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Feature Article

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2009: The Year in Preview

Innovation during the Great Disruption

By Scott D. Anthony

There are good reasons to expect 2009 to be a tough year for innovation. Consumers and corporations are likely to continue to tighten their collective belts, raising the innovation bar substantially. Markets and managers are likely to brutally punish activities that look like distractions.

Hope isn't lost, however. A surprising number of great companies, like General Electric, IBM, Kraft, McDonald's, Walt Disney, and Electronic Arts, were formed in years that featured a recession. Tough economic times didn't stop the introduction of game-changing innovations like IBM's personal computer, Apple's iPod, Campbell's condensed soup, and McDonald's "Speedee Service."

As I argue in my forthcoming book *The Silver Lining* (to be published in the spring by Harvard Business Press), there's an argument to be made that the darkening economic climate is *good news* for innovation. After all, abundance is at the root of many corporate struggles with innovation. Companies with overly deep pockets can flood a bad idea with money. Overly patient companies can let bad ideas linger for years.

Scarcity forces a focus on developing creative ways to deliver customer value. It requires companies to shut down bad ideas early. In other words, today's tough economic times will force innovators to do what they should have been doing already.

There's more good news for innovators. It has never been easier to develop and scale an idea. Facebook famously went from a college dorm room to a global enterprise in the blink of an eye. Innovators can draw on high-quality, low-cost tools to develop, test, and begin to commercialize ideas without tens of millions of dollars of investment. Further, academic and field work over the past two decades has removed some of the perceived randomness around innovation, allowing companies to confidently approach innovation in a much more disciplined way.

Innovation has never been more important. Success in what we are calling the Great Disruption requires mastering perpetual transformation. It requires spotting — and disarming — previously hidden attackers early, and pouncing on opportunities before competitors.

Some companies are in particularly good position to thrive in the tough economic climate. As we mentioned in a recent *BusinessWeek* article, one group in particular to watch closely is **on-the-brink disruptive attackers.**

My colleague Tim Huse and I looked back at the last three downturns in the United States and identified 44 disruptive companies that had had less than $1 billion in revenue at the start of the downturn, such as Intel and Southwest in 1979, or Best Buy and Charles Schwab in 1989, or Amazon and Research in Motion in 2000. On average, these companies grew almost 30 percent a year over the course of the 1980-1982, 1991, and 2001 downturns, respectively. (See this Innovators' Insight for more.)

On-the-brink attackers are good bets because they have built a solid base, but are small enough that they have substantial room for lucrative growth. Public companies with less than $1 billion of revenue in their most recent fiscal year that we have flagged as having some disruptive elements include EnerNOC (energy company with disruptive demand management service), K12 (suite of products enables online learning), Blue Nile (online diamond retailer), Alibaba.com (online market that gives small, primarily Asian companies, access to the world), iRobot (makes simple home robots like Roomba), VistaPrint (affordable online marketing services to small businesses), NetSuite (provider of on-demand software to small businesses), and SonoSite (portable handheld ultrasound). These companies could take advantage of teetering giants to drive into progressively more lucrative market tiers.

On the other hand, **partially disrupted** companies could face significant difficulties. For example, U.S. newspaper companies were just developing viable response strategies to the plethora of emerging disruptors in their market when the economic situation worsened substantially in the second half of 2008. A sickening core business necessitated shifting focus away from innovation efforts that had not yet gotten big enough to have material impact.

Could Microsoft suffer a similar, albeit less stark, fate? While disruptors have been nibbling away at Microsoft's core business for the past few years, the company remains a cash-generating machine. It has used its ample resources to explore new markets like mobile and gaming. If its core slows before some of these new growth efforts become solid profit engines, the company's long-term diversification strategy might suffer.

Another shining light is likely to be companies that have made substantial progress in their efforts to **make innovation systematic**. Companies that have already placed their bets on innovation can double down, creating multi-year gaps over their competitors. For example, Procter & Gamble, Johnson & Johnson, General Electric, Cisco, and IBM have all made public commitments to growth through innovation. And all treat innovation like any other operating process, setting targets, measuring performance, allocating resources, and actively managing portfolios.

A structured approach to innovation helps in bad times because a company isn't reliant on a single success. A company can prune its innovation portfolio and still retain a large number of high-potential investments.

Tough economic times will prove challenging for **innovation novices.** It's hard to rapidly develop capabilities in tough market conditions. Companies that haven't started their innovation journey are going to feel overwhelming pressure to stay focused on seemingly safe strategies, such as continued focus on operational excellence. This focus might allow them to survive the current economic downturn, but weakened innovation muscles will put the novices at severe long-term competitive disadvantage.

Finally, watch for companies that demonstrate the ability to **love the low end**. In the darkest days of October 2008, low-end lovers like McDonald's and WalMart thrived. Increasingly value-conscious consumers and hungry low-cost attackers mean that more and more companies have to develop a similar ability to love the low end.

Loving the low end isn't just about ripping out features or shrinking package size to lower prices. Rather, it is about gaining a deep understanding of how the low-end consumer measures value, and developing unique offerings that are tailored to key value drivers. It requires sacrificing performance along some dimensions, but increasing it along others.

Further, loving the low end will require companies to improve their ability to master business model innovation. For example, the secret to McDonald's success in the 20th century wasn't really great-tasting hamburgers. It was the Speedee Service model the company introduced in 1948 and perfected over the next 50 years. That model, featuring simple items that multiple, lesser-trained cooks could produce quickly, allowed the company to prosper at low price points.

While current and future low-end lovers are in a solid position, companies that are **niche providers of high-end goods** have their work cut out for them. After all, it's easier to cut consumption of high-end luxury goods than staples like toothpaste. High-end companies that have not further filled out their product line offering will have the unenviable challenge of trying to crack into increasingly crowded market tiers.

If forced scarcity coupled with a clear need does lead to increasingly disciplined innovation efforts, it could mark a turning point in the innovation movement. After all, a couple of generations ago, everyone thought quality was random, that drilling for oil was largely educated guesswork, and that ulcers resulted from stress. Today, quality is precise, companies can predict with certainty where oil lies, and we know almost all ulcers result from *H. pylori* bacterium. 2009 might be remembered as the year in which innovation shed its reputation for randomness and unpredictability.

As long as there are problems to be solved, there will be innovators to solve them. Companies that use the current tough times as an excuse to de-emphasize innovation are going to severely regret it.

Sidebar: What Will Innovation Look Like in Your Industry in 2009?

We asked Innosight partners to offer industry-specific predictions for:

1. What could go wrong in this industry?
2. What could go right in this industry?
3. What specifically are some events or companies that could change the shape of this industry?

The themes that emerged mirrored those mentioned in the main article – overall economic uncertainty clouding the picture for everyone and squeezing out innovation efforts, particularly at companies that are new to the innovation game. For some industries, possible increased regulation and policy change from the new presidential administration adds to the overall uncertainty.

Finance – Andrew Waldeck

Clearly, established companies in this vertical face severe challenges. For 2009 to go well, global financial services firms have to innovate their business models in ways that reduce their dependency on financial sponsors (hedge funds, LBO, and private equity firms) and their own principal investing activities. As well, firms will likely need to follow Citi's lead and reduce scope or focus existing assets more narrowly.

The current turmoil creates opportunity for potential disruptors. The chaos on Wall Street creates an attractive environment for boutique firms to add new talent and capabilities. These smaller firms can take advantage of opportunities that incumbent firms ignore as they focus on stabilizing their existing businesses.

Also, any downturn creates an opportunity for low-cost tools and data providers. CapitalIQ developed a significant installed base coming out of the last down market. Two years ago Motley Fool launched CAPS, a community site where members create and share stock research. Free services such as CAPS are following the disruptive playbook, and should do well.

However, continued paralysis and uncertainty about the overall global economic outlook will do no one any favors. Particularly, uncertainty about whether we've hit the bottom and how long the downturn will last will be problematic. And a bigger issue is that we will have more regulation, not less, going forward. This is right and appropriate, but the uncertainty around it could be a major inhibitor to innovation and progress in 2009.

Healthcare – Steve Wunker

Major disruptive changes are playing out in healthcare, from shifting sites of care to technologies that completely alter who makes the industry's most attractive profits. In 2009, two healthcare policy earthquakes may further rattle the longstanding structure of the industry. Widespread implementation of Electronic Medical Records, as proposed in the forthcoming economic stimulus package, could radically shift the balance of power between physicians, healthcare provider organizations, and insurers. Head-to-head, government-sponsored studies of product cost-effectiveness, as proposed by Health and Human Services Secretary nominee Tom Daschle, would require big changes in how firms assess development pipelines and bring new offerings to market.

Healthcare (Insurers) – Matt Eyring

Economics for insurers are in dismal shape. Profit margins are low single digits net of their investment. It's not enough to be price-competitive vis à vis other providers — insurers must also be affordable to companies and consumers. And the costs insurers can control constitute only a small percentage of their overall cost structure. The healthcare landscape is also facing a large amount of uncertainty as no one knows in which direction President-elect Barack Obama's healthcare reforms might go.

In order to get around their lack of control over costs, insurers that are not already vertically integrated – partnered with a variety of healthcare providers – should ask themselves in what ways they can innovate or partner in 2009 to help integrate their services with those of the care providers, in order to better manage both costs and quality.

Obama's choice for Health and Human Services Secretary, Tom Daschle, has said that our colleague Clayton Christensen's new book *The Innovator's Prescription* should be "considered carefully." However, there's no indication that as it considers an overhaul of the nation's healthcare system, the Obama administration would adopt any of Christensen's recommendations. Clearly, bold measures like nationalizing health care would be devastating for insurers. Early indications suggest that the administration won't go in this direction, but the longer uncertainty persists, the more damaging it will be for innovation.

Media – Scott D. Anthony

For established media companies to do well, they have to sharply improve their ability to catch the disruptive trends re-shaping the industry. Experimentation at the fringes isn't going to cut it.
After all, the continued migration of eyeballs away from mass media to the Internet coupled with advertisers demanding that media does more with less and the decimation of core advertisers like the auto manufacturers aren't "mights."

I expect there to be more companies that seek bankruptcy protection, and more bruising battles like we are seeing between Time Warner Cable and Viacom for control of content distribution. The rubble might mask continued valiant efforts at reinvention from existing companies, and continued emergence of new disruptors. Companies will take increasingly bold moves, such as stopping print publications, or outsourcing previously critical functions. Maybe we will see the emergence of a micropayment system to help fund the creation of top-flight content (spot.us is a non-profit that is experimenting with such a model).

Defense – Mark Johnson

The defense industry needs to fully embrace the reality that fighting terrorism militarily will require decentralization. While those in the industry speak about the need for change, the industry still has too much of a centralized, platform-centric mentality, rather than a decentralized, soldier-driven focus. We need to place the soldier at the center of the innovation effort, not platforms. We need to identify the "jobs" of our soldiers — the unique challenges, needs, and problems that still haven't been addressed. Companies that can place the "customer" (in this case, the soldier) and the job at the center of their innovation efforts could do well.

There's a real possibility that the defense budget will be reduced, especially hitting the procurement budget hard. Shrinking procurement budgets mean defense contractors need to figure out how to do more with less. We would argue that there are significant opportunities to provide disruptive, good-enough solutions for the soldiers that also address the need to decentralize war fighting, rather than continuing to spend on the centralized platforms of expensive ships and airplanes. For example, the unmanned aerial vehicle (UAV) is a classic disruption — good enough for many tasks, though not as good as fighter aircrafts. We can deploy a lot more of these and even make them small enough and cheap enough to go in the backpack of a soldier as reconnaissance support. These could continue to grow in their role as a disruptive development and we could see a further decline in the Joint Strike Fighter (JSF) and F22 programs.

Consumer Packaged Goods – Julie Toscano Sequiera

With the economy in turbulent times, CPG companies tend to be *relatively* more protected — as it goes, we all continue to buy toothpaste and toilet paper. Nevertheless, CPG companies will undoubtedly feel the impact of a more price-sensitive consumer and further pressure from struggling retail customers and suppliers in 2009.

With this backdrop, innovation will be an even more important weapon as brands aim to differentiate their offerings and compete with lower-priced private label offerings (i.e., targeting value-conscious tiers in the US and overseas). Companies that continue to focus on innovating to delight their consumers and get at important, unsatisfied jobs will be at a competitive advantage, even in these tough times.

In particular, we believe that the best-poised CPG companies will strive to push the boundaries of their innovations, looking beyond just new products to new categories, new business models, and new channels. In contrast, those players that succumb to short-term pressures by cutting innovation budgets, particularly around longer-term, more disruptive innovation projects, will find the pantry bare when consumer sentiment inevitably rebounds

Retail – Kevin Bolen

Retail will be a mixed bag in 2009. Disruptors like Amazon, WalMart and Costco will continue to thrive as consumers seek to maximize their spending power by frequenting these retailers whose well-established, low-cost business models position them well in tight economic times. Others, especially those serving the traditional “department store” role and so called “big box” electronics retailers, will continue to struggle as consumer spending on such “luxury” goods is curtailed due to the tight economy and the low-end retailers continuing to steal a bigger and more diverse “share of wallet.”

Even if the credit crunch loosens and taxes are reduced under the Obama administration, these stores may not see immediate relief as buyers, fresh off a tighter holiday budget, have grown more accustomed to shopping at low-end retailers. These buyers may now accept the lower level of service and selection in exchange for lower prices. We therefore expect more and more retailers will adopt a service-oriented model, copying Nordstrom’s or Best Buy’s Geek Squad success as a means to retain the higher-end consumers that are less price sensitive.

Automotive – Joseph V. Sinfield

2009 offers a host of challenges for an automotive industry reeling under an unprecedented downturn in demand. We might see a closer interaction between automakers, policymakers, and regulators as a result of the federal loans to General Motors and Chrysler, which must file their plans to return to profitability by March 31. Ford did not take a loan but is expected to renegotiate union contracts in accordance with the results of the GM and Chrysler union negotiations. Honda, Toyota, Hyundai and others are cutting costs as well.

Many automakers are firming up plans for the release of alternative energy vehicles. These are shaping up to be potentially disruptive plays – with some offering good-enough vehicles marketed to low-end customers.

While I don’t think we’ll see any automakers fold, we will see consolidation of vehicle models in the saturated marketplace as a better linkage develops between customer requirements and available models.

Manufacturing – Joseph V. Sinfield

The recession has accelerated the long-term drain of jobs away from manufacturing. Yet in 2009 we may see people begin to realize that process efficiency is not the path to growth. If that happens, we should see a shift away from strict reliance upon Six Sigma and cost-cutting, and toward innovation in manufacturing.

There will be a re-emergence of the need to link marketing and manufacturing, to go from designing new offerings as quickly or cheaply as possible or simply stripping cost from existing offerings, to designing what people really want. This shift will emphasize the continued need for the right kind of appropriately skilled talent – for example, well-trained, experienced machinists, experts in design for manufacturing, and those who can truly develop customer insights — as well as the need for organizational structures that can foster the necessary marketing-manufacturing collaboration.

Innovator's Insight

Innovation Lessons from Small Business

Big companies can learn a lot from flexible, customer-focused small businesses

By Andrew Waldeck and Renee Hopkins Callahan

Many people have come to think wrongly of innovation as a separate activity, walled off from their regular course of business, something they have to pursue intentionally. We saw this firsthand recently while participating in a workshop on small business innovation. One small business owner disavowed the notion that anything his business did could be classified as innovative, saying "We're not creating the iPod."

Our recent experience showed that many small business owners are highly innovative yet not aware of it. The notion that you have to be creating an iPod to be innovative reveals that people are very confused about what innovation is.

In fact, iPod wasn't Apple's sole reason for success in the digital music space. This innovation went well beyond the technology. Apple understood that some customers wanted to buy MP3s, not steal them. Thus the combination of iTunes with the slick iPod device proved a winning business model that upended digital music.

Understanding your customers is required for successful innovation. Small business owners, with their intimate knowledge of their customers, actually are incredibly well-positioned to innovate. One example is a story told at the workshop by a man we'll call "John" who owns a pool-service business.

John started out in the traditional way, servicing equipment and maintaining pools for residential, commercial, and government customers. The pools that were controlled by the municipalities and some of the very large commercial installations were required to maintain strict water quality standards. These customers invested heavily in monitoring technology that ensured the water quality was up to local standards. The rest of John's pool customers were certainly interested in maintaining pool quality, but viewed monitoring technology as far too expensive for them to reasonably deploy.

At a local trade show some time later, John was taken by new technology that would provide remote monitoring services at a much lower cost than the systems deployed in the large pool installations. Recognizing this enabling technology, John developed an entirely new business model for his customers. He purchased a limited number of the devices and then offered monitoring to a group of small to mid-sized pool owners as a service. Overnight, this entrepreneur had evolved his business model from a fee-for-service model to a leasing business.

However, John did not consider this change to his business model to be highly innovative for his field. When asked about the innovation, John explained he felt the decision to expand into leasing equipment was an easy one. He didn't need a business plan to evaluate this innovation. He pointed out that, in fact, he hasn't had a plan for a number of years. He started out with a business plan but stopped updating it years ago. He said, “I know in my mind by how much I want to grow and what I need to accomplish each month at achieve my target.”

What John didn’t realize is that he does in fact have all the elements of a business plan. Instead of the annual, stagnant planning process that characterizes many large businesses, John and other small business owners have clear metrics, a clear direction, and the ability to change course immediately if they need to.

There are lessons here for small business owners. Small companies should realize that their close customer connection provides a great springboard for innovation. The small businesses we talked to were incredibly market-connected. To them, a customer problem is an opportunity to sell that customer another solution. They are responsive, iterative, and flexible.

Further, small business owners might think they don’t have the resources to innovate. In fact, constraints are a friend to innovation, not a foe. More promising innovations have been killed by too much time and money, and too many people, than have been killed by lack of any of these.

Big companies can also learn from the way small companies approach innovation:

- Connect with your customers in order to truly understand them; pay particular attention to framing the conversation around the problems the customer has rather than the problems you think your current product or services could solve for that customer.
- Be iterative in regards to strategy and planning, to maintain flexibility and be most responsive to outside change.
- Be open to experimentation with new business models
- Be wary of the curse of too much capital and resist the temptation to throw resources at innovation efforts.

Above all, businesses of all sizes need to remember that innovation is not limited to products, services, technology, or creative thinking. Creating a new iPod isn’t always the goal – rather, focus on understanding why the customer can’t adequately solve important problems and develop an innovative business model that does the job in a new, novel fashion.

The last six months have certainly taught us that all businesses need to be open to change. If there was ever a time to start thinking like a small, nimble business, 2009 is it.

Innovator's Update

Hulu's a Big Hit

Its major-media owners figured out how to distance themselves enough from their online video-streaming venture to allow it to succeed

By Renee Hopkins Callahan

The Innovators' Insight "Has Hulu Forgotten Enough to Succeed?" from March 14, 2008, pointed out that if Hulu.com was to succeed as a disruption, its corporate owners would have to "forget" many of the lessons of their core businesses. What has happened since?

During its build-out and beta phase, Hulu was lambasted in the blogosphere and the tech press and branded a failure. Most found laughable the idea that a free video-streaming site backed by major media companies (Fox and NBC Universal) could actually provide a good user experience, much less become successful. After all, most successful online companies, such as Google, YouTube, Facebook, and MySpace (now owned by News Corp), were not started by existing media companies.

That fact was also the basis for our hesitation in the Insight published at the time of Hulu's public launch in March 2008. As Scott Anthony wrote, "asking two incumbents to work together to create a disruptive business seemed like a recipe for disaster." However, he pointed out that the venture could work – if Fox and NBC Universal were able to borrow enough core assets from their core businesses to help them out, but not enough to slow Hulu down, prevent it from learning, or constrain its strategic flexibility.

As the world now knows, Hulu's public launch has been a great success. After 10 months since its public debut it has become the sixth-most-visited website for online video viewing, with 227 million videos viewed and a 2 percent share of all videos viewed. The Associated Press chose it as the 2008 website of the year, and media outlets from *Fortune* to *Time* to *Newsweek* have all lauded it as an online hit. *BusinessWeek* has predicted it will eventually beat YouTube as the biggest online video site. Even Michael Arrington, who had been particularly harsh on Hulu in his popular TechCrunch blog, wrote an apologetic post, Happy Birthday Hulu. I'm Glad You Guys Didn't Suck."

What did Hulu do right? Hulu's most-often-cited high points are an easy, intuitive user interface that streams video in a browser without a separate application, a catalog of free content both deep and broad (including content from a variety of providers, not just Fox and NBC Universal), and a good search capability to be able to find the content.

We would maintain that the reason Hulu got it right is that it did exactly what we advised in our March Insight. Hulu borrowed just enough core assets to get started, but not enough so that the business model and culture of the parent companies constrained it too much.

A great deal of the credit for Hulu's success has been assigned to CEO Jason Kilar. The initial idea to for Fox and NBC Universal to team up came from Jeff Zucker, chief of NBC Universal, and Peter Chernin, president of News Corporation, Fox's corporate parent. But one of the first—and most important—things Zucker and Chernin did was to recruit an outside CEO for the new venture. Kilar had been an executive at Amazon, where helped the company move from books into home video and led teams that built the 1-Click Checkout and Amazon Prime.

According to an October 2008 *Wired* feature, Kilar started out as Hulu CEO by sending back to Fox and NBC Universal the on-loan employees and outside consultants they had provided for the venture. He also reversed Fox and NBC Universal's initial plan to outsource both the site design and the underlying computer code. Kilar told *Wired*, "Technology is the source of our competitive advantage. For us to design the company to last, we had to write every line of code ourselves."

The *Wired* article goes on to describe in detail how Kilar shaped the business model for Hulu in accordance with his vision for a successful online video service, often butting heads with executives from Fox and NBC Universal in the process. He was able to win their cooperation and support – and their video assets – which was all he really needed from them.

Hulu's new challenge is to pair its innovative content approach with an innovative business model. Hulu's business model is essentially the same as traditional broadcast networks' – offer compelling content, build audience, sell ads based on that audience volume, repeat. While Hulu gets two to three times the ad rate that the broadcast networks get, that's on a cost-per-thousand-viewers basis as opposed to a straight placement cost.

According to *Wired*, Hulu says its highest-rated shows get "millions of streams" per month, but a popular show like *CSI* will draw 16 million viewers on TV in a single night. And Hulu sells only two minutes of advertising per half-hour show, while traditional television broadcasters sell eight minutes of advertising into the same 30 minutes.

Hulu's audience has steadily grown, but in the current economic slump the overall online video ad market slowed in December 2008 to the point that Hulu hasn't had the advertising sell-outs it had been posting in the previous several months.

Yet rather than caviling about profitability, Hulu's corporate parents appear to be grateful to be able to provide an alternative to services that allow people to steal their content. In fact, Hulu's greatest accomplishment may be that, having succeeded by careful distancing from its corporate parents and their business model, it is now teaching its parents some truths about disruption and the realities of online video. In this world it no longer seems odd to read in *Wired* this quote from News Corporation president Chernin: "You can't protect old business models artificially."

While it's entirely possible Hulu might yet stumble in figuring out a breakthrough business model, it would now be much harder than it was a year ago to find people who would bet against it.