitment-based psychological contracts with their employees.

Idea in Brief

Here's the brutal fact: 70% of all change initiatives fail. Why? Managers flounder in an alphabet soup of change methods, drowning in conflicting advice. Change efforts exact a heavy toll—human **and** economic—as companies flail from one change method to another.

To effect successful change, first **grasp the two basic theories of change**:

1. **Theory E** change emphasizes economic value—as measured **only** by shareholder returns. This “hard” approach boosts returns through economic incentives, drastic layoffs, and restructuring. “Chainsaw Al” Dunlop’s firing 11,000 Scott Paper employees and selling several businesses—tripling shareholder value to \$9 billion—is a stunning example.

2. **Theory O** change—a “softer” approach—focuses on developing corporate culture and human capability, patiently building trust and emotional commitment to the company through teamwork and communication.

Then, carefully and simultaneously **balance these very different approaches**. It’s not easy. Employees distrust leaders who alternate between nurturing and cutthroat behavior. But, done well, you’ll boost profits and productivity, and achieve sustainable competitive advantage.

Managers at these companies are likely to see the risks in breaking those contracts. Because they place a high value on employee commitment, Asian and European businesses are also more likely to adopt an O strategy to change.

Few companies subscribe to just one theory. Most companies we have studied have used a mix of both. But all too often, managers try to apply theories E and O in tandem without resolving the inherent tensions between them. This impulse to combine the strategies is directionally correct, but theories E and O are so different that it’s hard to manage them simultaneously—employees distrust leaders who alternate between nurturing and cutthroat

corporate behavior. Our research suggests, however, that there is a way to resolve the tension so that businesses can satisfy their shareholders while building viable institutions. Companies that effectively combine hard and soft approaches to change can reap big payoffs in profitability and productivity. Those companies are more likely to achieve a sustainable competitive advantage. They can also reduce the anxiety that grips whole societies in the face of corporate restructuring.

Idea in Practice

The UK grocery chain, ASDA, teetered on bankruptcy in 1991. Here's how CEO Archie Norman combined change Theories E and O with spectacular results: a culture of trust and openness—*and* an eightfold increase in shareholder value.

Change dimension	How to combine theories E and O	Examples from ASDA
Goals	Embrace the paradox between economic value <i>and</i> organizational capability	Norman started his tenure by stating, "Our number one objective is to secure value for our shareholders" and "We need a culture built around common ideas . . . and listening, learning, and speed of response, from the stores upwards."
Leadership	Set direction from the top <i>and</i> engage people from below	Norman unilaterally set a new pricing strategy <i>and</i> shifted power from headquarters to stores. His forthright "Tell Archie" program encouraged dialogue with all employees. He hired warm, accessible Allan Leighton to complement his own Theory O leadership style and strengthened emotional commitment to the new ASDA.
Focus	Focus on both hard and soft sides of the organization	Norman set out to win both hearts <i>and</i> minds. He boosted economic value through hard, structural changes, e.g., removing top layers of hierarchy and freezing all wages. He paid equal attention to the soft side by spending 75% of his early months as HR director creating a more egalitarian and transparent organization—"a great place for everyone to work."

Change dimension	How to combine theories E and O	Examples from ASDA
Process	Plan for spontaneity	Norman encouraged experimentation, setting up three “risk-free” stores where employees could fail without penalty. Managers experimented with store layout, product range, employee roles. A cross-functional team redesigned ASDA’s entire retail organization—and produced significant innovations.
Reward system	Use incentives to reinforce rather than drive change	ASDA applied Theory E incentives in an O-like way. It encouraged all employees to participate actively in changing ASDA. And it rewarded their commitment with stock ownership and variable pay based on corporate <i>and</i> store performance.

In this article, we will explore how one company successfully resolved the tensions between E and O strategies. But before we do that, we need to look at just how different the two theories are.

A Tale of Two Theories

To understand how sharply theories E and O differ, we can compare them along several key dimensions of corporate change: goals, leadership, focus, process, reward system, and use of consultants. (For a side-by-side comparison, see the table “[Comparing theories of change](#).”) We’ll look at two companies in similar businesses that adopted almost pure forms of each archetype. Scott Paper successfully used Theory E to enhance shareholder value, while Champion International used Theory O to achieve a complete cultural transformation that increased its productivity and employee commitment. But as we will soon observe, both paper producers also discovered the limitations of sticking with only one theory of change. Let’s compare the two companies’ initiatives.

Goals

When Al Dunlap assumed leadership of Scott Paper in May 1994, he immediately fired 11,000 employees and sold off several businesses. His

determination to restructure the beleaguered company was almost monomaniacal. As he said in one of his speeches: “Shareholders are the number one constituency. Show me an annual report that lists six or seven constituencies, and I’ll show you a mismanaged company.” From a shareholder’s perspective, the results of Dunlap’s actions were stunning. In just 20 months, he managed to triple shareholder returns as Scott Paper’s market value rose from about \$3 billion in 1994 to about \$9 billion by the end of 1995. The financial community applauded his efforts and hailed Scott Paper’s approach to change as a model for improving shareholder returns.

Champion’s reform effort couldn’t have been more different. CEO Andrew Sigler acknowledged that enhanced economic value was an appropriate target for management, but he believed that goal would be best achieved by transforming the behaviors of management, unions, and workers alike. In 1981, Sigler and other managers launched a long-term effort to restructure corporate culture around a new vision called the Champion Way, a set of values and principles designed to build up the competencies of the workforce. By improving the organization’s capabilities in areas such as teamwork and communication, Sigler believed he could best increase employee productivity and thereby improve the bottom line.

Leadership

Leaders who subscribe to Theory E manage change the old-fashioned way: from the top down. They set goals with little involvement from their management teams and certainly without input from lower levels or unions. Dunlap was clearly the commander in chief at Scott Paper. The executives who survived his purges, for example, had to agree with his philosophy that shareholder value was now the company’s primary objective. Nothing made clear Dunlap’s leadership style better than the nickname he gloried in: “Chainsaw Al.”

By contrast, participation (a Theory O trait) was the hallmark of change at Champion. Every effort was made to get all its employees emotionally committed to improving the company’s performance. Teams drafted value

statements, and even the industry's unions were brought into the dialogue. Employees were encouraged to identify and solve problems themselves. Change at Champion sprouted from the bottom up.

Focus

In E-type change, leaders typically focus immediately on streamlining the “hardware” of the organization—the structures and systems. These are the elements that can most easily be changed from the top down, yielding swift financial results. For instance, Dunlap quickly decided to outsource many of Scott Paper's corporate functions—benefits and payroll administration, almost all of its management information systems, some of its technology research, medical services, telemarketing, and security functions. An executive manager of a global merger explained the E rationale: “I have a [profit] goal of \$176 million this year, and there's no time to involve others or develop organizational capability.”

By contrast, Theory O's initial focus is on building up the “software” of an organization—the culture, behavior, and attitudes of employees. Throughout a decade of reforms, no employees were laid off at Champion. Rather, managers and employees were encouraged to collectively reexamine their work practices and behaviors with a goal of increasing productivity and quality. Managers were replaced if they did not conform to the new philosophy, but the overall firing freeze helped to create a culture of trust and commitment. Structural change followed once the culture changed. Indeed, by the mid-1990s, Champion had completely reorganized all its corporate functions. Once a hierarchical, functionally organized company, Champion adopted a matrix structure that empowered employee teams to focus more on customers.

Comparing theories of change

Our research has shown that all corporate transformations can be compared along the six dimensions shown here. The table outlines the differences between the E and O archetypes and illustrates what an integrated approach might look like.

Dimensions of change	Theory E	Theory O	Theories E and O combined
Goals	Maximize shareholder value	Develop organizational capabilities	Explicitly embrace the paradox between economic value and organizational capability
Leadership	Manage change from the top down	Encourage participation from the bottom up	Set direction from the top and engage the people below
Focus	Emphasize structure and systems	Build up corporate culture: employees' behavior and attitudes	Focus simultaneously on the hard (structures and systems) and the soft (corporate culture)
Process	Plan and establish programs	Experiment and evolve	Plan for spontaneity
Reward system	Motivate through financial incentives	Motivate through commitment—use pay as fair exchange	Use incentives to reinforce change but not to drive it
Use of consultants	Consultants analyze problems and shape solutions	Consultants support management in shaping their own solutions	Consultants are expert resources who empower employees

Process

Theory E is predicated on the view that no battle can be won without a clear, comprehensive, common plan of action that encourages internal coordination and inspires confidence among customers, suppliers, and investors. The plan lets leaders quickly motivate and mobilize their businesses; it compels them to take tough, decisive actions they presumably haven't taken in the past. The changes at Scott Paper unfolded like a military battle plan. Managers were instructed to achieve specific targets by specific dates. If they didn't adhere to Dunlap's tightly choreographed marching orders, they risked being fired.

Meanwhile, the changes at Champion were more evolutionary and emergent than planned and programmatic. When the company's decade-long reform began in 1981, there was no master blueprint. The idea was that innovative work processes, values, and culture changes in one plant would be adapted and used by other plants on their way through the corporate system. No single

person, not even Sigler, was seen as the driver of change. Instead, local leaders took responsibility. Top management simply encouraged experimentation from the ground up, spread new ideas to other workers, and transferred managers of innovative units to lagging ones.

Reward System

The rewards for managers in E-type change programs are primarily financial. Employee compensation, for example, is linked with financial incentives, mainly stock options. Dunlap's own compensation package—which ultimately netted him more than \$100 million—was tightly linked to shareholders' interests. Proponents of this system argue that financial incentives guarantee that employees' interests match stockholders' interests. Financial rewards also help top executives feel compensated for a difficult job—one in which they are often reviled by their onetime colleagues and the larger community.

The O-style compensation systems at Champion reinforced the goals of culture change, but they didn't drive those goals. A skills-based pay system and a corporatewide gains-sharing plan were installed to draw union workers and management into a community of purpose. Financial incentives were used only as a supplement to those systems and not to push particular reforms. While Champion did offer a companywide bonus to achieve business goals in two separate years, this came late in the change process and played a minor role in actually fulfilling those goals.

Use of Consultants

Theory E change strategies often rely heavily on external consultants. A SWAT team of Ivy League-educated MBAs, armed with an arsenal of state-of-the-art ideas, is brought in to find new ways to look at the business and manage it. The consultants can help CEOs get a fix on urgent issues and priorities. They also offer much-needed political and psychological support for CEOs who are under fire from financial markets. At Scott Paper, Dunlap engaged consultants to identify many of the painful cost-savings initiatives that he subsequently implemented.

Theory O change programs rely far less on consultants. The handful of consultants who were introduced at Champion helped managers and workers make their own business analyses and craft their own solutions. And while the consultants had their own ideas, they did not recommend any corporate program, dictate any solutions, or whip anyone into line. They simply led a process of discovery and learning that was intended to change the corporate culture in a way that could not be foreseen at the outset.

In their purest forms, both change theories clearly have their limitations. CEOs who must make difficult E-style choices understandably distance themselves from their employees to ease their own pain and guilt. Once removed from their people, these CEOs begin to see their employees as part of the problem. As time goes on, these leaders become less and less inclined to adopt O-style change strategies. They fail to invest in building the company's human resources, which inevitably hollows out the company and saps its capacity for sustained performance. At Scott Paper, for example, Dunlap trebled shareholder returns but failed to build the capabilities needed for sustained competitive advantage—commitment, coordination, communication, and creativity. In 1995, Dunlap sold Scott Paper to its longtime competitor Kimberly-Clark.

CEOs who embrace Theory O find that their loyalty and commitment to their employees can prevent them from making tough decisions. The temptation is to postpone the bitter medicine in the hopes that rising productivity will improve the business situation. But productivity gains aren't enough when fundamental structural change is required. That reality is underscored by today's global financial system, which makes corporate performance instantly transparent to large institutional shareholders whose fund managers are under enormous pressure to show good results. Consider Champion. By 1997, it had become one of the leaders in its industry based on most performance measures. Still, newly instated CEO Richard Olsen was forced to admit a tough reality: Champion shareholders had not seen a significant increase in the economic value of the company in more than a

decade. Indeed, when Champion was sold recently to Finland-based UPM-Kymmene, it was acquired for a mere 1.5 times its original share value.

Managing the Contradictions

Clearly, if the objective is to build a company that can adapt, survive, and prosper over the years, Theory E strategies must somehow be combined with Theory O strategies. But unless they're carefully handled, melding E and O is likely to bring the worst of both theories and the benefits of neither. Indeed, the corporate changes we've studied that arbitrarily and haphazardly mixed E and O techniques proved destabilizing to the organizations in which they were imposed. Managers in those companies would certainly have been better off to pick either pure E or pure O strategies—with all their costs. At least one set of stakeholders would have benefited.

The obvious way to combine E and O is to sequence them. Some companies, notably General Electric, have done this quite successfully. At GE, CEO Jack Welch began his sequenced change by imposing an E-type restructuring. He demanded that all GE businesses be first or second in their industries. Any unit that failed that test would be fixed, sold off, or closed. Welch followed that up with a massive downsizing of the GE bureaucracy. Between 1981 and 1985, total employment at the corporation dropped from 412,000 to 299,000. Sixty percent of the corporate staff, mostly in planning and finance, was laid off. In this phase, GE people began to call Welch “Neutron Jack,” after the fabled bomb that was designed to destroy people but leave buildings intact. Once he had wrung out the redundancies, however, Welch adopted an O strategy. In 1985, he started a series of organizational initiatives to change GE culture. He declared that the company had to become “boundaryless,” and unit leaders across the corporation had to submit to being challenged by their subordinates in open forum. Feedback and open communication eventually eroded the hierarchy. Soon Welch applied the new order to GE's global businesses.

Unfortunately for companies like Champion, sequenced change is far easier

if you begin, as Welch did, with Theory E. Indeed, it is highly unlikely that E would successfully follow O because of the sense of betrayal that would involve. It is hard to imagine how a draconian program of layoffs and downsizing can leave intact the psychological contract and culture a company has so patiently built up over the years. But whatever the order, one sure problem with sequencing is that it can take a very long time; at GE it has taken almost two decades. A sequenced change may also require two CEOs, carefully chosen for their contrasting styles and philosophies, which may create its own set of problems. Most turnaround managers don't survive restructuring—partly because of their own inflexibility and partly because they can't live down the distrust that their ruthlessness has earned them. In most cases, even the best-intentioned effort to rebuild trust and commitment rarely overcomes a bloody past. Welch is the exception that proves the rule.

So what should you do? How can you achieve rapid improvements in economic value while simultaneously developing an open, trusting corporate culture? Paradoxical as those goals may appear, our research shows that it is possible to apply theories E and O together. It requires great will, skill—and wisdom. But precisely because it is more difficult than mere sequencing, the simultaneous use of O and E strategies is more likely to be a source of sustainable competitive advantage.

One company that exemplifies the reconciliation of the hard and soft approaches is ASDA, the UK grocery chain that CEO Archie Norman took over in December 1991, when the retailer was nearly bankrupt. Norman laid off employees, flattened the organization, and sold off losing businesses—acts that usually spawn distrust among employees and distance executives from their people. Yet during Norman's eight-year tenure as CEO, ASDA also became famous for its atmosphere of trust and openness. It has been described by executives at Wal-Mart—itsself famous for its corporate culture—as being “more like Wal-Mart than we are.” Let's look at how ASDA resolved the conflicts of E and O along the six main dimensions of change.

Explicitly confront the tension between E and O goals

With his opening speech to ASDA's executive team—none of whom he had met—Norman indicated clearly that he intended to apply both E and O strategies in his change effort. It is doubtful that any of his listeners fully understood him at the time, but it was important that he had no conflicts about recognizing the paradox between the two strategies for change. He said as much in his maiden speech: “Our number one objective is to secure value for our shareholders and secure the trading future of the business. I am not coming in with any magical solutions. I intend to spend the next few weeks listening and forming ideas for our precise direction. . . . We need a culture built around common ideas and goals that include listening, learning, and speed of response, from the stores upwards. [But] there will be management reorganization. My objective is to establish a clear focus on the stores, shorten lines of communication, and build one team.” If there is a contradiction between building a high-involvement organization and restructuring to enhance shareholder value, Norman embraced it.

Set direction from the top and engage people below

From day one, Norman set strategy without expecting any participation from below. He said ASDA would adopt an everyday-low-pricing strategy, and Norman unilaterally determined that change would begin by having two experimental store formats up and running within six months. He decided to shift power from the headquarters to the stores, declaring: “I want everyone to be close to the stores. We must love the stores to death; that is our business.” But even from the start, there was an O quality to Norman's leadership style. As he put it in his first speech: “First, I am forthright, and I like to argue. Second, I want to discuss issues as colleagues. I am looking for your advice and your disagreement.” Norman encouraged dialogue with employees and customers through colleague and customer circles. He set up a “Tell Archie” program so that people could voice their concerns and ideas.

Making way for opposite leadership styles was also an essential ingredient to Norman's—and ASDA's—success. This was most clear in Norman's willingness to hire Allan Leighton shortly after he took over. Leighton

eventually became deputy chief executive. Norman and Leighton shared the same E and O values, but they had completely different personalities and styles. Norman, cool and reserved, impressed people with the power of his mind—his intelligence and business acumen. Leighton, who is warmer and more people oriented, worked on employees' emotions with the power of his personality. As one employee told us, "People respect Archie, but they love Allan." Norman was the first to credit Leighton with having helped to create emotional commitment to the new ASDA. While it might be possible for a single individual to embrace opposite leadership styles, accepting an equal partner with a very different personality makes it easier to capitalize on those styles. Leighton certainly helped Norman reach out to the organization. Together they held quarterly meetings with store managers to hear their ideas, and they supplemented those meetings with impromptu talks.

Focus simultaneously on the hard and soft sides of the organization

Norman's immediate actions followed both the E goal of increasing economic value and the O goal of transforming culture. On the E side, Norman focused on structure. He removed layers of hierarchy at the top of the organization, fired the financial officer who had been part of ASDA's disastrous policies, and decreed a wage freeze for everyone—management and workers alike. But from the start, the O strategy was an equal part of Norman's plan. He bought time for all this change by warning the markets that financial recovery would take three years. Norman later said that he spent 75% of his early months at ASDA as the company's human resource director, making the organization less hierarchical, more egalitarian, and more transparent. Both Norman and Leighton were keenly aware that they had to win hearts and minds. As Norman put it to workers: "We need to make ASDA a great place for everyone to work."

Plan for spontaneity

Training programs, total-quality programs, and top-driven culture change

programs played little part in ASDA's transformation. From the start, the ASDA change effort was set up to encourage experimentation and evolution. To promote learning, for example, ASDA set up an experimental store that was later expanded to three stores. It was declared a risk-free zone, meaning there would be no penalties for failure. A cross-functional task force "renewed," or redesigned, ASDA's entire retail proposition, its organization, and its managerial structure. Store managers were encouraged to experiment with store layout, employee roles, ranges of products offered, and so on. The experiments produced significant innovations in all aspects of store operations. ASDA's managers learned, for example, that they couldn't renew a store unless that store's management team was ready for new ideas. This led to an innovation called the Driving Test, which assessed whether store managers' skills in leading the change process were aligned with the intended changes. The test perfectly illustrates how E and O can come together: it bubbled up O-style from the bottom of the company, yet it bound managers in an E-type contract. Managers who failed the test were replaced.

Let incentives reinforce change, not drive it

Any synthesis of E and O must recognize that compensation is a double-edged sword. Money can focus and motivate managers, but it can also hamper teamwork, commitment, and learning. The way to resolve this dilemma is to apply Theory E incentives in an O way. Employees' high involvement is encouraged to develop their commitment to change, and variable pay is used to reward that commitment. ASDA's senior executives were compensated with stock options that were tied to the company's value. These helped attract key executives to ASDA. Unlike most E-strategy companies, however, ASDA had a stock-ownership plan for all employees. In addition, store-level employees got variable pay based on both corporate performance and their stores' records. In the end, compensation represented a fair exchange of value between the company and its individual employees. But Norman believed that compensation had not played a major role in motivating change at the company.

Use consultants as expert resources who empower employees

Consultants can provide specialized knowledge and technical skills that the company doesn't have, particularly in the early stages of organizational change. Management's task is figuring out how to use those resources without abdicating leadership of the change effort. ASDA followed the middle ground between Theory E and Theory O. It made limited use of four consulting firms in the early stages of its transformation. The consulting firms always worked alongside management and supported its leadership of change. However, their engagement was intentionally cut short by Norman to prevent ASDA and its managers from becoming dependent on the consultants. For example, an expert in store organization was hired to support the task force assigned to renew ASDA's first few experimental stores, but later stores were renewed without his involvement.

By embracing the paradox inherent in simultaneously employing E and O change theories, Norman and Leighton transformed ASDA to the advantage of its shareholders and employees. The organization went through personnel changes, unit sell-offs, and hierarchical upheaval. Yet these potentially destructive actions did not prevent ASDA's employees from committing to change and the new corporate culture because Norman and Leighton had won employees' trust by constantly listening, debating, and being willing to learn. Candid about their intentions from the outset, they balanced the tension between the two change theories.

By 1999, the company had multiplied shareholder value eightfold. The organizational capabilities built by Norman and Leighton also gave ASDA the sustainable competitive advantage that Dunlap had been unable to build at Scott Paper and that Sigler had been unable to build at Champion. While Dunlap was forced to sell a demoralized and ineffective organization to Kimberly-Clark, and while a languishing Champion was sold to UPM-Kymmene, Norman and Leighton in June 1999 found a friendly and culturally compatible suitor in Wal-Mart, which was willing to pay a substantial premium for the organizational capabilities that ASDA had so painstakingly developed.

HISTORICALLY, THE STUDY of change has been restricted to mature, large companies that needed to reverse their competitive declines. But the arguments we have advanced in this article also apply to entrepreneurial companies that need to manage rapid growth. Here, too, we believe that the most successful strategy for change will be one that combines theories E and O.

Just as there are two ways of changing, so there are two kinds of entrepreneurs. One group subscribes to an ideology akin to Theory E. Their primary goal is to prepare for a cash-out, such as an IPO or an acquisition by an established player. Maximizing market value before the cash-out is their sole and abiding purpose. These entrepreneurs emphasize shaping the firm's strategy, structure, and systems to build a quick, strong market presence. Mercurial leaders who drive the company using a strong top-down style are typically at the helm of such companies. They lure others to join them using high-powered incentives such as stock options. The goal is to get rich quick.

Other entrepreneurs, however, are driven by an ideology more akin to Theory O—the building of an institution. Accumulating wealth is important, but it is secondary to creating a company that is based on a deeply held set of values and that has a strong culture. These entrepreneurs are likely to subscribe to an egalitarian style that invites everyone's participation. They look to attract others who share their passion about the cause—though they certainly provide generous stock options as well. The goal in this case is to make a difference, not just to make money.

Many people fault entrepreneurs who are driven by a Theory E view of the world. But we can think of other entrepreneurs who have destroyed businesses because they were overly wrapped up in the Theory O pursuit of a higher ideal and didn't pay attention to the pragmatics of the market. Steve Jobs's venture, Next, comes to mind. Both types of entrepreneurs have to find some way of tapping the qualities of theories E and O, just as large companies do.

In the end, the integration of theories E and O created major change—and major payoffs—for ASDA. Such payoffs are possible for other organizations that want to develop a sustained advantage in today's economy. But that advantage can come only from a constant willingness and ability to develop organizations for the long term combined with a constant monitoring of

shareholder value—E dancing with O, in an unending minuet.

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The Hard Side of Change Management

by Harold L. Sirkin, Perry Keenan, and Alan Jackson

WHEN FRENCH NOVELIST JEAN-BAPTISTE Alphonse Karr wrote “*Plus ça change, plus c’est la même chose*,” he could have been penning an epigram about change management. For over three decades, academics, managers, and consultants, realizing that transforming organizations is difficult, have dissected the subject. They’ve sung the praises of leaders who communicate vision and walk the talk in order to make change efforts succeed. They’ve sanctified the importance of changing organizational culture and employees’ attitudes. They’ve teased out the tensions between top-down transformation efforts and participatory approaches to change. And they’ve exhorted companies to launch campaigns that appeal to people’s hearts and minds. Still, studies show that in most organizations, two out of three transformation initiatives fail. The more things change, the more they stay the same.

Managing change *is* tough, but part of the problem is that there is little agreement on what factors most influence transformation initiatives. Ask five executives to name the one factor critical for the success of these programs, and you’ll probably get five different answers. That’s because each manager looks at an initiative from his or her viewpoint and, based on personal experience, focuses on different success factors. The experts, too, offer different perspectives. A recent search on Amazon.com for books on “change and management” turned up 6,153 titles, each with a distinct take on the topic. Those ideas have a lot to offer, but taken together, they force companies to tackle many priorities simultaneously, which spreads resources and skills thin.

Moreover, executives use different approaches in different parts of the organization, which compounds the turmoil that usually accompanies change.

In recent years, many change management gurus have focused on soft issues, such as culture, leadership, and motivation. Such elements are important for success, but managing these aspects alone isn't sufficient to implement transformation projects. Soft factors don't directly influence the outcomes of many change programs. For instance, visionary leadership is often vital for transformation projects, but not always. The same can be said about communication with employees. Moreover, it isn't easy to change attitudes or relationships; they're deeply ingrained in organizations and people. And although changes in, say, culture or motivation levels can be indirectly gauged through surveys and interviews, it's tough to get reliable data on soft factors.

What's missing, we believe, is a focus on the not-so-fashionable aspects of change management: the hard factors. These factors bear three distinct characteristics. First, companies are able to measure them in direct or indirect ways. Second, companies can easily communicate their importance, both within and outside organizations. Third, and perhaps most important, businesses are capable of influencing those elements quickly. Some of the hard factors that affect a transformation initiative are the time necessary to complete it, the number of people required to execute it, and the financial results that intended actions are expected to achieve. Our research shows that change projects fail to get off the ground when companies neglect the hard factors. That doesn't mean that executives can ignore the soft elements; that would be a grave mistake. However, if companies don't pay attention to the hard issues first, transformation programs will break down before the soft elements come into play.

Idea in Brief

Two out of every three transformation programs fail.
Why? Companies overemphasize the soft side of

change: leadership style, corporate culture, employee motivation. Though these elements are critical for success, change projects can't get off the ground unless companies address harder elements first.

The essential hard elements? Think of them as DICE:

- **Duration:** time between milestone reviews—the shorter, the better
- **Integrity:** project teams' skill
- **Commitment:** senior executives' and line managers' dedication to the program
- **Effort:** the extra work employees must do to adopt new processes—the less, the better

By assessing each DICE element **before** you launch a major change initiative, you can identify potential problem areas and make the necessary adjustments (such as reconfiguring a project team's composition or reallocating resources) to ensure the program's success. You can also use DICE **after** launching a project—to make midcourse corrections if the initiative veers off track.

DICE helps companies lay the foundation for successful change. Using the DICE assessment technique, one global beverage company executed a multiproject organization-wide change program that generated hundreds of millions of dollars, breathed new life into its once-stagnant brands, and cracked open new markets.

That's a lesson we learned when we identified the common denominators of change. In 1992, we started with the contrarian hypothesis that organizations handle transformations in remarkably similar ways. We researched projects in a number of industries and countries to identify those common elements. Our initial 225-company study revealed a consistent correlation between the outcomes (success or failure) of change programs and four hard factors: project *duration*, particularly the time between project reviews; performance *integrity*, or the capabilities of project teams; the *commitment* of both senior executives and the staff whom the change will affect

the most; and the additional *effort* that employees must make to cope with the change. We called these variables the DICE factors because we could load them in favor of projects' success.

Idea in Practice

Conducting a DICE Assessment

Your project has the greatest chance of success if the following hard elements are in place:

Duration

A long project reviewed frequently stands a far better chance of succeeding than a short project reviewed infrequently. Problems can be identified at the first sign of trouble, allowing for prompt corrective actions. Review complex projects every two weeks; more straightforward initiatives, every six to eight weeks.

Integrity

A change program's success hinges on a high-integrity, high-quality project team. To identify team candidates with the right portfolio of skills, solicit names from key colleagues, including top performers in functions other than your own. Recruit people who have problem-solving skills, are results oriented, and are methodical but tolerate ambiguity. Look also for organizational savvy, willingness to accept responsibility for decisions, and a disdain for the limelight.

Commitment

If employees don't see company leaders supporting a change initiative, they won't change. Visibly endorse the initiative—no amount of public support is too much. When you feel you're "talking up" a change effort at least three times more than you need to, you've hit it right.

Also continually communicate why the change is needed and what it means for employees. Ensure that all messages about the change are consistent and clear. Reach out to managers and employees through one-on-one conversations to win them over.

Effort

If adopting a change burdens employees with too much additional effort, they'll resist. Calculate how much work employees will have to do beyond their existing responsibilities to implement the change. Ensure that no one's workload increases more than 10%. If necessary, remove nonessential regular work from employees with key roles in the transformation project. Use temporary workers or outsource some processes to accommodate additional workload.

Using the DICE Framework

Conducting a DICE assessment fosters successful change by sparking valuable senior leadership debate about project strategy. It also improves change effectiveness by enabling companies to manage large portfolios of projects.

Example: A manufacturing company planned 40 projects as part of a profitability-improvement program. After conducting a DICE assessment for each project, leaders and project owners identified the five most important projects and asked, "How can we ensure these projects' success?" They moved people around on teams, reconfigured some projects, and identified initiatives senior managers should pay more attention to—setting up their most crucial projects for resounding success.

We completed our study in 1994, and in the 11 years since then, the Boston Consulting Group has used those four factors to predict the outcomes, and guide the execution, of more than 1,000 change management initiatives worldwide. Not only has the correlation held, but no other factors (or combination of factors) have predicted outcomes as well.

The Four Key Factors

If you think about it, the different ways in which organizations combine the four factors create a continuum—from projects that are set up to succeed to those that are set up to fail. At one extreme, a short project led by a skilled,

motivated, and cohesive team, championed by top management and implemented in a department that is receptive to the change and has to put in very little additional effort, is bound to succeed. At the other extreme, a long, drawn-out project executed by an inexperienced, unenthusiastic, and disjointed team, without any top-level sponsors and targeted at a function that dislikes the change and has to do a lot of extra work, will fail. Businesses can easily identify change programs at either end of the spectrum, but most initiatives occupy the middle ground where the likelihood of success or failure is difficult to assess. Executives must study the four DICE factors carefully to figure out if their change programs will fly—or die.

The Four Factors

THESE FACTORS determine the outcome of any transformation initiative.

D. The **duration** of time until the change program is completed if it has a short life span; if not short, the amount of time between reviews of milestones.

I. The project team's performance **integrity**; that is, its ability to complete the initiative on time. That depends on members' skills and traits relative to the project's requirements.

C. The **commitment** to change that top management (C_1) and employees affected by the change (C_2) display.

E. The **effort** over and above the usual work that the change initiative demands of employees.

Duration

Companies make the mistake of worrying mostly about the time it will take to implement change programs. They assume that the longer an initiative carries on, the more likely it is to fail—the early impetus will peter out, windows of opportunity will close, objectives will be forgotten, key supporters will leave or lose their enthusiasm, and problems will accumulate. However, contrary to popular perception, our studies show that a long project that is reviewed frequently is more likely to succeed than a short project that isn't reviewed

frequently. Thus, the time between reviews is more critical for success than a project's life span.

Companies should formally review transformation projects at least bimonthly since, in our experience, the probability that change initiatives will run into trouble rises exponentially when the time between reviews exceeds eight weeks. Whether reviews should be scheduled even more frequently depends on how long executives feel the project can carry on without going off track. Complex projects should be reviewed fortnightly; more familiar or straightforward initiatives can be assessed every six to eight weeks.

Scheduling milestones and assessing their impact are the best way by which executives can review the execution of projects, identify gaps, and spot new risks. The most effective milestones are those that describe major actions or achievements rather than day-to-day activities. They must enable senior executives and project sponsors to confirm that the project has made progress since the last review took place. Good milestones encompass a number of tasks that teams must complete. For example, describing a particular milestone as "Consultations with Stakeholders Completed" is more effective than "Consult Stakeholders" because it represents an achievement and shows that the project has made headway. Moreover, it suggests that several activities were completed—identifying stakeholders, assessing their needs, and talking to them about the project. When a milestone looks as though it won't be reached on time, the project team must try to understand why, take corrective actions, and learn from the experience to prevent problems from recurring.

Review of such a milestone—what we refer to as a "learning milestone"—isn't an impromptu assessment of the Monday-morning kind. It should be a formal occasion during which senior-management sponsors and the project team evaluate the latter's performance on all the dimensions that have a bearing on success and failure. The team must provide a concise report of its progress, and members and sponsors must check if the team is on track to complete, or has finished all the tasks to deliver, the milestone. They should also determine whether achieving the milestone has had the desired effect on

the company; discuss the problems the team faced in reaching the milestone; and determine how that accomplishment will affect the next phase of the project. Sponsors and team members must have the power to address weaknesses. When necessary, they should alter processes, agree to push for more or different resources, or suggest a new direction. At these meetings, senior executives must pay special attention to the dynamics within teams, changes in the organization's perceptions about the initiative, and communications from the top.

Integrity

By performance integrity, we mean the extent to which companies can rely on teams of managers, supervisors, and staff to execute change projects successfully. In a perfect world, every team would be flawless, but no business has enough great people to ensure that. Besides, senior executives are often reluctant to allow star performers to join change efforts because regular work can suffer. But since the success of change programs depends on the quality of teams, companies must free up the best staff while making sure that day-to-day operations don't falter. In companies that have succeeded in implementing change programs, we find that employees go the extra mile to ensure their day-to-day work gets done.

Since project teams handle a wide range of activities, resources, pressures, external stimuli, and unforeseen obstacles, they must be cohesive and well led. It's not enough for senior executives to ask people at the watercooler if a project team is doing well; they must clarify members' roles, commitments, and accountability. They must choose the team leader and, most important, work out the team's composition.

Smart executive sponsors, we find, are very inclusive when picking teams. They identify talent by soliciting names from key colleagues, including human resource managers; by circulating criteria they have drawn up; and by looking for top performers in all functions. While they accept volunteers, they take care not to choose only supporters of the change initiative. Senior executives personally interview people so that they can construct the right portfolio of

skills, knowledge, and social networks. They also decide if potential team members should commit all their time to the project; if not, they must ask them to allocate specific days or times of the day to the initiative. Top management makes public the parameters on which it will judge the team's performance and how that evaluation fits into the company's regular appraisal process. Once the project gets under way, sponsors must measure the cohesion of teams by administering confidential surveys to solicit members' opinions.

Executives often make the mistake of assuming that because someone is a good, well-liked manager, he or she will also make a decent team leader. That sounds reasonable, but effective managers of the status quo aren't necessarily good at changing organizations. Usually, good team leaders have problem-solving skills, are results oriented, are methodical in their approach but tolerate ambiguity, are organizationally savvy, are willing to accept responsibility for decisions, and while being highly motivated, don't crave the limelight. A CEO who successfully led two major transformation projects in the past ten years used these six criteria to quiz senior executives about the caliber of nominees for project teams. The top management team rejected one in three candidates, on average, before finalizing the teams.

Commitment

Companies must boost the commitment of two different groups of people if they want change projects to take root: They must get visible backing from the most influential executives (what we call C_1), who are not necessarily those with the top titles. And they must take into account the enthusiasm—or often, lack thereof—of the people who must deal with the new systems, processes, or ways of working (C_2).

Top-level commitment is vital to engendering commitment from those at the coal face. If employees don't see that the company's leadership is backing a project, they're unlikely to change. No amount of top-level support is too much. In 1999, when we were working with the CEO of a consumer products company, he told us that he was doing much more than necessary to display

his support for a nettlesome project. When we talked to line managers, they said that the CEO had extended very little backing for the project. They felt that if he wanted the project to succeed, he would have to support it more visibly! A rule of thumb: When you feel that you are talking up a change initiative at least three times more than you need to, your managers will feel that you are backing the transformation.

Sometimes, senior executives are reluctant to back initiatives. That's understandable; they're often bringing about changes that may negatively affect employees' jobs and lives. However, if senior executives do not communicate the need for change, and what it means for employees, they endanger their projects' success. In one financial services firm, top management's commitment to a program that would improve cycle times, reduce errors, and slash costs was low because it entailed layoffs. Senior executives found it gut-wrenching to talk about layoffs in an organization that had prided itself on being a place where good people could find lifetime employment. However, the CEO realized that he needed to tackle the thorny issues around the layoffs to get the project implemented on schedule. He tapped a senior company veteran to organize a series of speeches and meetings in order to provide consistent explanations for the layoffs, the timing, the consequences for job security, and so on. He also appointed a well-respected general manager to lead the change program. Those actions reassured employees that the organization would tackle the layoffs in a professional and humane fashion.

Companies often underestimate the role that managers and staff play in transformation efforts. By communicating with them too late or inconsistently, senior executives end up alienating the people who are most affected by the changes. It's surprising how often something senior executives believe is a good thing is seen by staff as a bad thing, or a message that senior executives think is perfectly clear is misunderstood. That usually happens when senior executives articulate subtly different versions of critical messages. For instance, in one company that applied the DICE framework, scores for a

project showed a low degree of staff commitment. It turned out that these employees had become confused, even distrustful, because one senior manager had said, “Layoffs will not occur,” while another had said, “They are not expected to occur.”

Organizations also underestimate their ability to build staff support. A simple effort to reach out to employees can turn them into champions of new ideas. For example, in the 1990s, a major American energy producer was unable to get the support of mid-level managers, supervisors, and workers for a productivity improvement program. After trying several times, the company’s senior executives decided to hold a series of one-on-one conversations with mid-level managers in a last-ditch effort to win them over. The conversations focused on the program’s objectives, its impact on employees, and why the organization might not be able to survive without the changes. Partly because of the straight talk, the initiative gained some momentum. This allowed a project team to demonstrate a series of quick wins, which gave the initiative a new lease on life.

Effort

When companies launch transformation efforts, they frequently don’t realize, or know how to deal with the fact, that employees are already busy with their day-to-day responsibilities. According to staffing tables, people in many businesses work 80-plus-hour weeks. If, on top of existing responsibilities, line managers and staff have to deal with changes to their work or to the systems they use, they will resist.

Project teams must calculate how much work employees will have to do beyond their existing responsibilities to change over to new processes. Ideally, no one’s workload should increase more than 10%. Go beyond that, and the initiative will probably run into trouble. Resources will become overstretched and compromise either the change program or normal operations. Employee morale will fall, and conflict may arise between teams and line staff. To minimize the dangers, project managers should use a simple metric like the percentage increase in effort the employees who must cope with the new ways

feel they must contribute. They should also check if the additional effort they have demanded comes on top of heavy workloads and if employees are likely to resist the project because it will demand more of their scarce time.

Companies must decide whether to take away some of the regular work of employees who will play key roles in the transformation project. Companies can start by ridding these employees of discretionary or nonessential responsibilities. In addition, firms should review all the other projects in the operating plan and assess which ones are critical for the change effort. At one company, the project steering committee delayed or restructured 120 out of 250 subprojects so that some line managers could focus on top-priority projects. Another way to relieve pressure is for the company to bring in temporary workers, like retired managers, to carry out routine activities or to outsource current processes until the changeover is complete. Handing off routine work or delaying projects is costly and time-consuming, so companies need to think through such issues before kicking off transformation efforts.

Calculating DICE Scores

COMPANIES CAN DETERMINE if their change programs will succeed by asking executives to calculate scores for each of the four factors of the DICE framework—duration, integrity, commitment, and effort. They must grade each factor on a scale from 1 to 4 (using fractions, if necessary); the lower the score, the better. Thus, a score of 1 suggests that the factor is highly likely to contribute to the program's success, and a score of 4 means that it is highly unlikely to contribute to success. We find that the following questions and scoring guidelines allow executives to rate transformation initiatives effectively:

Duration [D]

Ask: Do formal project reviews occur regularly? If the project will take more than two months to complete, what is the average time between reviews?

Score: If the time between project reviews is less than two months, you should give the project 1 point. If the time is between two and four months, you should award the project 2 points; between four and eight months, 3 points; and if reviews are more than eight months apart, give the project 4 points.

Integrity of Performance [I]

Ask: Is the team leader capable? How strong are team members' skills and motivations? Do they have sufficient time to spend on the change initiative?

Score: If the project team is led by a highly capable leader who is respected by peers, if the members have the skills and motivation to complete the project in the stipulated time frame, and if the company has assigned at least 50% of the team members' time to the project, you can give the project 1 point. If the team is lacking on all those dimensions, you should award the project 4 points. If the team's capabilities are somewhere in between, assign the project 2 or 3 points.

Senior Management Commitment [C₁]

Ask: Do senior executives regularly communicate the reason for the change and the importance of its success? Is the message convincing? Is the message consistent, both across the top management team and over time? Has top management devoted enough resources to the change program?

Score: If senior management has, through actions and words, clearly communicated the need for change, you must give the project 1 point. If senior executives appear to be neutral, it gets 2 or 3 points. If managers perceive senior executives to be reluctant to support the change, award the project 4 points.

Local-Level Commitment [C₂]

Ask: Do the employees most affected by the change understand the reason for it and believe it's worthwhile? Are they enthusiastic and supportive or worried and obstructive?

Score: If employees are eager to take on the change initiative, you can give the project 1 point, and if they are just willing, 2 points. If they're reluctant or strongly reluctant, you should award the project 3 or 4 points.

[D]	[I]	[C ₁]	[C ₂]	[E]

Calculate



$$\text{DICE score} = D + 2I + 2C_1 + C_2 + E$$



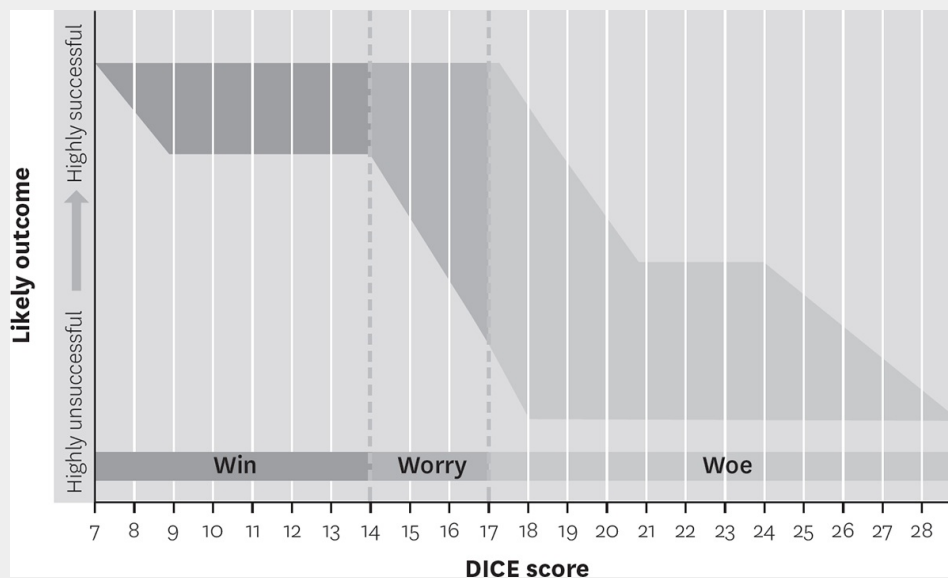
Plot



Effort [E]

Ask: What is the percentage of increased effort that employees must make to implement the change effort? Does the incremental effort come on top of a heavy workload? Have people strongly resisted the increased demands on them?

Score: If the project requires less than 10% extra work by employees, you can give it 1 point. If it's 10% to 20% extra, it should get 2 points. If it's 20% to 40%, it must be 3 points. And if it's more than 40% additional work, you should give the project 4 points.



Executives can combine the four elements into a project score. When we conducted a regression analysis of our database of change efforts, we found that the combination that correlates most closely with actual outcomes doubles the weight given to team performance (I) and senior management commitment (C₁). That translates into the following formula:

$$\text{DICE Score} = D + (2 \times I) + (2 \times C_1) + C_2 + E$$

In the 1-to-4 scoring system, the formula generates overall scores that range from 7 to 28. Companies can compare a project's score with those of past projects and their outcomes to assess if the project is slated for success or failure. Our data show a clear distribution of scores:

Scores between 7 and 14: The project is very likely to succeed. We call this the Win Zone.

Scores higher than 14 but lower than 17: Risks to the project's success are rising, particularly as the score approaches 17. This is the Worry Zone.

Scores over 17: The project is extremely risky. If a project scores over 17 and under 19 points, the risks to success are very high. Beyond 19, the project is unlikely to succeed. That's why we call this the Woe Zone.

We have changed the boundaries of the zones over time. For instance, the Worry Zone was between 14 and 21 points at first, and the Woe Zone from 21 to 28 points. But we found that companies prefer to be alerted to trouble as soon as outcomes become unpredictable (17 to 20 points). We therefore compressed the Worry Zone and expanded the Woe Zone.

Creating the Framework

As we came to understand the four factors better, we created a framework that would help executives evaluate their transformation initiatives and shine a spotlight on interventions that would improve their chances of success. We developed a scoring system based on the variables that affect each factor. Executives can assign scores to the DICE factors and combine them to arrive at a project score. (See the sidebar “[Calculating DICE Scores.](#)”)

Although the assessments are subjective, the system gives companies an objective framework for making those decisions. Moreover, the scoring mechanism ensures that executives are evaluating projects and making trade-offs more consistently across projects.

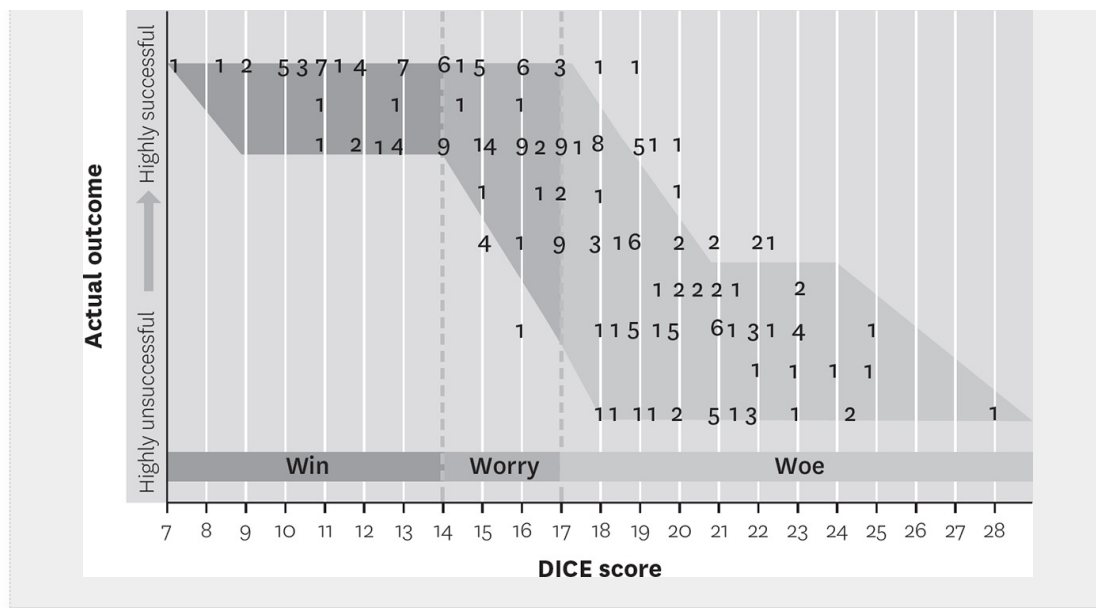
A company can compare its DICE score on the day it kicks off a project with the scores of previous projects, as well as their outcomes, to check if the initiative has been set up for success. When we calculated the scores of the 225

change projects in our database and compared them with the outcomes, the analysis was compelling. Projects clearly fell into three categories, or zones: *Win*, which means that any project with a score in that range is statistically likely to succeed; *worry*, which suggests that the project's outcome is hard to predict; and *woe*, which implies that the project is totally unpredictable or fated for mediocrity or failure. (See the figure “DICE scores predict project outcomes.”)

Companies can track how change projects are faring by calculating scores over time or before and after they have made changes to a project's structure. The four factors offer a litmus test that executives can use to assess the probability of success for a given project or set of projects. Consider the case of a large Australian bank that in 1994 wanted to restructure its back-office operations. Senior executives agreed on the rationale for the change but differed on whether the bank could achieve its objectives, since the transformation required major changes in processes and organizational structures. Bringing the team and the senior executives together long enough to sort out their differences proved impossible; people were just too busy. That's when the project team decided to analyze the initiative using the DICE framework.

DICE scores predict project outcomes

When we plotted the DICE scores of 225 change management initiatives on the horizontal axis, and the outcomes of those projects on the vertical axis, we found three sets of correlations. Projects with DICE scores between 7 and 14 were usually successful; those with scores over 14 and under 17 were unpredictable; and projects with scores over 17 were usually unsuccessful. We named the three zones Win, Worry, and Woe, respectively. (Each number plotted on the graph represents the number of projects, out of the 225 projects, having a particular DICE score.)



Doing so condensed what could have been a free-flowing two-day debate into a sharp two-hour discussion. The focus on just four elements generated a clear picture of the project's strengths and weaknesses. For instance, managers learned that the restructuring would take eight months to implement but that it had poorly defined milestones and reviews. Although the project team was capable and senior management showed reasonable commitment to the effort, there was room for improvement in both areas. The back-office workforce was hostile to the proposed changes since more than 20% of these people would lose their jobs. Managers and employees agreed that the back-office staff would need to muster 10% to 20% more effort on top of its existing commitments during the implementation. On the DICE scale, the project was deep in the Woe Zone.

However, the assessment also led managers to take steps to increase the possibility of success before they started the project. The bank decided to split the project time line into two—one short-term and one long-term. Doing so allowed the bank to schedule review points more frequently and to maximize team members' ability to learn from experience before the transformation grew in complexity. To improve staff commitment, the bank decided to devote more time to explaining why the change was necessary and how the institution would support the staff during the implementation. The bank also

took a closer look at the people who would be involved in the project and changed some of the team leaders when it realized that they lacked the necessary skills. Finally, senior managers made a concerted effort to show their backing for the initiative by holding a traveling road show to explain the project to people at all levels of the organization. Taken together, the bank's actions and plans shifted the project into the Win Zone. Fourteen months later, the bank completed the project—on time and below budget.

Applying the DICE Framework

The simplicity of the DICE framework often proves to be its biggest problem; executives seem to desire more complex answers. By overlooking the obvious, however, they often end up making compromises that don't work. Smart companies try to ensure that they don't fall into that trap by using the DICE framework in one of three ways.

Track Projects

Some companies train managers in how to use the DICE framework before they start transformation programs. Executives use spreadsheet-based versions of the tool to calculate the DICE scores of the various components of the program and to compare them with past scores. Over time, every score must be balanced against the trajectory of scores and, as we shall see next, the portfolio of scores.

Senior executives often use DICE assessments as early warning indicators that transformation initiatives are in trouble. That's how Amgen, the \$10.6 billion biotechnology company, used the DICE framework. In 2001, the company realigned its operations around some key processes, broadened its offerings, relaunched some mature products, allied with some firms and acquired others, and launched several innovations. To avoid implementation problems, Amgen's top management team used the DICE framework to gauge how effectively it had allocated people, senior management time, and other resources. As soon as projects reported troubling scores, designated executives paid attention to them. They reviewed the projects more often,

reconfigured the teams, and allocated more resources to them. In one area of the change project, Amgen used DICE to track 300 initiatives and reconfigured 200 of them.

Both big and small organizations can put the tool to good use. Take the case of a hospital that kicked off six change projects in the late 1990s. Each initiative involved a lot of investment, had significant clinical implications, or both. The hospital's general manager felt that some projects were going well but was concerned about others. He wasn't able to attribute his concerns to anything other than a bad feeling. However, when the general manager used the DICE framework, he was able to confirm his suspicions. After a 45-minute discussion with project managers and other key people, he established that three projects were in the Win Zone but two were in the Woe Zone and one was in the Worry Zone.

The strongest projects, the general manager found, consumed more than their fair share of resources. Senior hospital staff sensed that those projects would succeed and spent more time promoting them, attending meetings about them, and making sure they had sufficient resources. By contrast, no one enjoyed attending meetings on projects that were performing poorly. So the general manager stopped attending meetings for the projects that were on track; he attended only sessions that related to the three underperforming ones. He pulled some managers from the projects that were progressing smoothly and moved them to the riskier efforts. He added more milestones to the struggling enterprises, delayed their completion, and pushed hard for improvement. Those steps helped ensure that all six projects met their objectives.

Manage portfolios of projects

When companies launch large transformation programs, they kick off many projects to attain their objectives. But if executives don't manage the portfolio properly, those tasks end up competing for attention and resources. For instance, senior executives may choose the best employees for projects they have sponsored or lavish attention on pet projects rather than on those that

need attention. By deploying our framework before they start transformation initiatives, companies can identify problem projects in portfolios, focus execution expertise and senior management attention where it is most needed, and defuse political issues.

Take, for example, the case of an Australasian manufacturing company that had planned a set of 40 projects as part of a program to improve profitability. Since some had greater financial implications than others, the company's general manager called for a meeting with all the project owners and senior managers. The group went through each project, debating its DICE score and identifying the problem areas. After listing all the scores and issues, the general manager walked to a whiteboard and circled the five most important projects. "I'm prepared to accept that some projects will start off in the Worry Zone, though I won't accept anything outside the middle of this zone for more than a few weeks. For the top five, we're not going to start until these are well within the Win Zone. What do we have to do to achieve that?" he asked.

The group began thinking and acting right away. It moved people around on teams, reconfigured some projects, and identified those that senior managers should pay more attention to—all of which helped raise DICE scores before implementation began. The most important projects were set up for resounding success while most of the remaining ones managed to get into the Win Zone. The group left some projects in the Worry Zone, but it agreed to track them closely to ensure that their scores improved. In our experience, that's the right thing to do. When companies are trying to overhaul themselves, they shouldn't have all their projects in the Win Zone; if they do, they are not ambitious enough. Transformations should entail fundamental changes that stretch an organization.

Force conversation

When different executives calculate DICE scores for the same project, the results can vary widely. The difference in scores is particularly important in terms of the dialogue it triggers. It provokes participants and engages them in debate over questions like "Why do we see the project in these different

ways?” and “What can we agree to do to ensure that the project will succeed?” That’s critical, because even people within the same organization lack a common framework for discussing problems with change initiatives. Prejudices, differences in perspectives, and a reluctance or inability to speak up can block effective debates. By using the DICE framework, companies can create a common language and force the right discussions.

Sometimes, companies hold workshops to review floundering projects. At those two- to four-hour sessions, groups of eight to 15 senior and middle managers, along with the project team and the project sponsors, hold a candid dialogue. The debate usually moves beyond the project’s scores to the underlying causes of problems and possible remedies. The workshops bring diverse opinions to light, which often can be combined into innovative solutions. Consider, for example, the manner in which DICE workshops helped a telecommunications service provider that had planned a major transformation effort. Consisting of five strategic initiatives and 50 subprojects that needed to be up and running quickly, the program confronted some serious obstacles. The projects’ goals, time lines, and revenue objectives were unclear. There were delays in approving business cases, a dearth of rigor and focus in planning and identifying milestones, and a shortage of resources. There were leadership issues, too. For example, executive-level shortcomings had resulted in poor coordination of projects and a misjudgment of risks.

To put the transformation program on track, the telecom company incorporated DICE into project managers’ tool kits. The Project Management Office arranged a series of workshops to analyze issues and decide future steps. One workshop, for example, was devoted to three new product development projects, two of which had landed in the Woe Zone and one in the Worry Zone. Participants traced the problems to tension between managers and technology experts, underfunding, lack of manpower, and poor definition of the projects’ scopes. They eventually agreed on three remedial actions: holding a conflict-resolution meeting between the directors in charge of technology and those responsible for the core business; making sure senior

leadership paid immediate attention to the resource issues; and bringing together the project team and the line-of-business head to formalize project objectives. With the project sponsor committed to those actions, the three projects had improved their DICE scores and thus their chances of success at the time this article went to press.

Conversations about DICE scores are particularly useful for large-scale transformations that cut across business units, functions, and locations. In such change efforts, it is critical to find the right balance between centralized oversight, which ensures that everyone in the organization takes the effort seriously and understands the goals, and the autonomy that various initiatives need. Teams must have the flexibility and incentive to produce customized solutions for their markets, functions, and competitive environments. The balance is difficult to achieve without an explicit consideration of the DICE variables.

Take the case of a leading global beverage company that needed to increase operational efficiency and focus on the most promising brands and markets. The company also sought to make key processes such as consumer demand development and customer fulfillment more innovative. The CEO's goals were ambitious and required investing significant resources across the company. Top management faced enormous challenges in structuring the effort and in spawning projects that focused on the right issues. Executives knew that this was a multiyear effort, yet without tight schedules and oversight of individual projects, there was a risk that projects would take far too long to be completed and the results would taper off.

To mitigate the risks, senior managers decided to analyze each project at several levels of the organization. Using the DICE framework, they reviewed each effort every month until they felt confident that it was on track. After that, reviews occurred when projects met major milestones. No more than two months elapsed between reviews, even in the later stages of the program. The time between reviews at the project-team level was even shorter: Team leaders reviewed progress biweekly throughout the transformation. Some of the best

people joined the effort full time. The human resources department took an active role in recruiting team members, thereby creating a virtuous cycle in which the best people began to seek involvement in various initiatives. During the course of the transformation, the company promoted several team members to line- and functional leadership positions because of their performance.

The company's change program resulted in hundreds of millions of dollars of value creation. Its once-stagnant brands began to grow, it cracked open new markets such as China, and sales and promotion activities were aligned with the fastest-growing channels. There were many moments during the process when inertia in the organization threatened to derail the change efforts. However, senior management's belief in focusing on the four key variables helped move the company to a higher trajectory of performance.

By providing a common language for change, the DICE framework allows companies to tap into the insight and experience of their employees. A great deal has been said about middle managers who want to block change. We find that most middle managers are prepared to support change efforts even if doing so involves additional work and uncertainty and puts their jobs at risk. However, they resist change because they don't have sufficient input in shaping those initiatives. Too often, they lack the tools, the language, and the forums in which to express legitimate concerns about the design and implementation of change projects. That's where a standard, quantitative, and simple framework comes in. By enabling frank conversations at all levels within organizations, the DICE framework helps people do the right thing by change.

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Why Change Programs Don't Produce Change

by Michael Beer, Russell A. Eisenstat, and Bert Spector

IN THE MID-1980S, THE NEW CEO of a major international bank—call it U.S. Financial—announced a companywide change effort. Deregulation was posing serious competitive challenges—challenges to which the bank's traditional hierarchical organization was ill-suited to respond. The only solution was to change fundamentally how the company operated. And the place to begin was at the top.

The CEO held a retreat with his top 15 executives where they painstakingly reviewed the bank's purpose and culture. He published a mission statement and hired a new vice president for human resources from a company well-known for its excellence in managing people. And in a quick succession of moves, he established companywide programs to push change down through the organization: a new organizational structure, a performance appraisal system, a pay-for-performance compensation plan, training programs to turn managers into "change agents," and quarterly attitude surveys to chart the progress of the change effort.

As much as these steps sound like a textbook case in organizational transformation, there was one big problem: two years after the CEO launched the change program, virtually nothing in the way of actual changes in organizational behavior had occurred. What had gone wrong?

The answer is "everything." Every one of the assumptions the CEO made—about who should lead the change effort, what needed changing, and how to go about doing it—was wrong.

U.S. Financial's story reflects a common problem. Faced with changing markets and increased competition, more and more companies are struggling to reestablish their dominance, regain market share, and in some cases, ensure their survival. Many have come to understand that the key to competitive success is to transform the way they function. They are reducing reliance on managerial authority, formal rules and procedures, and narrow divisions of work. And they are creating teams, sharing information, and delegating responsibility and accountability far down the hierarchy. In effect, companies are moving from the hierarchical and bureaucratic model of organization that has characterized corporations since World War II to what we call the task-driven organization where what has to be done governs who works with whom and who leads.

But while senior managers understand the necessity of change to cope with new competitive realities, they often misunderstand what it takes to bring it about. They tend to share two assumptions with the CEO of U.S. Financial: that promulgating companywide programs—mission statements, “corporate culture” programs, training courses, quality circles, and new pay-for-performance systems—will transform organizations, and that employee behavior is changed by altering a company's formal structure and systems.

In a four-year study of organizational change at six large corporations (see the sidebar, [“Tracking Corporate Change”](#); the names are fictitious), we found that exactly the opposite is true: the greatest obstacle to revitalization is the idea that it comes about through companywide change programs, particularly when a corporate staff group such as human resources sponsors them. We call this “the fallacy of programmatic change.” Just as important, formal organization structure and systems cannot lead a corporate renewal process.

While in some companies, wave after wave of programs rolled across the landscape with little positive impact, in others, more successful transformations did take place. They usually started at the periphery of the corporation in a few plants and divisions far from corporate headquarters. And they were led by the general managers of those units, not by the CEO or

corporate staff people.

Idea in Brief

Two years after launching a change program to counter competitive threats, a bank CEO realized his effort had produced . . . no change. Surprising, since he and his top executives had reviewed the company's purpose and culture, published a mission statement, and launched programs (e.g., pay for-performance compensation) designed to push change throughout the organization.

But revitalization doesn't come from the top. It starts at an organization's periphery, led by unit managers creating ad hoc arrangements to solve concrete problems. Through **task alignment**—directing employees' responsibilities and relationships toward the company's central competitive task—these managers focus energy on work, not abstractions like “empowerment” or “culture.”

Senior managers' role in this process? Specify the company's desired **general** direction, without dictating solutions. Then spread the lessons of revitalized units throughout the company.

The general managers did not focus on formal structures and systems; they created ad hoc organizational arrangements to solve concrete business problems. By aligning employee roles, responsibilities, and relationships to address the organization's most important competitive task—a process we call “task alignment”—they focused energy for change on the work itself, not on abstractions such as “participation” or “culture.” Unlike the CEO at U.S. Financial, they didn't employ massive training programs or rely on speeches and mission statements. Instead, we saw that general managers carefully developed the change process through a sequence of six basic managerial interventions.

Once general managers understand the logic of this sequence, they don't

have to wait for senior management to start a process of organizational revitalization. There is a lot they can do even without support from the top. Of course, having a CEO or other senior managers who are committed to change does make a difference—and when it comes to changing an entire organization, such support is essential. But top management's role in the change process is very different from that which the CEO played at U.S. Financial.

Idea in Practice

Successful change requires commitment, coordination, and competency.

1. Mobilize commitment to change through joint diagnosis of problems

Example: Navigation Devices had never made a profit or high-quality, cost-competitive product—because top-down decisions ignored cross-functional coordination. To change this, a new general manager had his **entire** team broadly assess the business. Then, his task force of engineers, production workers, managers, and union officials visited successful manufacturing organizations to identify improvement ideas. One plant's **team** approach impressed them, illuminated their own problem, and suggested a solution. Commitment to change intensified.

2. Develop a shared vision of how to organize for competitiveness

Remove functional and hierarchical barriers to information sharing and problem solving—by changing roles and responsibilities, not titles or compensation.

Example: Navigation's task force proposed developing products through cross-functional teams. A larger team refined this model and presented it to all employees—who supported it because it stemmed from their own analysis of their business problems.

3. Foster consensus for the new vision, competence to enact it, and cohesion to advance it

This requires the general manager's strong leadership.

Example: Navigation's general manager fostered **consensus** by supporting those who were committed to change and offering outplacement and counseling to those who weren't; **competence** by providing requested training; and cohesion by redeploying managers who couldn't function in the new organization. Change accelerated.

4. Spread revitalization to all departments—without pushing from the top

Example: Navigation's new team structure required engineers to collaborate with production workers. Encouraged to develop their own approach to teamwork and coordination, the engineers selected matrix management. People willingly learned needed skills and attitudes, because the new structure was **their** choice.

5. Institutionalize revitalization through formal policies, systems, and structures . . . only *after* your new approach is up and running

Example: Navigation boosted its profits—without changing reporting relationships, evaluation procedures, or compensation. Only then did the general manager alter formal structures; e.g., eliminating a VP so that engineering and manufacturing reported directly to him.

6. Monitor the revitalization process, adjusting in response to problems

Example: At Navigation, an oversight team of managers, a union leader, an engineer, and a financial analyst kept watch over the change process—continually learning, adapting, and strengthening the commitment to change.

Grass-roots change presents senior managers with a paradox: directing a “nondirective” change process. The most effective senior managers in our study recognized their limited power to mandate corporate renewal from the top. Instead, they defined their roles as creating a climate for change, then spreading the lessons of both successes and failures. Put another way, they

specified the general direction in which the company should move without insisting on specific solutions.

In the early phases of a companywide change process, any senior manager can play this role. Once grass-roots change reaches a critical mass, however, the CEO has to be ready to transform his or her own work unit as well—the top team composed of key business heads and corporate staff heads. At this point, the company's structure and systems must be put into alignment with the new management practices that have developed at the periphery. Otherwise, the tension between dynamic units and static top management will cause the change process to break down.

We believe that an approach to change based on task alignment, starting at the periphery and moving steadily toward the corporate core, is the most effective way to achieve enduring organizational change. This is not to say that change can never start at the top, but it is uncommon and too risky as a deliberate strategy. Change is about learning. It is a rare CEO who knows in advance the fine-grained details of organizational change that the many diverse units of a large corporation demand. Moreover, most of today's senior executives developed in an era in which top-down hierarchy was the primary means for organizing and managing. They must learn from innovative approaches coming from younger unit managers closer to the action.

The Fallacy of Programmatic Change

Most change programs don't work because they are guided by a theory of change that is fundamentally flawed. The common belief is that the place to begin is with the knowledge and attitudes of individuals. Changes in attitudes, the theory goes, lead to changes in individual behavior. And changes in individual behavior, repeated by many people, will result in organizational change. According to this model, change is like a conversion experience. Once people "get religion," changes in their behavior will surely follow.

This theory gets the change process exactly backward. In fact, individual behavior is powerfully shaped by the organizational roles that people play. The

most effective way to change behavior, therefore, is to put people into a new organizational context, which imposes new roles, responsibilities, and relationships on them. This creates a situation that, in a sense, “forces” new attitudes and behaviors on people. (See the table, “Contrasting assumptions about change.”)

One way to think about this challenge is in terms of three interrelated factors required for corporate revitalization. *Coordination* or teamwork is especially important if an organization is to discover and act on cost, quality, and product development opportunities. The production and sale of innovative, high-quality, low-cost products (or services) depend on close coordination among marketing, product design, and manufacturing departments, as well as between labor and management. High levels of *commitment* are essential for the effort, initiative, and cooperation that coordinated action demands. New *competencies* such as knowledge of the business as a whole, analytical skills, and interpersonal skills are necessary if people are to identify and solve problems as a team. If any of these elements are missing, the change process will break down.

Tracking Corporate Change

WHICH STRATEGIES FOR CORPORATE change work, and which do not? We sought the answers in a comprehensive study of 12 large companies where top management was attempting to revitalize the corporation. Based on preliminary research, we identified 6 for in-depth analysis: 5 manufacturing companies and 1 large international bank. All had revenues between \$4 billion and \$10 billion. We studied 26 plants and divisions in these 6 companies and conducted hundreds of interviews with human resource managers; line managers engaged in change efforts at plants, branches, or business units; workers and union leaders; and, finally, top management.

Based on this material, we ranked the 6 companies according to the success with which they had managed the revitalization effort. Were there significant improvements in interfunctional coordination, decision making, work organizations, and concern for people? Research has shown that in the long term, the quality of these 4 factors will influence performance. We did not define success in

terms of improved financial performance because, in the short run, corporate financial performance is influenced by many situational factors unrelated to the change process.

To corroborate our rankings of the companies, we also administered a standardized questionnaire in each company to understand how employers viewed the unfolding change process. Respondents rated their companies on a scale of 1 to 5. A score of 3 meant that no change had taken place; a score below 3 meant that, in the employee's judgment, the organization had actually gotten worse. As the table suggests, with one exception—the company we call Livingston Electronics—employees' perceptions of how much their companies had changed were identical to ours. And Livingston's relatively high standard of deviation (which measures the degree of consensus among employees about the outcome of the change effort) indicates that within the company there was considerable disagreement as to just how successful revitalization had been.

Researchers and employees—similar conclusions

Extent of revitalization

Company	Ranked by researchers	Rated by employees	
		<i>Average</i>	<i>Standard deviation</i>
General Products	1	4.04	.35
Fairweather	2	3.58	.45
Livingston Electronics	3	3.61	.76
Scranton Steel	4	3.30	.65
Continental Glass	5	2.96	.83
U.S. Financial	6	2.78	1.07

The problem with most companywide change programs is that they address only one or, at best, two of these factors. Just because a company issues a philosophy statement about teamwork doesn't mean its employees necessarily know what teams to form or how to function within them to improve coordination. A corporate reorganization may change the boxes on a formal organization chart but not provide the necessary attitudes and skills to make the new structure work. A pay-for-performance system may force managers to

differentiate better performers from poorer ones, but it doesn't help them internalize new standards by which to judge subordinates' performances. Nor does it teach them how to deal effectively with performance problems. Such programs cannot provide the cultural context (role models from whom to learn) that people need to develop new competencies, so ultimately they fail to create organizational change.

Contrasting assumptions about change	
Programmatic change	Task alignment
Problems in behavior are a function of individual knowledge, attitudes, and beliefs.	Individual knowledge, attitudes and beliefs are shaped by recurring patterns of behavioral interactions.
The primary target of renewal should be the content of attitudes and ideas; actual behavior should be secondary.	The primary target of renewal should be behavior; attitudes and ideas should be secondary.
Behavior can be isolated and changed individually.	Problems in behavior come from a circular pattern, but the effects of the organizational system on the individual are greater than those of the individual on the system.
The target for renewal should be at the individual level.	The target for renewal should be at the level of roles, responsibilities, and relationships.

Similarly, training programs may target competence, but rarely do they change a company's patterns of coordination. Indeed, the excitement engendered in a good corporate training program frequently leads to increased frustration when employees get back on the job only to see their new skills go unused in an organization in which nothing else has changed. People end up seeing training as a waste of time, which undermines whatever commitment to change a program may have roused in the first place.

When one program doesn't work, senior managers, like the CEO at U.S. Financial, often try another, instituting a rapid progression of programs. But this only exacerbates the problem. Because they are designed to cover everyone and everything, programs end up covering nobody and nothing particularly well. They are so general and standardized that they don't speak to the day-to-day realities of particular units. Buzzwords like "quality,"

“participation,” “excellence,” “empowerment,” and “leadership” become a substitute for a detailed understanding of the business.

And all these change programs also undermine the credibility of the change effort. Even when managers accept the potential value of a particular program for others—quality circles, for example, to solve a manufacturing problem—they may be confronted with another, more pressing business problem such as new product development. One-size-fits-all change programs take energy *away* from efforts to solve key business problems—which explains why so many general managers don’t support programs, even when they acknowledge that their underlying principles may be useful.

This is not to state that training, changes in pay systems or organizational structure, or a new corporate philosophy are always inappropriate. All can play valuable roles in supporting an integrated change effort. The problems come when such programs are used in isolation as a kind of “magic bullet” to spread organizational change rapidly through the entire corporation. At their best, change programs of this sort are irrelevant. At their worst, they actually inhibit change. By promoting skepticism and cynicism, programmatic change can inoculate companies against the real thing.

Six Steps to Effective Change

Companies avoid the shortcomings of programmatic change by concentrating on “task alignment”—reorganizing employee roles, responsibilities, and relationships to solve specific business problems. Task alignment is easiest in small units—a plant, department, or business unit—where goals and tasks are clearly defined. Thus the chief problem for corporate change is how to promote task-aligned change across many diverse units.

We saw that general managers at the business unit or plant level can achieve task alignment through a sequence of six overlapping but distinctive steps, which we call the *critical path*. This path develops a self-reinforcing cycle of commitment, coordination, and competence. The sequence of steps is important because activities appropriate at one time are often

counterproductive if started too early. Timing is everything in the management of change.

1. Mobilize commitment to change through joint diagnosis of business problems. As the term task alignment suggests, the starting point of any effective change effort is a clearly defined business problem. By helping people develop a shared diagnosis of what is wrong in an organization and what can and must be improved, a general manager mobilizes the initial commitment that is necessary to begin the change process.

Consider the case of a division we call Navigation Devices, a business unit of about 600 people set up by a large corporation to commercialize a product originally designed for the military market. When the new general manager took over, the division had been in operation for several years without ever making a profit. It had never been able to design and produce a high-quality, cost-competitive product. This was due largely to an organization in which decisions were made at the top, without proper involvement of or coordination with other functions.

The first step the new general manager took was to initiate a broad review of the business. Where the previous general manager had set strategy with the unit's marketing director alone, the new general manager included his entire management team. He also brought in outside consultants to help him and his managers function more effectively as a group.

Next, he formed a 20-person task force representing all the stakeholders in the organization—managers, engineers, production workers, and union officials. The group visited a number of successful manufacturing organizations in an attempt to identify what Navigation Devices might do to organize more effectively. One high-performance manufacturing plant in the task force's own company made a particularly strong impression. Not only did it highlight the problems at Navigation Devices but it also offered an alternative organizational model, based on teams, that captured the group's imagination. Seeing a different way of working helped strengthen the group's commitment to change.

The Navigation Devices task force didn't learn new facts from this process of joint diagnosis; everyone already knew the unit was losing money. But the group came to see clearly the organizational roots of the unit's inability to compete and, even more important, came to share a common understanding of the problem. The group also identified a potential organizational solution: to redesign the way it worked, using ad hoc teams to integrate the organization around the competitive task.

2. Develop a shared vision of how to organize and manage for competitiveness. Once a core group of people is committed to a particular analysis of the problem, the general manager can lead employees toward a task-aligned vision of the organization that defines new roles and responsibilities. These new arrangements will coordinate the flow of information and work across interdependent functions at all levels of the organization. But since they do not change formal structures and systems like titles or compensation, they encounter less resistance.

At Navigation Devices, the 20-person task force became the vehicle for this second stage. The group came up with a model of the organization in which cross-functional teams would accomplish all work, particularly new product development. A business-management team composed of the general manager and his staff would set the unit's strategic direction and review the work of lower level teams. Business-area teams would develop plans for specific markets. Product-development teams would manage new products from initial design to production. Production-process teams composed of engineers and production workers would identify and solve quality and cost problems in the plant. Finally, engineering-process teams would examine engineering methods and equipment. The teams got to the root of the unit's problems—functional and hierarchical barriers to sharing information and solving problems.

To create a consensus around the new vision, the general manager commissioned a still larger task force of about 90 employees from different levels and functions, including union and management, to refine the vision and obtain everyone's commitment to it. On a retreat away from the workplace,

the group further refined the new organizational model and drafted a values statement, which it presented later to the entire Navigation Devices work force. The vision and the values statement made sense to Navigation Devices employees in a way many corporate mission statements never do—because it grew out of the organization’s own analysis of real business problems. And it was built on a model for solving those problems that key stakeholders believed would work.

3. Foster consensus for the new vision, competence to enact it, and cohesion to move it along. Simply letting employees help develop a new vision is not enough to overcome resistance to change—or to foster the skills needed to make the new organization work. Not everyone can help in the design, and even those who do participate often do not fully appreciate what renewal will require until the new organization is actually in place. This is when strong leadership from the general manager is crucial. Commitment to change is always uneven. Some managers are enthusiastic; others are neutral or even antagonistic. At Navigation Devices, the general manager used what his subordinates termed the “velvet glove.” He made it clear that the division was going to encourage employee involvement and the team approach. To managers who wanted to help him, he offered support. To those who did not, he offered outplacement and counseling.

Once an organization has defined new roles and responsibilities, people need to develop the competencies to make the new setup work. Actually, the very existence of the teams with their new goals and accountabilities will force learning. The changes in roles, responsibilities, and relationships foster new skills and attitudes. Changed patterns of coordination will also increase employee participation, collaboration, and information sharing.

But management also has to provide the right supports. At Navigation Devices, six resource people—three from the unit’s human resource department and three from corporate headquarters—worked on the change project. Each team was assigned one internal consultant, who attended every meeting, to help people be effective team members. Once employees could

see exactly what kinds of new skills they needed, they asked for formal training programs to develop those skills further. Since these courses grew directly out of the employees' own experiences, they were far more focused and useful than traditional training programs.

Some people, of course, just cannot or will not change, despite all the direction and support in the world. Step three is the appropriate time to replace those managers who cannot function in the new organization—after they have had a chance to prove themselves. Such decisions are rarely easy, and sometimes those people who have difficulty working in a participatory organization have extremely valuable specialized skills. Replacing them early in the change process, before they have worked in the new organization, is not only unfair to individuals; it can be demoralizing to the entire organization and can disrupt the change process. People's understanding of what kind of manager and worker the new organization demands grows slowly and only from the experience of seeing some individuals succeed and others fail.

Once employees have bought into a vision of what's necessary and have some understanding of what the new organization requires, they can accept the necessity of replacing or moving people who don't make the transition to the new way of working. Sometimes people are transferred to other parts of the company where technical expertise rather than the new competencies is the main requirement. When no alternatives exist, sometimes they leave the company through early retirement programs, for example. The act of replacing people can actually reinforce the organization's commitment to change by visibly demonstrating the general manager's commitment to the new way.

Some of the managers replaced at Navigation Devices were high up in the organization—for example, the vice president of operations, who oversaw the engineering and manufacturing departments. The new head of manufacturing was far more committed to change and skilled in leading a critical path change process. The result was speedier change throughout the manufacturing function.

4. Spread revitalization to all departments without pushing it

from the top. With the new ad hoc organization for the unit in place, it is time to turn to the functional and staff departments that must interact with it. Members of teams cannot be effective unless the department from which they come is organized and managed in a way that supports their roles as full-fledged participants in team decisions. What this often means is that these departments will have to rethink their roles and authority in the organization.

At Navigation Devices, this process was seen most clearly in the engineering department. Production department managers were the most enthusiastic about the change effort; engineering managers were more hesitant. Engineering had always been king at Navigation Devices; engineers designed products to the military's specifications without much concern about whether manufacturing could easily build them or not. Once the new team structure was in place, however, engineers had to participate on product-development teams with production workers. This required them to re-examine their roles and rethink their approaches to organizing and managing their own department.

The impulse of many general managers faced with such a situation would be to force the issue—to announce, for example, that now all parts of the organization must manage by teams. The temptation to force newfound insights on the rest of the organization can be great, particularly when rapid change is needed, but it would be the same mistake that senior managers make when they try to push programmatic change throughout a company. It short-circuits the change process.

It's better to let each department "reinvent the wheel"—that is, to find its own way to the new organization. At Navigation Devices, each department was allowed to take the general concepts of coordination and teamwork and apply them to its particular situation. Engineering spent nearly a year agonizing over how to implement the team concept. The department conducted two surveys, held off-site meetings, and proposed, rejected, then accepted a matrix management structure before it finally got on board. Engineering's decision to move to matrix management was not surprising, but because it was its own

choice, people committed themselves to learning the necessary new skills and attitudes.

5. Institutionalize revitalization through formal policies, systems, and structures. There comes a point where general managers have to consider how to institutionalize change so that the process continues even after they've moved on to other responsibilities. Step five is the time: the new approach has become entrenched, the right people are in place, and the team organization is up and running. Enacting changes in structures and systems any earlier tends to backfire. Take information systems. Creating a team structure means new information requirements. Why not have the MIS department create new systems that cut across traditional functional and departmental lines early in the change process? The problem is that without a well-developed understanding of information requirements, which can best be obtained by placing people on task-aligned teams, managers are likely to resist new systems as an imposition by the MIS department. Newly formed teams can often pull together enough information to get their work done without fancy new systems. It's better to hold off until everyone understands what the team's information needs are.

What's true for information systems is even more true for other formal structures and systems. Any formal system is going to have some disadvantages; none is perfect. These imperfections can be minimized, however, once people have worked in an ad hoc team structure and learned what interdependencies are necessary. Then employees will commit to them too.

Again, Navigation Devices is a good example. The revitalization of the unit was highly successful. Employees changed how they saw their roles and responsibilities and became convinced that change could actually make a difference. As a result, there were dramatic improvements in value added per employee, scrap reduction, quality, customer service, gross inventory per employee, and profits. And all this happened with almost no formal changes in reporting relationships, information systems, evaluation procedures,

compensation, or control systems.

When the opportunity arose, the general manager eventually did make some changes in the formal organization. For example, when he moved the vice president of operations out of the organization, he eliminated the position altogether. Engineering and manufacturing reported directly to him from that point on. For the most part, however, the changes in performance at Navigation Devices were sustained by the general manager's expectations and the new norms for behavior.

6. Monitor and adjust strategies in response to problems in the revitalization process. The purpose of change is to create an asset that did not exist before—a learning organization capable of adapting to a changing competitive environment. The organization has to know how to continually monitor its behavior—in effect, to learn how to learn.

Some might say that this is the general manager's responsibility. But monitoring the change process needs to be shared, just as analyzing the organization's key business problem does.

At Navigation Devices, the general manager introduced several mechanisms to allow key constituents to help monitor the revitalization. An oversight team—composed of some crucial managers, a union leader, a secretary, an engineer, and an analyst from finance—kept continual watch over the process. Regular employee attitude surveys monitored behavior patterns. Planning teams were formed and reformed in response to new challenges. All these mechanisms created a long-term capacity for continual adaptation and learning.

The six-step process provides a way to elicit renewal without imposing it. When stakeholders become committed to a vision, they are willing to accept a new pattern of management—here the ad hoc team structure—that demands changes in their behavior. And as the employees discover that the new approach is more effective (which will happen only if the vision aligns with the core task), they have to grapple with personal and organizational changes they might otherwise resist. Finally, as improved coordination helps solve relevant

problems, it will reinforce team behavior and produce a desire to learn new skills. This learning enhances effectiveness even further and results in an even stronger commitment to change. This mutually reinforcing cycle of improvements in commitment, coordination, and competence creates a growing sense of efficacy. It can continue as long as the ad hoc team structure is allowed to expand its role in running the business.

The Role of Top Management

To change an entire corporation, the change process we have described must be applied over and over again in many plants, branches, departments, and divisions. Orchestrating this company-wide change process is the first responsibility of senior management. Doing so successfully requires a delicate balance. Without explicit efforts by top management to promote conditions for change in individual units, only a few plants or divisions will attempt change, and those that do will remain isolated. The best senior manager leaders we studied held their subordinates responsible for starting a change process without specifying a particular approach.

Create a market for change. The most effective approach is to set demanding standards for all operations and then hold managers accountable to them. At our best-practice company, which we call General Products, senior managers developed ambitious product and operating standards. General managers unable to meet these product standards by a certain date had to scrap their products and take a sharp hit to their bottom lines. As long as managers understand that high standards are not arbitrary but are dictated by competitive forces, standards can generate enormous pressure for better performance, a key ingredient in mobilizing energy for change.

But merely increasing demands is not enough. Under pressure, most managers will seek to improve business performance by doing more of what they have always done—overmanage—rather than alter the fundamental way they organize. So, while senior managers increase demands, they should also hold managers accountable for fundamental changes in the way they use

human resources.

For example, when plant managers at General Products complained about the impossibility of meeting new business standards, senior managers pointed them to the corporate organization-development department within human resources and emphasized that the plant managers would be held accountable for moving revitalization along. Thus top management had created a demand system for help with the new way of managing, and the human resource staff could support change without appearing to push a program.

Use successfully revitalized units as organizational models for the entire company. Another important strategy is to focus the company's attention on plants and divisions that have already begun experimenting with management innovations. These units become developmental laboratories for further innovation.

There are two ground rules for identifying such models. First, innovative units need support. They need the best managers to lead them, and they need adequate resources—for instance, skilled human resource people and external consultants. In the most successful companies that we studied, senior managers saw it as their responsibility to make resources available to leading-edge units. They did not leave it to the human resource function.

Second, because resources are always limited and the costs of failure high, it is crucial to identify those units with the likeliest chance of success. Successful management innovations can appear to be failures when the bottom line is devastated by environmental factors beyond the unit's control. The best models are in healthy markets.

Obviously, organizational models can serve as catalysts for change only if others are aware of their existence and are encouraged to learn from them. Many of our worst-practice companies had plants and divisions that were making substantial changes. The problem was, nobody knew about them. Corporate management had never bothered to highlight them as examples to follow. In the leading companies, visits, conferences, and educational programs facilitated learning from model units.

Develop career paths that encourage leadership development.

Without strong leaders, units cannot make the necessary organizational changes, yet the scarcest resource available for revitalizing corporations is leadership. Corporate renewal depends as much on developing effective change leaders as it does on developing effective organizations. The personal learning associated with leadership development—or the realization by higher management that a manager does not have this capacity—cannot occur in the classroom. It only happens in an organization where the teamwork, high commitment, and new competencies we have discussed are already the norm.

The only way to develop the kind of leaders a changing organization needs is to make leadership an important criterion for promotion, and then manage people's careers to develop it. At our best-practice companies, managers were moved from job to job and from organization to organization based on their learning needs, not on their position in the hierarchy. Successful leaders were assigned to units that had been targeted for change. People who needed to sharpen their leadership skills were moved into the company's model units where those skills would be demanded and therefore learned. In effect, top management used leading-edge units as hot-houses to develop revitalization leaders.

But what about the top management team itself? How important is it for the CEO and his or her direct reports to practice what they preach? It is not surprising—indeed, it's predictable—that in the early years of a corporate change effort, top managers' actions are often not consistent with their words. Such inconsistencies don't pose a major barrier to corporate change in the beginning, though consistency is obviously desirable. Senior managers can create a climate for grass-roots change without paying much attention to how they themselves operate and manage. And unit managers will tolerate this inconsistency so long as they can freely make changes in their own units in order to compete more effectively.

There comes a point, however, when addressing the inconsistencies becomes crucial. As the change process spreads, general managers in the ever-growing circle of revitalized units eventually demand changes from corporate

staff groups and top management. As they discover how to manage differently in their own units, they bump up against constraints of policies and practices that corporate staff and top management have created. They also begin to see opportunities for better coordination between themselves and other parts of the company over which they have little control. At this point, corporate organization must be aligned with corporate strategy, and coordination between related but hitherto independent businesses improved for the benefit of the whole corporation.

None of the companies we studied had reached this “moment of truth.” Even when corporate leaders intellectually understood the direction of change, they were just beginning to struggle with how they would change themselves and the company as a whole for a total corporate revitalization.

This last step in the process of corporate renewal is probably the most important. If the CEO and his or her management team do not ultimately apply to themselves what they have been encouraging their general managers to do, then the whole process can break down. The time to tackle the tough challenge of transforming companywide systems and structures comes finally at the end of the corporate change process.

At this point, senior managers must make an effort to adopt the team behavior, attitudes, and skills that they have demanded of others in earlier phases of change. Their struggle with behavior change will help sustain corporate renewal in three ways. It will promote the attitudes and behavior needed to coordinate diverse activities in the company; it will lend credibility to top management’s continued espousal of change; and it will help the CEO identify and develop a successor who is capable of learning the new behaviors. Only such a manager can lead a corporation that can renew itself continually as competitive forces change.

Companies need a particular mind-set for managing change: one that emphasizes process over specific content, recognizes organization change as a unit-by-unit learning process rather than a series of programs, and acknowledges the payoffs that result from persistence over a long period of

time as opposed to quick fixes. This mindset is difficult to maintain in an environment that presses for quarterly earnings, but we believe it is the only approach that will bring about successful renewal.

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