STRATEGY & INNOVATION
Breakthrough Insight and Ideas for Driving Growth
September-October 2006 | Volume 4 | Number 5

Ten Rules for Strategic Innovation

Managing the process of moving from idea to execution

BY VIJAY GOVINDARAJAN

Strategy used to be about protecting existing competitive advantage. Today, it is about finding the next advantage; every strategy starts to decay the day it is created. Our research addresses how established corporations can execute breakthrough strategies to address *tomorrow's* business realities. Actions belong in one of three boxes. Box 1: manage the present; Box 2: selectively abandon the past; and Box 3: create the future.

Box 1 is about improving the current business. Boxes 2 and 3 are about breakout performance and growth. Strategy cannot be *just* about Box 1, securing profits for the next year. Strategy must encompass Box 2 and Box 3. It must be about what a company needs to do to sustain leadership for the next 10 years. In fact, managers' central task is to balance managing the present with creating the future. For example, Apple must continue to excel at producing personal computers that delight its core customers (Box 1). But it must also secure its future by launching high-growth-potential, transformative businesses like iPod and iTunes (Box 2 and Box 3).

Organizations that operate with a short timeframe assume that their industries are stable and static. But it takes years for large organizations to change direction. By comparison, change in the industry environment is rapid and nonlinear. For instance, nanotechnology and genetic engineering are revolutionizing the pharmaceutical and semiconductor industries.

see 'Ten Rules' on page 6

A Time of Threat or Opportunity?

Newspapers need to find rays of hope amid the disruptions

BY SCOTT D. ANTHONY & STEPHEN T. GRAY

Sometimes looming disruptions are hard to spot, especially for incumbents with seemingly sound core businesses and room to grow. But other times, the threat is apparent to nearly all. For years, newspaper companies could see trouble on the horizon. Few, however, thought its arrival would be so dramatic.

Newspaper circulation keeps sinking, and Internet gains aren't offsetting the losses. Print advertising revenues are weakening and online sales, though growing, are still too small to bridge the gap. And now investor pressure has caused the all but unthinkable: the

see 'Threat or Opportunity' on page 10

INSIDE

Voices of Disruption

BY TIM FROST

Each issue, we feature a person who is "in the trenches" of disruption. This issue, we hear from Tim Frost, who is the head of retail strategy and innovation at Absa Group Ltd, South Africa's largest retail bank and a member of the Barclays Group.

In October 2004, just before the publication of *Seeing What's Next*, I attended a workshop in New York with Clayton Christensen and Innosight. The topic: "Using disruptive innovation theory to predict industry change."

Over the course of the nearly two-day conference, it became increasingly clear to me that disruption offers deceptively simple—yet enormously powerful—ideas about how industries change, why they change, and what incumbents can do about it. I knew that this could be an insightful way to look banking in South Africa.

South Africa is a diverse "rainbow nation" of 47 million people, spanning a dual economy of both first-world wealth and third-world extreme poverty, which is experienced by almost 50 percent of the population. In 12 brief years of democracy since 1994, the country has made major advances in a number of key areas: housing availability, electricity distribution, social spending, development opportunities for the poor, civil liberties, fiscal and monetary management, and trade integration with the rest of the world.

At the same time, crime levels are high, HIV infections and AIDS-related deaths are among the largest in the world, and stable though modest economic growth has not translated (until recently) into jobs and falling unemployment.

Earning the equivalent of less than $200 per month, roughly half of South African adults do not use formal financial services and are financially excluded ("unbanked"). At the other extreme, there are some 25,000 high-net worth individuals with more than $1 million in net assets and approximately 500,000 affluent individuals in South Africa earning more than $70,000 a year, all of whom are "highly banked."

In a market this diverse, the opportunity for disruptive innovation in financial services and other industries is enormous, assuming companies can identify the right products and, more important, the right business models.

As a parallel example, today more than 45 percent of South Africa's adult population own a cellular phone, up from just 2.4 percent in 1996. Cellphone operators have reached the lower tiers of the market with an affordable, pre-paid, functional, and aspirational product. So what about banking?

Disruptive opportunity abounds in the South African banking indus-

STRATEGY & INNOVATION

Publisher and Editor-in-Chief: Jonathan Barrett
Editor: Scott D. Anthony
Circulation Manager: Cheryl Riley
Business Manager: Matt Eyring

INNOSIGHT
unlocking new market growth

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

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

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

Services, Permissions, and Back Issues: Strategy & Innovation (ISSN 1543-7760) is published bimonthly by Innosight, LLC. POSTMASTER: Send address changes to SI, P.O. Box 257, Shrub Oak, NY 10588-0257. To resolve subscription service problems, please call 617.393.4535. E-mail to inquiries@strategyandinnovation.com

try. In the mass-market segment, the "unbanked" people, traditionally thought of as nonconsumers of banking services, are actually being served by informal providers. Recent legislation is opening up the possibility for small-scale second- and third-tier banks—and indeed non-banks (retailers, cellphone companies)—to enter the market and pursue these historically overshot consumers.

Disruptions are occurring in many places. Mortgage originators today account for about 60 percent of all new mortgage bonds. Automobile manufacturers have moved aggressively into financing, both on their own and through alliances with large banks. Retailers, especially in consumer durables and fashion, are financing the consumer' spending bonanza that has been brought about by rising economic prosperity.

And now, niche micro-lenders are aggressively growing by targeting the mass- and middle-markets, which have been underserved and are hungry for debt. Targeting the low-end business that traditional banks have overlooked or poorly served, these specialists have used a low-cost, experimental model to learn how to lend (and collect) effectively and profitably in the higher-risk ends of the market.

These micro-lenders now are beginning to come after the core customers of the large banks, eating their way upmarket with the addition of savings accounts, credit cards, and other financial products.

Foreign direct investment in the retail-banking sector by international banks like Barclays in South Africa signals further competition. Experiments between banks and cellphone operators to provide functional mobile banking are growing, as are bank-supermarket joint ventures and bank-retailer alliances. Then there is the entry of Virgin Money (in a venture with Absa) to offer cut-price home loans and credit cards through a direct-sales (call center) model.

Looking through the lens of disruptive innovation, it's now possible to understand the forces at work within our industry, see opportunities, and identify new business models. With the assistance of Innosight, through the first half of 2006 Absa began to wrestle with this changing landscape and to search for disruptive opportunities.

Applying the jobs-to-be-done theory, the team analyzed many hundreds of unsatisfied financial services jobs, assessing how well Absa's products met those needs. Looking at Absa from the consumers' perspective revealed new opportunities and sparked new thinking about how to "change the game" and unlock new horizons. Today, we are continuing to push several of these disruptive ideas forward.

As a final, and perhaps sobering, note, I have learned in the last two years that "seeing what's next" is far easier than "creating what's next": Some would say that one of retail banks' most serious competitors is the organizations themselves.

We at Absa are certainly finding disruptive *execution* a far more difficult task than disruptive foresight. But then trying to fundamentally change perspectives and behaviors is part of the fun of innovation, isn't it? ◆

A LETTER FROM CLAYTON M. CHRISTENSEN

U.S. auto manufacturers are going through well-documented difficulties. Some of these, such as costly health care policies and restrictive union contracts, are structural and the companies have announced measures intended to make them more competitive.

But perhaps the biggest problem facing the Big 3 is consumers' lack of interest in American-made cars: Each of the last few years, American auto manufacturers have sold fewer cars and have lost market share.

While there is no simple solution to these problems, one breakthrough strategy a company could follow is to truly try to introduce cars that get particular jobs done.

Car companies segment markets either by product (compact, SUV, or sports cars) or by customer demographics. The result? In all but the priciest luxury segments, differentiation that merits a premium price seems impossible to achieve. Why?

The answer is apparent when you consider how customers view the market. Most have a primary job that they hire a car to do. Millions of them, sales or service people for example, hire a car primarily to be a mobile office. When these people realize that they need to buy a car for this purpose, what model is designed to do this job? An Avalon, Accord, Accent, Astra, or Altima? A Bonneville or Blazer, Camry or Corolla?

In fact, no company has designed a car that is optimized to do the mobile-office job. So these consumers end up with a car that doesn't do the job well and are forced to deal with a number of inconveniences as they try to make phone calls, enter data, answer e-mails, file papers, find sales literature, use the Internet, keep their computers' battery charged, and eat lunch.

If a company took a job-based perspective, it would be easy to see how to differentiate products in ways that mattered to those who hire a car to be a mobile office. Electrical outlets, wireless access to a corporate CRM database, a big-screen Blackberry, fold-out desks, and organizing systems all could differentiate the car on dimensions that would mean something to customers who need to get this job done.

While this is only one example of a job people hire cars to get done, there are many more and each offers a real opportunity for the differentiation that commands price premiums.

Clayton Christensen

Innovators' Update: Do-It-Yourself Disruptors

Are so-called 'Web 2.0' companies just making cool websites or are they leading a new wave of disruption?

Each issue, we'll take a look back at a past Innovators' Insight to see how our analysis has held up. In this issue, we look at Insight #24, "Do-it-Yourself Disruption." The Insight discussed how emerging models that give consumers the ability to customize and control information could shake up established markets. What has happened since?

Back in 2004, terms like "wiki" and "blog" were just beginning to enter the public consciousness. Today, they are often components of emerging Web-based solutions carrying the tagline "Web 2.0." As hype grows and venture capital money flows, key questions remain. What exactly is a Web 2.0 company? How can you tell if an emerging Web 2.0 company is poised for greatness?

The term, widely credited to a 2004 conference hosted by O'Reilly Media and MediaLive International, refers to second-generation Web-based models that allow users to shape and influence content in new ways. As Wikipedia, an online user-created encyclopedia and a leading Web 2.0 player, describes: "Web 2.0 gives users an experience closer to desktop applications than the traditional static Web pages."

Commonly classified as Web 2.0 companies are photo sharing site Flikr, Digg (users vote for news stories), Google Maps, YouTube, and Pandora (users discover music based on their tastes).

You can almost hear the breathy hype beginning. "Traditional" Web models for job searching, like Monster.com, will fall in the face of emerging models such as LinkedIn and Jobster. Old-line media companies that rely on employment classifieds will go down as Web 2.0 providers over take market leaders.

Indeed, many emerging competitors have a compellingly disruptive feel. Instead of having centralized control, the companies provide a basic architecture and a set of tools that allow users to create whatever appeals to them. The tightly intertwined community that results can provide numerous attractive vehicles for monetization, such as highly targeted advertising.

While some of the emerging players surely will become great companies, beware of the hype. Remember when the Internet first entered the mainstream? Most analysts dramatically overestimated its effect on incumbents. There have been winners and losers, but the business models spawned by the Internet had more intricate, slower, effects on many industries.

So how to make sense of the emerging Web 2.0 solutions? The following three questions can provide guidance about who is most likely to shake up a category:

1) Is there really a "job" that most users need to get done that was difficult or expensive before? Some emerging solutions are no doubt extremely cool and fun. And having fun is important. But be wary of opportunities that promise fun and nothing else: Something more fun almost always comes along.

2) Does the ability to customize and shape content actually help users get a job done or is it a distraction that overshoots users' needs? There always is a difference between what a company can do and what it should do. Collaborative tools that allow users to shape and modify pictures, video, and content can be great, but what if all a user wants to do is book tickets to an event? Too many tools and options can lead to confusion and disappointment.

3) Does the company's business model look unattractive to existing providers? A company that creates a collaborative model without a different way to monetize that model simply demonstrates to market-leading incumbents how to augment their existing offering.

What are our bets for where the Web 2.0 hype is justified? Plays in real estate (think Zillow and Redfin) and job searching have real promise. Both target important innovation jobs—buying properties and finding the right job. Collaborative tools and the ability to customize information help get these jobs done better. Emerging business models also differ sharply from the current models that charge companies to place employment listings or take a five-percent real-estate commission.

If you hear a company proclaim that it is destined for success because it is following a Web 2.0 approach, dig deeper. Look to ensure that the company actually is targeting an important job, that its Web 2.0 characteristics help rather than distract, and that it is following a distinct business model. Without these components, expect the hype to dissipate. ◆

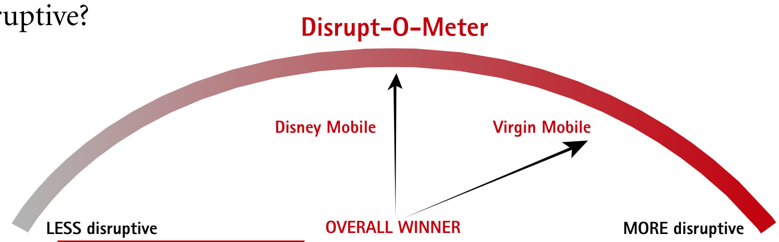
Reprint # 040504A

Disrupt-O-Meter

Tale of the Disruptive Tape: Disney Mobile vs. Virgin Mobile

"Is company X disruptive?" Whenever we're asked this question—and we're asked it often—we run through a simple mental checklist that looks at the target customer, the solution, the business model, and the competitive landscape. In this issue, we use our "Disrupt-O-Meter" to analyze solutions in the Mobile Virtual Network Operator (MVNO) industry.

Disney's ESPN cable network made a big splash at the Superbowl this year, launching Mobile ESPN, a cellphone service for sports fans. In September, it shuttered the service due to lack of interest. Disney still has high hopes for Disney Mobile, which uses GPS technology to allow parents to locate their children. In 2002, Virgin Group launched Virgin Mobile to offer a cheap, "pay-as-you-go" service. Both companies are MVNOs, which resell wireless airtime bought from Sprint Nextel. Which is more disruptive?



Disney Mobile		Virgin Mobile	
Consumers wanting "family plans" and the ability to monitor kids' location and usage	CUSTOMER	Consumers seeking cheap, simple pre-paid access to cellphones	WINNER
Phones are $60 to $110 and available online or through wireless stores	SOLUTION	Simple, cheap phones sold at numerous discount retailers, like Target and Wal-Mart	WINNER
Rate plans are a slight premium to major networks and include similar services	BUSINESS MODEL	Low-cost pre-paid service appeals to consumers who can't or don't buy contracts	WINNER
Going after premium family market; many of the adults likely have existing phones	COMPETITIVE LANDSCAPE	Competing more against other MVNOs than the major network owners	WINNER

More Disruptive: Virgin Mobile. With market penetration rates getting ever higher, all tiers of the wireless market are competitive. Disney is competing for family consumers, however, trying to lure adults who are the bread-and-butter of the major wireless providers. While Disney does offer a range of services—such as a feature to locate a child—many if not all of these can easily be easily copied by other providers. While estimates put the penetration of yearly-contract subscribers at around 70 percent, pre-paid penetration is estimated at only 40 percent. Pre-paid services also tend to be cheaper and lower-margin than contract plans, meaning they're less desirable to the major providers. Virgin Mobile has seen significant growth with its cheap offering. Broad distribution at retail locations makes purchasing a phone and added minutes from Virgin highly convenient.◆

Reprint # 040505A

EMERGING TECHNOLOGY WATCH

Dig that video?

A small company called Internet Broadcast Corporation has begun acting as an aggregator of news videos around the globe. While it presently relays videos from wire services such as Reuters and UPI, it seems to be working to bypass these incumbents by signing deals with local wire services from Zambia to Turkey. If IBC is able to develop closer connections with established news aggregator such as Digg, the combined services should be able to act in concert, providing a layer of expertise and local coverage that is deeper—and cheaper—than the reach of traditional reporters and wire services.

Download a VoIP handheld wireless

Voice over Internet Protocol (VoIP) has been disrupting the fixed-line phone business for several years, offering cheap long-distance calls over the Internet. Cellular companies, which worried less about competition from landline services than each other, marched forward, rolling out ever faster connections. Now, wireless VoIP is emerging. It can't yet support calls made while moving from one wireless access point to another, but companies from Skype to EzLoop are offering consumers the ability to walk and talk freely within a hotspot. In September, JaJah announced that it would provide a downloadable software that turns Symbian phones into wireless VoIP devices. JaJah is going a step beyond other providers, most of whom are selling their own handsets instead of enabling existing devices.

How many words is a picture worth?

Mobile handsets have never been particularly "search-friendly," given the limitations of a 10-number alphanumeric key-pad. Text-message solutions, such as those offered by Google SMS, Yahoo SMS, and 4Info, have tried to make it easier to get an answer to simple queries. And now, Microsoft, Mobot, and Neven Vision are working on robotic vision algorithms for cameraphones. In theory, the technology would allow a user to submit a photograph instead of text string to get search results. These solutions all rely on extensive image databases and likely will be difficult to perfect. There may be a middle ground being developed by companies such as Hitachi and ScanR, which aim to use optical character recognition technology to pull words out of existing cameraphone images and submit them to search strings. While perhaps sustaining to existing services, this technology could be helpful when users want to perform searches on some types of information, such as road signs.

By John Boddie. For submissions please, email jboddie@strategyandinnovation.com

Reprint # 040505B

'Ten Rules' (continued from page 1)

Globalization is opening doors to emerging economies with billions of customers who have vast unmet needs. Once-distinct industries, such as entertainment, telephony, and computing, are converging. And rapidly escalating concerns about security and the environment are creating unforeseen markets.

Because these forces create nonlinear change, old assumptions are no longer valid. Because strategies are quickly imitated, they need almost constant reinvention. The only way to stay ahead—the only way to capture emerging opportunities—is to innovate.

Senior managers must maximize profits from existing businesses. Box 1 is tremendously important, but responsible leaders must build for a future beyond that life. Too many companies ignore Box 2 and Box 3 until it is too late, as vividly illustrated by the problems experienced by Sears and Kmart in retailing and by Kodak in photography.

How can other companies avoid similar declines? How can large, established corporations build breakthrough new businesses?

Ideas are not enough

We have asked hundreds of executives in Fortune 500 companies to assess their organizations' capabilities at both breakthrough idea generation and breakthrough execution. We used a 10-point scale: one is poor and 10 is world-class. Typically, companies score themselves five or six on idea generation and only one or two on execution. Nonetheless, companies that launch innovation initiatives tend to allocate the preponderance of their energies to generating ideas.

This is interesting. We believe that innovative output is the *product* of ideas and execution. (Intuitively, if either is zero, breakthrough output is zero.) Do some math. Which will produce better results: increasing the idea generation score from six to seven, or the execution score from two to three?

Ideas are crucial, but even the best ones are speculative. The future is too unpredictable. This highlights the need for execution. Even the best business plan for a breakthrough idea is guesswork. In Box 3, it is not the company with the best initial strategy that wins, it is the company that learns the fastest. Thus, rule number one in our book, *Ten Rules For Strategic Innovators—from Idea to Execution*, is that in any great innovation story, the idea is only Chapter 1.

Little is understood about how to get from idea to profitability. The research that led to *Ten Rules* is based on looking at multiyear histories of innovative efforts at 10 companies: Corning, The New York Times Company, Capston-White (not its real name), Analog Devices, Unilever, Cisco Systems, Hasbro, NuCor, Stora Enso, and the Thomson Corporation. In these companies, using in-depth interviews and archived documents, we examined strategic innovations that exploited advances in digital technology, biotechnology, and nanotechnology.

The next section profiles The New York Times Company's efforts to launch New York Times Digital (NYTD). We then explain the remaining nine rules for building breakthrough businesses within established organizations.

New York Times Digital

In the mid-1990s, *The New York Times* was at the top of its game. Its influence was strong, its readers were elite, and it was in the midst of a successful national expansion. Journalists viewed the Times as a career destination. In fact, writers with less than 10 years at the Times were considered newcomers.

In 1995, tradition crossed paths with technology. An employee in the IT department had a conversation with Russ Lewis, the CEO. He said, "Boss, I think this Internet-thing is going to be huge. We should do something." This was the start of a transformational journey.

At first glance, it may not seem such a radical transformation. There are obvious similarities between the newspaper and the website. However, there are dramatic differences in the business models. The newspaper runs on a 24-hour cycle; the website is updated continuously. The newspaper charges a premium price; most content on the website is free. At the foundation of the newspaper business is excellence in journalism; the website is built around software expertise. To advertisers, the newspaper is an opportunity for broad-based brand building; the website is an opportunity for precise targeting.

The newspaper offers readers text and still pictures; the website offers a full range of multimedia content, from the paper and a variety of other sources. The business model for NYTD was not only much different, it was highly uncertain at launch. Such basic questions as whether the website needed a separate and independent newsroom were up for debate.

In building NYTD, the first move was to find someone capable of leading the venture. The company hired Martin Nisenholtz, who had spent his entire career developing expertise in interactive communications. Nisenholtz was put in a senior position, reporting directly to both the general manager and editor of the newspaper. And, he was given a staff that was rich in experience within the company.

As a result, NYTD had ready access to newspaper resources and was off to a fast start. However, by 1997, NYTD's leadership team worried that their operation was not evolving as rapidly as the world of online media. Their own internal jargon reflected their concerns. They sometimes referred to their business as "newspaper.com," and their website as "shovelware," as in all it could do was take newspaper content and shovel it online.

Nisenholtz felt constrained by the assumptions the newspaper side was making about what it would take to succeed online. Even outsiders wondered if the company was investing enough in the new technology. In 1999, Lewis chose to reorganize the digital effort as a separate business unit. This was a crucial turning point. Lewis' decision was consistent with what has become conventional wisdom for managing new ventures—that they must be organized as separate units. But what does separate really mean? Separate how?

The reorganization included several specific changes. First, Nisenholtz was promoted. He reported directly to the corporate president rather than to the newspaper. This is more startling than at first it may appear. The unit became a peer on the organization chart with a unit nearly one hundred times its size.

There were many other changes, as well. The unit recruited so heavily from the outside that by 2000 three-fourths of the staff came from external sources. NYTD dismantled the product development process and rebuilt it—creating non-traditional roles and breaking norms for organizing that were common throughout the industry. They also altered their planning approach to meet the demands of a rapidly changing and uncertain environment and appointed a policy team, including a separate VP of Human Resources, VP of Business Development, and CFO. A new "culture committee" examined the existing values, and redefined them to suit the new environment.

Ideas are crucial, but even the best ones are speculative, highlighting the need for execution.

These changes initiated an explosion of creativity and dozens of new online features. Revenues handily exceeded expectations for several quarters. Still, the changes were not without side effects. New tensions arose between digital and the paper over competition for resources, concerns over protecting the brand, and even simple jealousy.

Because NYTD talked openly about trying to create a new and different kind of organization, some described the atmosphere as "us versus them." While NYTD was able to grow at the top line, their efficiency and effectiveness suffered as a result of the strains in their relationship with the newspaper.

When the bubble burst, digital was in a jam. Though revenues were growing, profits lagged. As weakness in the core led to declines in profitability at the corporate level, the losses seemed ever more serious. Newspaper leadership almost succeeded in reducing NYTD to a newspaper.com operation, but Lewis chose a different path, insisting on an immediate drive to profitability.

This led to two painful rounds of layoffs, but the unit achieved profitability in 2001 and has grown profits since. A crucial part of the solution was implementing teams at the senior management level to improve cooperation and coordination where it mattered most.

There is still a great deal of uncertainty in the future of online media. NYTD continues to examine and re-examine its organizational approach, but there are important lessons to be drawn from the story so far. NYTD evolved into what we call the "distinct-but-linked" organization.

That's a little more specific from just "separate." "Distinct but linked" means that the new business, or "NewCo," is a fundamentally different organization. However, it is not isolated from the core business, or "CoreCo." We now turn to specific recommendations for making the distinct-but-linked model as effective as possible.

Forget, Borrow, Learn

By comparing the New York Times story to several others, we learned that a distinct-but-linked approach can help NewCo overcome three central challenges in executing breakthrough innovations: forgetting, borrowing, and learning. NewCo must *forget* CoreCo's assumptions about why it wins; it must *borrow* CoreCo's assets; and it must *learn* how to make a profit in its uncertain market.

Note the important distinction between what must be forgotten and learned, and what must be borrowed. What NewCo must forget and learn are mindsets, assumptions, and decision biases. But what NewCo borrows is assets with concrete value, such as brands, manufacturing capacity, sales relationships, or technical expertise.

There are fundamental relationships among forgetting, borrowing, and learning. First, there is always tension between forgetting and borrowing: Too much borrowing creates too much interaction between NewCo and CoreCo, giving CoreCo too much influence. Second, forgetting is a prerequisite to learning. If NewCo clings to CoreCo's success formula, it cannot discover how to succeed in its own unique environment.

All three of the challenges are deceptively difficult. Forgetting, for example, may at first appear to be simply a matter of training managers to recognize the sharp differences between business models. But this is insufficient. Behaviors must change as well, and CoreCo has many reinforcers of behaviors that are consistent its model. The crux of the forgetting challenge is removing these reinforcers and erasing organizational memory.

Borrowing is difficult because it's easy to borrow too much or to overlook tensions between NewCo and CoreCo that harm borrowing. Learning is difficult because the learning process and the planning process are really one and the same, and planning processes within established organizations are designed for delivering consistent results, not resolving unknowns.

The only way to forget, borrow, and learn is to alter the policies that have the greatest influence over behavior—that is, to alter the organizational DNA. All organizations have DNA. When small companies get big enough that the leader can no longer make all of the decisions, the leader starts to create DNA by establishing policies, decision rules, incentives, values, and more.

Organizational DNA is similar to biological DNA. Both shape motivations, behaviors, and abilities. Both are difficult to observe directly, yet are very powerful. But there are differences. Biological DNA is inherited and cannot be changed. Organizational DNA is created and can be changed, with effort.

A strong organization has DNA that is consistent with its business model. But this means that this same DNA will hinder a new business. An organization's weaknesses are also the flip side of its strengths. Hard-wire an organization to excel in one business and it is almost certain to struggle in a different one.

The remaining nine rules represent a specific blueprint for using the distinct-but-linked design to forget, borrow, and learn. There are three rules for each challenge.

Forgetting

To forget, NewCo must rebuild its DNA from the ground up. **Outside hires play a crucial role** in erasing organizational memory because they naturally challenge existing assumptions. Outsiders must be placed in influential positions. When Corning launched a new biotechnology business in the late 1990s, it hired outsiders, but only for technical positions, not managerial ones. Two years into the venture's life, a decision to place two outside experts in managerial positions helped turn the business in a more positive direction.

In addition, NewCo should **report at least one level above** the manager of CoreCo. Both Corning and the Times learned that having NewCo report to CoreCo gives CoreCo too much influence, making it difficult for NewCo to overcome entrenched assumptions.

Performance measures are another strong reinforcer of existing behaviors and mindsets. When Analog Devices built a new business to commercialize a sensor that launches automotive airbags, it for some time evaluated NewCo by CoreCo's gross margin standards, even though its cost structure was much different. This led to misperceptions and missteps.

Borrowing

The first borrowing principle is to **be exceedingly cautious about how much is borrowed**. Each link makes it more difficult for NewCo to forget. When General Motors launched OnStar, it borrowed everything possible from the core. As a result, it adopted several elements of the automotive business model that were not a natural fit for an information technology business.

NewCo should **borrow only from CoreCo when it gets a crucial competitive advantage**, never just for incremental cost savings. Links must not only be carefully selected, they must be carefully managed. Tensions are inevitable, and senior management must keep these tensions at productive levels to support NewCo.

An important step for ensuring tensions remain healthy is to **make borrowing as easy as possible on CoreCo**. The manager of CoreCo is responsible for the foundation of the corporation's performance and should not be distracted by an experimental unit. To make borrowing painless, CoreCo's resources should be increased when NewCo demands time and attention. Also, transfer prices should properly correct CoreCo's reported income.

Learning

NewCo has a very focused learning challenge: It must learn to predict its own business outcomes. The quicker it can forecast its own performance, the faster it resolves the critical unknowns in its business model and the more quickly it will zero in on a winning formula, or exit a losing business. Learning means wild guesses become informed estimates and informed estimates become reliable forecasts.

Predicting is the activity at the core of the planning process, so all of the rules for learning are alterations to the traditional approach to planning. Most crucially, the senior management team must **hold NewCo accountable for learning**, not for delivering plan numbers. By definition, NewCo cannot learn if it cannot alter predictions as it gains more information. Still, this is a difficult shift for senior managers who often connect performance with accountability.

The opposite of accountability to plan, however, is not chaos. It is a disciplined, structured, and rigorous approach to learning. One crucial attribute of a planning process that supports learning is that it iterates more frequently. NewCo's **plans should be revised quarterly or even monthly**. This implies that NewCo's plans must be less detailed, otherwise planning becomes too great a burden. NewCo's plans must be simple and focused on just a few critical unknowns that can make or break the business.

Finally, **NewCo's and CoreCo's planning meetings should be separate**. Hasbro's internet unit, Hasbro Interactive, had both a meteoric rise and a rapid decline. One contributing factor to the decline was a decision to hold monthly meetings in which all business units reported performance on standard metrics. This made it very difficult for Hasbro Interactive to diagnose what was working and what was not—there were too many conflicting interests and assumptions in the room at the same time.

HOW TO FORGET, BORROW, AND LEARN

Forgetting:

1. Staff NewCo with outside hires in some meaningful positions.
2. Have the NewCo general manager report at least one level above the CoreCo general manager
3. Use performance metrics appropriate to the new business, not the core business.

Borrowing:

1. Be cautious about borrowing too much—each link makes forgetting more difficult.
2. Borrow only when NewCo gets a crucial competitive advantage, not simply for cost savings.
3. Through resource allocation or transfer pricing, compensate CoreCo for any lending costs it incurs in aiding NewCo.

Learning:

1. Hold NewCo accountable for learning, not delivering specific numbers.
2. Insists on regular revisions to plans, which should be simple and focused on resolving critical unknowns.
3. Separate NewCo and CoreCo's planning meetings to avoid conflicts.

Strategic innovation

Strategic innovation is crucial for long-term growth, even survival. But ideas are not enough. In any great innovation story, the idea is only Chapter 1. Companies must excel at both creativity *and* execution. There are three challenges to execution: The new company must forget the core's success formula, borrow one or two of its valuable assets, and learn how to succeed in its new and uncertain market. ◆

Vijay Govindarajan is a professor at Tuck School of Business, Dartmouth College. He has been recognized by *BusinessWeek*, *Forbes*, *Across the Board*, and *The London Times* as a top thought leader in strategy. This article is an adaptation of *Ten Rules for Strategic Innovators: From Idea to Execution*, Harvard Business School Press, 2005, written with Chris Trimble. Professor Govindarajan can be reached at vg@tuck.com.
Reprint # 040501A

sale of Knight Ridder, one of the industry's most respected companies. Other companies are also are under heavy stress.

But outside this industry's *perceived* boundaries, huge opportunities are opening. Customer behaviors are changing fast as individuals and businesses find new solutions for obtaining their news, information, and advertising needs.

The innovators creating these solutions are seeing dizzying growth rates. Why can't newspaper companies do the same? They can—but not without dramatic changes in the way these companies think, the strategies they adopt, and the innovation processes they use.

The threats—and opportunities—facing the industry and the steps companies can adopt to stave off successful disruptors offer lessons to all innovators. While the situation facing newspaper companies appears dire, incumbents can thrive amid disruption by:

1. Focusing on the opportunities within the threats
2. Looking at markets in new ways to seize opportunities
3. Building new innovation structures and capabilities

Focus on the opportunities

The media landscape is changing on a grand scale, driven by a fundamental transformation that enables people to get any information at any time and publish their own content at will. The trigger is technological, but the impact is behavioral. Consumers are eagerly substituting faster, cheaper, fresher, simpler (or more exhaustive) solutions to do information jobs they once fulfilled through newspapers.

In classic disruptive fashion, these new solutions often provide lower quality in some ways (depth, comprehensiveness), but offer attractive tradeoffs such as lower cost, real-time information, and anytime access. And they can focus on niche subjects in ways general-interest newspapers can't match.

On the content side, free daily newspapers, such as *Metro* in the U.S., are a good example. They offer much less depth and scope than their paid competitors. But they are designed for an easy, entertaining read in a short snippet of time, appealing to people who aren't likely to buy a daily anyway.

Advertisers have new options, as well. The popular listing website craigslist.com doesn't offer sophisticated design or a staff to create ads, but it's easy to use and it's free to most users. Consequently, people sell things they would never advertise in paid daily newspapers.

Large companies are migrating ad dollars to the Internet, too. Much of this is going to paid search offerings like Google's. But the increasing clutter makes it difficult to be seen, so advertisers are embedding themselves in movies, games, online video, and other channels—not newspapers' strong spots.

So what are incumbents facing disruptions to do? Given the massive changes, one almost could imagine a forlorn executive wondering if the battle is all but lost and if the business should be managed for what it appears to be: a slowly dying giant with some years of healthy profitability left. But such a view fails to see the many opportunities available to incumbents.

The above changes have fueled massive increases in time spent with media, now reaching an average of about seven-and-a-half hours a day for U.S. adults, according to a report by Veronis Suhler Stevenson. As channels proliferate—print, broadcast TV, radio, cable TV, satellite radio, Internet, cellphones, DVDs, music players, gaming boxes, and more to come—media use saturates more and more of our waking hours.

This growth in media consumption represents a significant opportunity to incumbents that can identify new ways to interact with consumers and offer advertising outlets to businesses.

Newspapers still have powerful brands, create vibrant local content, and enjoy close ties to both the communities and businesses they serve. To their credit, newspapers saw the disruptive potential of the Internet early and moved to establish news websites. Many have been successful in winning both readers and advertisers, and recent revenue growth has been strong.

However, the online strategy chosen by most newspapers—essentially reproducing the paper online—falls into the common disruption trap of "cramming": attempting to reproduce the old product in the new technology. Simply reproducing their print business model online blinded companies to the larger changes and opportunities around them.

Unencumbered by decades-old models and structures, new pure-play websites are generating revenues and profits in new ways. Lead generation, for example, is a "cost-per-action" model adopted by many websites, but few incumbents. Instead of paying a newspaper company for the number of people who *view* an advertisement, advertisers pay lead generators for the number of people who *take action* on an advertisement.

As lead-based sites like Autobytel proliferate, many advertisers, especially local businesses with limited budgets, will want the efficiency of this model. And that's a big opportunity for local newspapers.

Self-serve classified channels are another outlet newspapers have not exploited. Google operates primarily on a self-serve model, allowing users to "bid" for targeted search terms, set the amount they are willing to spend per day on a particular term, and manage multiple advertising campaigns simultaneously.

Their huge success shows how low cost, do-it-yourself ad placement can help newspapers serve the vast number of small businesses and individuals lacking the time or money to buy conventional ads.

Look at markets in new ways

Many facing disruption would agree with the manager who said, "I don't know what to do, but I am ready to do it." To manage such rapid change, companies need to adopt a portfolio approach to commercializing innovations. A portfolio strategy involves making a diverse set of innovation investments, some focused on a company's core business, others on new areas of disruptive potential.

As described below, improvements and additions to the core are essential when facing disruptive threats. While they are less difficult to identify and execute, they also will do less to drive a company in new directions. Investments in disruptive innovation are much more difficult, but it is these areas that can provide the future growth to combat disruptive competitors.

These investments do not have to be big bets that cost a lot of money and take long expanses of time. On the contrary, a good innovation portfolio identifies areas of opportunity and invests small amounts of money to learn more about underlying risks and assumptions.

Maximizing the core

Why does a company need to focus on the health of its core business before embarking on disruption? Without a healthy core, innovation efforts will almost certainly fail as scarce resource are drawn back to support the main business, starving the new ventures.

Like most companies, newspapers are efficient at producing their main products and have some success with ancillary products. When facing disruption, however, companies need to scour the landscape for any promising core products they may have missed. In many cases, these products are proven winners that make money in familiar ways, using existing business models, sales channels, and production and distribution systems.

The good news is that adding and improving core products is relatively easy and these products tend to produce good profit margins. Some newspaper companies have been doing "alternative publications" for years, launching product after product to diversify the core business. For example, *The Spectrum* in St. George, Utah, a 23,000

Dallas Morning News: Helping Busy Mothers

Readership is sliding at nearly all daily newspapers in the U.S. as consumers find new ways to access information.

And while working hard to retain existing readers is a necessary part of maximizing the core business, such strategies have virtually no impact on the disruptive forces changing the media landscape.

Why? Most of these disruptive offerings appeal to nonconsumers, people who rarely read a daily paper at all.

Drawing on their personal experiences and interviews with both readers and nonconsumers, members of a team from *The Dallas Morning News* tasked with finding potential new consumers identified a group ripe for disruption: busy mothers.

Busy mothers in the Dallas/Fort Worth area were having problems finding trusted recommendations on things to do with their young children.

The "user knowledge" about available activities existed mainly in the minds of other mothers who had faced the same problems before. And this repository of information could be accessed only inconveniently: By word of mouth within a mom's circle of acquaintances.

The idea emerged for a "MasterMom" online-print-mobile solution where moms (dads, too) could find suggestions on kids' activities, such as lessons, summer camps, and birthday parties. They also could share their experiences and provide feedback to other parents through user ratings and recommendations.

Because parents were seeking to get these jobs done during small snippets of time, such as while waiting at a playground or in a doctor's office, the website could be optimized for viewing on a mobile phone or supplemented with a reverse-published newsletter.

Through "MasterMom," the newspaper hopes to reach out to mothers of young children, many of who do not have time for the print newspaper.

Richmond Times-Dispatch: New Advertising Jobs

The Richmond Times-Dispatch knew that it was dealing with a variety of disruptions, both of consumers and businesses. The paper began its investigation into these disruptions by looking at businesses that *didn't* advertise with the newspaper.

The impetus came from an insight: The number of local businesses who didn't advertise in the newspaper was at least four times greater than the number of advertisers who did. They had identified a significant weakness—and a tremendous opportunity.

As a result, the *Times-Dispatch* set out to interview current advertisers, non-advertising businesses, and their own advertiser-facing employees about the various jobs advertisers are trying to get done, but cannot easily accomplish with existing services.

They found that certain unfulfilled jobs came up repeatedly:

- Hyper-local businesses (drycleaners and grocers) and businesses with distinct audiences (baby stores and luxury goods retailers) wanted to target their marketing message more narrowly than a daily paper allowed.
- Businesses with high staff turnover (contractors, child care) and businesses in closely knit communities (real-estate brokers, lenders, inspectors, and lawyers) expressed frustration about the difficulty of finding the right employees, partners, or suppliers.
- Businesses dependent on personal relationships (mortgage brokers, investment advisors, and personal care providers) wanted to be able to make direct contact with their particular types of prospective customers.

Few ideal options are available to these potential customers. Designing solutions to meet their needs—profitably—has the potential to unlock massive new growth.

While the paper still needs to figure out this problem, understanding disruptive forces and then identifying areas of opportunity are major steps forward for an incumbent.

circulation daily, has more than 40 revenue-generating products and activities besides the paper, most of which are publications.

Creating new core products typically consists primarily of: 1) determining whether a sufficiently large and interested audience exists and what jobs they would want to do, and 2) determining whether a sufficiently large and interested advertiser base exists and what jobs they would want the product to do.

Enabling new growth

When developing new growth or disruptive offerings, companies need to get a fresh understanding of the markets they can serve. In the newspaper industry, managers and executives talk constantly about serving "readers" and "advertisers." When seeking ways to grow the core business, this makes all the sense in the world: Newspapers need to find more and better ways to serve these two customers.

But these seemingly straightforward terms can blind executives searching for disruptive opportunities. These companies are failing to talk about nonconsumers, all of the "non-readers" and "non-advertisers" in the market; this is where disruptions are taking hold.

If newspaper companies are serious about reclaiming audiences, they need to ask, "What indispensable roles can we play in the lives of those we want to serve?"

When thinking about "readers" and "non-readers," the reality is that consuming news is only one of the information-related tasks most people do. The countless other jobs include "Connect me to others with similar interests," "Keep me entertained during small snippets of time," "Help me make smart lifestyle choices," and "Help me save money or make money."

To grow new offerings, companies should start by identifying nonconsuming groups not reached with existing products—especially those who are desirable to advertisers—and then identify meaningful jobs that these groups need to get done in their daily life (See *The Dallas Morning News* sidebar, previous page).

Advertisers and non-advertisers also have important, unsatisfied jobs. While many businesses advertise, the job they are trying to get done is almost *never* advertising. Businesses actually want to find new ways to connect with customers, reach specific audiences, build brands, and solve problems beyond those addressed through traditional advertising.

Most current advertisers feel newspapers fulfill a crucial job. But large numbers of nonconsuming businesses consider newspaper products too expensive, too broad, and too difficult to use. Many non-advertisers, local and national alike, use other media or simply do not advertise at all (See *The Richmond Times-Dispatch* sidebar, this page).

Few ideal options are available to these potential customers. Designing solutions to meet their needs—profitably—has the potential to unlock massive new growth.

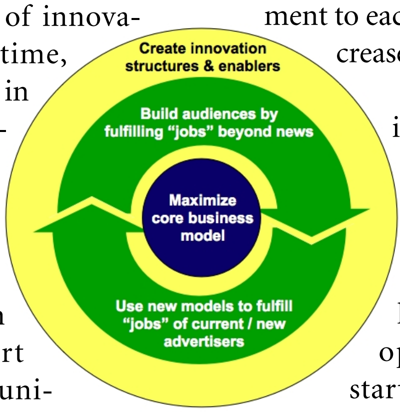
Like a wise market investor, a company must think carefully about balancing its "portfolio" between low-risk opportunities in the core and new, higher-risk growth opportunities that can be the big future success stories.

Build new innovation structures

Mastering innovation requires commitment—starting with senior executives who need to put in place structures and enablers that make innovation regular and repeatable.

Without the right structures, organizations have an overwhelming tendency to fall into old habits. The result? Existing processes begin to subtly influence even the best new growth idea until it bears a striking resemblance to the company's old products and business models.

Developing new products and business models requires establishing a language of innovation, committing time, allocating resources in new ways, and creating a dedicated process.



The Newspaper Next 'Game Plan' for Innovation

Establishing a common language of innovation and making it part of internal communications can lead to real change. After all, middle managers make many of the most important day-to-day decisions and old habits can undermine new goals. And senior managers who "don't get it" can derail well-designed new approaches.

Innovation requires a commitment of time—but not everyone's time. Appoint "innovation champions" who are tasked with seizing new growth opportunities and who can spend more than 50 percent of their time on innovation. Support these people both with the regular involvement of senior managers and a team of experts who can help address problems.

Innovation also requires reframing the resource allocation process. Many managers think their company's strategy determines how it allocates resources. In fact, how resources are allocated typically determines a company's strategy.

Invest just enough in early-stage ideas to learn about key risks and assumptions. Scarce resources force teams to zero in quickly on critical assumptions, find cheap ways to test those assumptions, and develop lean, flexible structures. As the process progresses, hurdles grow higher, the number of ideas shrinks, and the resource commitment to each surviving idea increases.

When creating an innovation process, be careful to not overly rely on financial projections. These are likely to downgrade opportunities that start in small, unmeasurable markets. Simple checklists that indicate how an idea is progressing and whether it fits the patterns of disruption will be more helpful.

A process also requires consistent mechanisms to gather knowledge about the jobs nonconsumers and consumers are trying to do. Form a dedicated group of consumers or businesses as standing test-beds for new ideas. This can offer quick feedback on whether ideas actually meet the jobs of identified consumers adequately.

Threats and opportunities

Over the last year, the Newspaper Next project team worked to understand the disruptions facing the newspaper industry and examine the possibilities for growth. The team augmented primary and secondary research by conducting demonstration projects at seven U.S. newspaper companies.

It is clear that newspaper companies are dealing with numerous disruptive threats.

But the research led to another conclusion: Nearly all of the threats offer real opportunities to companies that can create a portfolio of innovative products and services.

It will not be easy. Realizing the opportunities requires new mindsets and new actions, both within companies and between companies. Companies have to move from monolithic product offerings to a vibrant portfolio of products, services and business models.

They have to move from thinking about readers to thinking about audiences. And they have to move from thinking about advertisers to thinking about business customers. Above all else, newspaper companies have to commit to do things differently, and back that commitment with action. Business as usual will simply not suffice.

The payoff of this work can be significant: Newspaper companies can launch new offerings, grow in new directions, and harness the disruptive forces threatening the industry.◆

Scott D. Anthony is managing director at Innosight. He can be reached at santhony@innosight.com. Stephen T. Gray is managing director of the Newspaper Next project for the American Press Institute. He can be reached at sgray@americanpressinstitute.org. The full report, "Newspaper Next: Blueprint for Transformation," is available for download at www.newspapernext.org.

Reprint # 040501B

Signals of Change: Four Industries Facing Disruptive Threats

It's easy to see disruption in the rearview mirror, but where do signs suggest that disruptive change may be on the horizon?

BY MICHAEL URLOCKER

Once the theory of disruptive innovation was formulated, it was rather easy for people to look back at the minicomputer industry or the long-distance telephone business and understand the disruptive forces that shaped those markets. Identifying such changes as they happen can be considerably more tricky.

The front-page article "A Time of Threat or Opportunity?" in this issue discusses disruptions in the newspaper business and how incumbents can find rays of hope amid the changes. The lessons apply to any industry facing a disruption. Below are four other markets facing disruption today.

Movie theaters struggle against downloads, DVDs…each other

Hollywood's playbook works like this: Bigger-budget movies with more special effects and more stars draw bigger crowds. Unfortunately, the playbook stopped working a few years ago. Budgets are still high, but attendance has fallen at an accelerating rate since 2002.

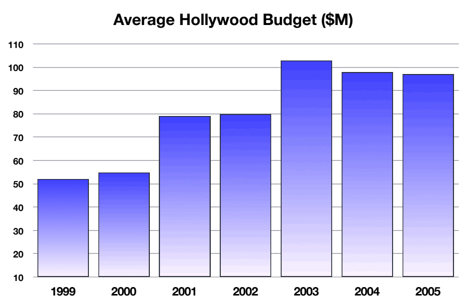
Movie lovers, and there are millions of them, will argue about the causes: the need for better scripts, more comfortable or cleaner theaters, lower ticket prices, fewer ads, or better concessions. But a chief culprit seems to be the simpler, cheaper, more convenient, do-it-yourself solution: a DVD (or, increasingly, a downloaded movie) and a high-definition TV.

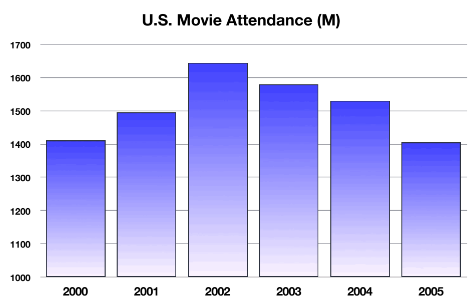
From a jobs-to-be-done perspective, the home-viewing option still is not yet good enough (or too expensive) for many viewers, meaning there appears to be room for innovative theater owners to capture underserved customers. (Though with the falling cost of high-definition TVs and high-end home theaters, cinemas need to move quickly.)

The bright-side for theater owners? There still are some attractive customer groups. Teenagers still want have fun with their friends away from their parents. Couples want to get out for a night of entertainment. Parents need somewhere to go when it's raining and their kids are bored. And die-hard movie lovers want to have the full cinema experience, undisturbed by cellphones, crying babies, and other demands of the home.

A handful of movie theaters are starting to think about movie attendance from a jobs-based perspective, and a fragmented market might result. For example, entrepreneur Mark Cuban, a movie producer and owner of the Landmark Theater chain, plans to launch two segmented theaters, one for children under 10 (and their parents), the other a "Rock N Roll Theater" to recreate the participation and rowdy crowds seen at midnight screenings of the Rocky Horror Picture Show in the 1980s. (Don't expect silence, Cuban says.)

Likewise, the Alamo Drafthouse, voted one of the best theaters in America, offers a night of crazy, unpredictable entertainment including dinner, beer, and a movie. The theater ran a 24-hour marathon showing of "Snakes on a Plane" that included non-traditional offerings, such as performance art by a local actor and stand up improv by a comedian. For showings of the obscure comedy "Strange Brew," the theater gave away free





Average Hollywood budgets are rising, but movie attendance is falling beer, custom brewed and labeled to fit the movie's story. For another cult film, 1961 sci-fi dud "Nude on the Moon" the theater gave free admission to nudists.

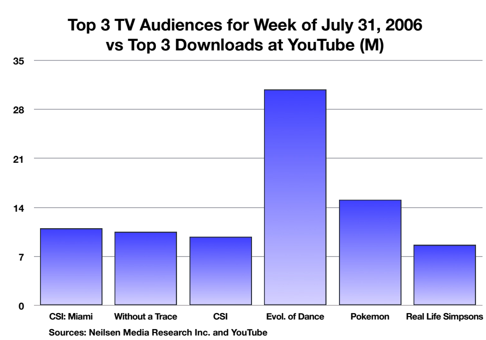
Jobs-based segmentation of the market may not reverse the bigger trend of declining attendance, but it could help theaters hold on to those people who increasingly are choosing home viewing or other forms of entertainment.

One hundred million YouTube downloads a day can't be wrong

If you are like many people, you may be watching less TV these days, but you're still spending a lot of time staring at a screen. It's just a smaller screen.

Some web-based alternatives to television meet many of the criteria of disruptive innovations: The quality is inferior, but good enough for some circumstances; the service appeals to marginal groups of consumers who appear overshot by the mainstream television market; it's convenient to access; and, it's free.

Web-service YouTube, in particular, looks bizarre and inferior to anyone raised on professionally produced broadcast television series. And YouTube's business model (free amateur content, no advertising) makes little sense to networks or cable-TV operators. The website offers a gargantuan collection of sometimes odd videos, including pranks, lip-synching teenagers, pet-tricks, and TV highlights.



YouTube's top downloads (right) beat TV's top shows

But it's wildly popular. An unusual video of an argument on a Hong Kong bus captured on a low-quality cellphone camera generated more than five million downloads worldwide. The "Bus Uncle" video, a grumpy passenger's profanity-laden six-minute diatribe against the pressures of modern life, created a cottage industry of parodies, rap songs, homages, souvenir posters, and T-shirts.

By mainstream TV standards, Bus Uncle's rapid rise makes no sense. It meets few of the traditional criteria of broadcast media: It's not news; it has no celebrities; it's not scripted. What do these videos have? Immediacy, drama, relevance to normal lives, social commentary, and universality.

YouTube's top downloads, such as a nightclub comedy act called "The Evolution of Dance," have more than triple the viewers of the top-rated weekly TV shows.

Within a few weeks of YouTube passing 100 million daily downloads this past summer, mainstream broadcasters began experimenting with the amateur video phenomena. CNN, for example, launched CNN Exchange as a website for amateurs to submit their own news-oriented videos and thoughts. Time Warner/AOL's Uncut Video site is attempting the same thing.

Whether these new sites co-opt the disruptive innovation or fail in an attempt to cram the new disruption into a rusting business model has yet to be seen.

Apple recently announced the launch of iTV, which plugs into a TV and allows downloaded movies and other video to play on regular TVs. Given Apple's track record of selling 1.5 billion downloadable songs, Apple may be the one to watch as a disruptor of TV.

Low-end disruption of software, it's not just the desktop anymore

Microsoft's main application package reached the "good enough" point for many computer users back in the late 1990s with Office 98. Despite the software giant's continued investments in R&D, customers just have not flocked to subsequent upgrades the way they once did.

This overshooting of software users' needs has spread rapidly from the desktop to enterprise-grade applications, such as databases and industrial-strength programs like call-control software for private branch exchanges (PBXs) or corporate switchboards.

Even traditionally strong niche segments, such as that of Business Intelligence software, are showing signs of overshooting: Cognos Inc's latest offering, a suite of better integrated products, are generating lower than expected sales.

As a result, low-end disruptors have invaded the enterprise software industry, relying on an entirely different business model: Free basic level products, low-cost upgrades, and open-source product development.

Consider the traditional economics enjoyed by Oracle, the top database supplier: A database traditionally sells for about $50,000 per central processing unit, plus a 22 percent annual maintenance fee. Disruptors like MySQL and PostgreSQL promise 80 percent of the functionality for less than five percent of the price. Sounds disruptive.

Granted, some features may be lacking initially, but the open source programs offer two valuable attributes beyond low cost: Buyers are not locked into either hardware or software suppliers and they can customize the programs themselves.

V-mail and e-mail and information overload

For anyone who uses a phone or email to communicate these days, two problems are becoming apparent. First, it's hard to get in touch with a live person. And, the corollary, it's hard to wade through all that piled-up mail.

Consider how many people now let their voicemail boxes fill up so no more messages can be recorded or who never read their email. Information overload is a problem and it can prevent people from working effectively.

Modern communications tools like the Blackberry or the cellphone appeared to blaze a trail through the clutter for a while, but then these tools quickly became part of the problem. Add to this the swell of direct-marketing calls and emails, as well as a "cc: everyone" culture in some workplaces, and the sorting through cluttered communications becomes a job needing a solution.

U.S. Federal Communications Commission statistics show that 44 percent of California residential phone numbers are unlisted. And that spam filters are increasingly being deployed in corporate email systems. But these solutions are inadequate, failing to identify unwanted information and, worse, occasionally blocking even wanted communication.

A handful of new communications-related companies are looking at these problems. For example, Iotum Corp. a startup in Canada's telecom corridor near Ottawa, has created a relevance engine that hooks into Voice over Internet Protocol (VoIP) systems to help filter, rank, and prioritize incoming calls based on a user's own database of contacts in Microsoft Outlook. The system also hooks into Instant Messaging and cellular systems.

Tello Corp., a California startup with backers that include cellular pioneer Craig McCaw, Bell Canada, and Intel, has a different approach, trying to make it easier for corporate teams to work together over a wide variety of communications networks—whether instant messaging, email, Blackberry, or VoIP. Tello is designed to let users quickly see if a business colleague is available and to determine how best to reach that person.

By solving real-world problems like information overload and collaboration, products from Iotum, Tello, and others may create the valuable problem-solving attributes that new VoIP telecom systems need to prevent deep commoditization.◆

Michael Urlocker is a chartered financial analyst and the CEO of OnDisruption.com, a management consulting firm. He can be reached at mike@ondisruption.com

Reprint # 040514A

INDEX