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Welcome!

We at Innosight would like to congratulate our Co-Founder and Chairman Mark Johnson, whose December 2008 cover article, "Reinventing Your Business Model" (co-authored by Clayton Christensen and Henning Kagermann) was recognized with a McKinsey Award as one of the best articles published last year in "Harvard Business Review". Mark will further explore the importance of business model innovation in his upcoming book, "Seizing the White Space: Business Model Innovation for Transformative Growth and Renewal" (HBP, January 2010).

Also, Scott Anthony's work on his upcoming book "The Silver Lining" is prominently featured in Harvard Business Press' newly launched "Leading Through Uncertain Times," an online center that delivers practical action plans, resources, tools, and content to help leaders handle the downside of business cycles.

Comments and suggestions are welcome – send them to editor@strategyandinnovation.com.

—Renee Hopkins Callahan, Editor

For "Reinventing Your Business Model":

<http://hbr.harvardbusiness.org/2008/12/reinventing-your-business-model/ar/1>

For HBP Leading Through Uncertain Times:

<http://ww3.harvardbusiness.org/corporate/products-and-services/collections/product-leading-through-uncertain-times-experts.html>

Innosight News and Events

I will be live-blogging and posting Twitter updates from a couple of upcoming conferences: The Business of Community Networking, March 25-26 in Boston, and World Innovation Forum, May 5-6 in New York. Come say hello if you are planning to attend one of these events!

Business of Community Networking:

<http://www.worldrg.com/showConference.cfm?confCode=MW09002>

World Innovation Forum: <http://us.hsmglobal.com/contenidos/wifhome.html>

Front End of Innovation Conference, an annual PDMA-sponsored innovation event at which Innosight will be exhibiting, May 18 to 20, Boston World Trade Center and Seaport Hotel.

<http://www.iirusa.com/feiusa/fei-home.xml>

Voice of Disruption: SimulConsult

CEO Lynn K. Feldman talks about the ways in which SimulConsult disrupts by attacking complexity in healthcare

Lynn K. Feldman is CEO of SimulConsult, Inc. Previously, Feldman co-founded StrictlyPersonal, Inc. which specializes in one-to-one fundraising software, worked as a senior vice president at Digitas, managing interactive marketing relationships and strategy development across a range of industries, and the Boston Consulting Group as a member of the Health Care practice focusing on payors and hospitals. She spoke to Strategy & Innovation editor Renee Hopkins Callahan about disruptive innovation in healthcare.

Q: What does SimulConsult do, and how did it get started?

A: The concept behind SimulConsult began with Michael Segal, M.D., Ph.D., a pediatric neurologist, who as a resident observed how hard it was to remember the hundreds of overlapping diseases in his specialty. Today, our company helps doctors to make difficult diagnoses – diagnoses where there is some unusual pattern of findings. “Findings” include symptoms, test results, and observations the doctor makes when you are in the office, like reflexes or peering in your eyes. The SimulConsult software enables doctors to enter their patient’s unusual pattern of findings and get back what they’re seeking – a differential diagnosis, which is a probability-weighted list of diseases. The software then prompts the doctor to add additional useful findings so that the differential continues to be refined to the point where the diagnosis is either conclusive or there’s clearly one lab test that would clinch it.

Q: Oh, like on House MD?

A: Right! To use the language of Clay Christensen, Dr. House is the eccentric and dramatic but nonetheless brilliant, memory-driven, intuitive physician. And what we are doing is collecting the brilliance and wisdom of the medical community in the form of evidence-based medicine, and making that **precision** available to doctors through pattern-matching software to combine with their intuitive skills in working with patients.

Back in the days of the Norman Rockwell doctor, medicine had a few hundred known common diseases and a few hundred known uncommon diseases that didn’t overlap very much. Moreover, only about half of the diseases were treatable. Memory-driven intuitive medicine worked pretty well. Since then, the number of known separate diagnoses has doubled every decade so today there are about 8,000 known diagnoses, and we are heading rapidly to 16,000. Dealing with the

resulting diagnostic complexity is like running up a down escalator.

The ideal is to have the generalist – a pediatrician or family practitioner who knows the whole integrated picture of your health – diagnose and where necessary refer for specialized treatment. These days many diseases are so overlapping in symptom and expression that generalists have mostly given up on diagnosing all but the common diseases. Instead they refer.

But each disease will typically have 15 or so findings, each with its own time course and possibly inheritance pattern. And those findings in diseases rarely fit neatly into just one specialty. Does the poor generalist make five referrals and order \$15,000 worth of tests? This happens with great regularity. This has resulted in diagnosis being the fastest growing category of medical costs, already equal to 10 percent of the cost of U.S. healthcare – \$250 billion. Worse, it's believed that there's a 15 percent error rate in diagnosis.

SimulConsult deals with these problems and enables physicians to do more as they face off against greater complexity. It basically allows doctors to remain intuitive experts at observing and getting the patient to tell them what's actually going on, where generalists are often advantaged because they know the whole person. We can help with the pattern recognition.

Q: Where does data come from?

Our content is collected from academic physicians citing the literature and giving time-course information and inheritance information for each and every finding in the disease and then it's peer-reviewed before it gets posted to the Web. We typically update the software database several times each week.

In the past, doctors have relied on textbooks (now online), which are excellent for treatment because they are organized by disease, but their text search does a poor job of differentiating among diseases with overlapping findings by time course or inheritance – which turns out to be essential for differentiation – whether it is inherited where the time course is about time from birth, or it's an infectious disease where the time course is about time from exposure.

Q: How do you make money?

A: Our business model has three sources of revenue: 1) physician subscriptions; 2) highly specialized, contextually relevant advertising; 3) licenses from payers to manage diagnostic costs. SimulConsult is a very fast, very high-quality system that lowers the cost of delivering care. With that promise we become a very important component of the core technology for the new category of benefit manager that is emerging around diagnosis. If we can promise that people will have fewer tests, fewer referrals and faster and more accurate diagnoses, that's a big deal.

The benefit managers represent one category of nonconsumption. With the benefit managers, it could be implemented in one of several ways. For instance, if a doctor wished to order an expensive genetic test for patients insured by any one of the four major insurers in Massachusetts,

the doctor could use the SimulConsult software to document his patient's case, and then with one click of a button, automatically send a test for authorization as long as the test is recommended among the top few useful tests in narrowing the differential.

Now, that's not telling the doctor what to do, and it's not even telling them which of the top tests to order, or from where. It's merely saying we will authorize it if the doctor has proven the case this way. So for situations with unusual findings, this makes it straightforward.

Interestingly, there is also some nonconsumption among doctors. As MinuteClinic eats the generalist physician revenues from below, those physicians need to move up. SimulConsult enables them to move up. There are many unusual diseases that an internist or a generalist is perfectly competent to treat – if they knew what it was. Once they know the diagnosis, they too can find the up-to-date treatment protocol for a person of this age and size.

Q: What has the competitive response been?

A: We're in use in 60 countries. In order to be effective we have to compete in what you might call a "vertical" or specialized disease. For example, there are more than 1,800 neurological symptoms. A bunch of our competitors have focused on being broad rather than deep, trying to drive frequency of use. But the average doctor doesn't need help diagnosing diabetes or the flu. A few have specialized databases, such as Visual DX, with 900 pictures of dermatological diseases and findings. They have had success in adoption in their fields.

There are definitely other companies out there that offer diagnosis information, there are a bunch of them that are really like textbooks online – Medlink, UpToDate, Dynalink – and they have content about diagnosis. But if you have more than one finding, it is difficult for the text search of these resources to tie to the time course of multiple findings.

Then there are a couple of players who have tried to do something more like what we've done with mixed success, mainly because they didn't solve the scientific problems inherent in pattern-matching.

Q: What is your strategy going forward?

A: We have a significant number of users within child neurology and various pediatricians and geneticists. Internists and family practitioners have found us. We have done zero marketing up to now. Eventually that will change, but up to now we've worked with professional societies like the Child Neurology Society who have helped inform doctors about our software, and even used it as part of educational programs such as medical education, resident education and invited talks. There are three components to our growth. The first is building physician subscriptions, the second working with all the relevant players in hospital quality management, and the third to work with the emerging category of diagnostic benefit managers and with self-insured employers to try and figure out how to think about this.

To continue to increase our relevance we're in the process of significantly expanding the verticals we cover, in an orderly fashion. We already cover about 20 percent of medicine, and we're incredibly deep. We've also been in discussion with a variety of the companies that provide Electronic Medical Records (EMRs) and they continue to have some interest.

Disrupt-O-Meter: Photoshop.com

Photoshop.com, Adobe's Web-based photo editing service, is among the latest examples of the shift away from desktop software and towards online software that started with companies like Salesforce.com. While Adobe is a bit late in arriving to the game of Web-based applications, Photoshop.com is an impressive effort relative to the company's core retail software business, primarily because it is available for free. Is Photoshop.com likely to be a disruptive success?

Innosight's Disrupt-O-Meter analysis requires examination of these aspects:

Customer

Price-sensitive digital camera users with light photo-editing needs who are primarily interested in photo sharing rather than advanced photo editing

Solution

Online tool that combines photo editing with photo sharing, allowing users to upload, store, sort, and edit digital photos, and then send them to friends or transfer them to Facebook or other social networking sites. No download is needed to access the tool, which runs within a browser and works across the gamut of operating systems. Users can sync the tool with photos stored on a computer, import photos from other photo-storage sites like Flickr or Picasa, import addresses from popular email services like Gmail and Hotmail, and receive updates when contacts add new photos. Adobe has also added Photoshop.com Mobile service to allow users to upload, view, and share photos from a mobile phone.

Business model

Basic membership to Photoshop.com is free and includes two gigabytes of photo storage. Additional storage can be added to the basic membership for a minimum of \$20 per year. Adobe also offers a "Plus" membership level that includes additional storage space and editing features, starting at \$50 per year. Adobe also hopes for potential upgrades from Photoshop.com to its traditional (and pricier) Photoshop or Elements software.

Competitive landscape

Photoshop.com competes with other free, online photo-editing sites, such as Picasa, Picnik and FotoFlexer, and with desktop editing software packages, including Adobe's own Photoshop retail software and free offerings such as those from getpaint.net and Gimp. Adobe integrates with other photo-sharing sites, allowing users to drag and drop photos between Photoshop.com and Picasa, Photobucket, Facebook, and Flickr. Many of these sites, however, likely view Photoshop.com as a direct competitor.

Analysis

If Adobe had launched Photoshop.com a few years ago, it would be ringing the bell off our Disrupt-o-Meter. Rolled out in the current market, however, the product tips the scale at a lukewarm due north.



Disrupt-O-Meter

Photoshop.com's disruptive potential is diluted given that other products entered the online photo-editing space earlier than Adobe. However, the offering is nonetheless a worthwhile play for Adobe and disruptive relative to the core Photoshop product portfolio. Photoshop.com's price point and strategic advantages over other free products (e.g., the Photoshop brand, low/no switching costs due to integration with competitive platforms) will likely pull in some nonconsumers and convert some current users of other offerings. This approach could generate a new revenue stream and business model for Adobe, while also introducing some new customers to Photoshop who will eventually trade up to paid Photoshop software. To be successful, Adobe will need to gain clarity on assumptions about the customer and competition.

Overshot consumers?

In launching Photoshop.com Adobe tests the notion that some consumers are overshot by existing editing software and willing to trade off some performance for a lower price point. The cost is lowered further by the fact that the heavy lifting of the offering is done on the server side, so users need not invest in a powerful processor to make use of the tool (though a strong Internet connection is key).

The trade-off? More limited functionality and potential privacy sacrifices. The tool offers only fairly basic editing features, which frustrates more advanced users but could be a plus for lighter users who want a simpler solution. Only images of limited size can be edited and some photos are automatically reduced to smaller size for editing. The speed can be slow – in part due to Internet connection issues and in part due to the application itself. Perhaps most significantly, users currently cannot print photos directly from Photoshop.com, though a printing feature may be added in the near future. Adobe says it will change the privacy terms on Photoshop.com, but at the moment the company reserves the right to use for advertising or other purposes any images that a user shares. Overall, Adobe may need to tweak the trade-offs to get the right mix of functionality, but the company has the right idea in redefining the price / performance algorithm of a product offering to target low-end potential consumers.

For customers who are not overshot, Adobe still stands to profit immediately if the service creates demand for the fully-featured Photoshop software (which retails at about \$650) or Photoshop Elements (about \$100). Eventually, Adobe will likely look to charge for additional Photoshop.com services such as printing or advanced editing features. As Adobe's VP of Creative Solution Services, Doug Mack, commented (see related reference), the company wants to "focus on making the user experience ... so good that people will want it. If you can do that, you'll acquire an audience. If you can attract a really big audience, that unlocks every business model." Indeed, a large market for advertising or additional premium services is attractive, as is the potential for deals in which computer manufacturers would buy licenses to pre-install components of the Photoshop.com software.

Eager competitors?

Another test of disruptive viability: will competitors be motivated to fight or flee? Providers of traditional publishing/editing software may have little motivation to follow Adobe's lead to provide free, Web-based services when the most profitable, demanding customers of such software find Photoshop.com to be an underpowered application that is missing key features. The traditional competition (e.g., Microsoft) may be willing to cede these low-end customers. However, the profit potential of online business models derived by creating large audiences for free, basic services is now well-established, thanks to the success of companies like eBay. Competitors, then, are not likely to sacrifice any online turf easily.

And what about those competitors that already have a business model based on free, Web-based services involving photo storage/sharing, like Google and Facebook? These companies are sure to fight for the online photo storing/sharing market. Adobe's success relative to these competitors, then, hinges on whether non-consumers have a latent photo-editing "job-to-be-done," (see related reference) the ease-of-use and value of Photoshop.com's editing features, and the tool's ability to seamlessly integrate with competitors in order to eliminate switching costs for those users who currently store their photos on other sites.

Overall, then, Photoshop.com is an attractive low-end offering for users with low-level photo editing needs and is an important, needed step into the world of Web-based photo sharing for Adobe. Fierce competition likely awaits for share of the online photo applications market, but Adobe is smart to be taking the lead in providing an offering that could eventually disrupt one of its own core products.

Related references

<http://www.photoshop.com>

<http://www.flickr.com>

<http://picasa.google.com/>

<http://www.picnik.com/>

<http://fotoflexer.com/>

<http://www.getpaint.net/>

<http://www.gimp.org/>

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http://www.forbes.com/2008/07/25/amazon-google-facebook-ent-tech-cx_kw_0725whartonwebpreneur_2.html

http://www.innosight.com/our_approach/JOBS.html

From the InnoBlog

Disrupting Healthcare: WalMart and EMR

By Robyn Bolton

Any time a barrier prevents consumers from satisfying an important job, the market is ripe for disruption. Consider the significant barriers keeping physicians from adopting electronic medical record (EMR) systems, or expanding on those systems they do have. In a study published in the *New England Journal of Medicine* (see related reference), 88 percent of physicians without electronic medical record (EMR) systems and 80 percent of physicians who already have EMR systems cite “cost of capital” as a barrier to adoption or expansion.

Who can blame them? Widely published estimates cite the costs of electronic medical record (EMR) systems as ranging from \$15,000 - \$50,000. However, this does not take into account the costs of hardware, implementation, training, and ongoing support, which can easily take the full costs of an EMR system to \$250,000 - \$300,000 for the first year (see related reference).

So who will enable the disruption for which this market is ripe? Enter WalMart. Long known as a purveyor of cheap toothpaste, toilet paper, and televisions, WalMart announced this week that it has partnered with Dell and EClinicalWorks to offer physicians a package of hardware, software, installation, maintenance, and training for the everyday low price of \$25,000 for the first physician and \$10,000 for each additional physician in the first year. While WalMart’s announcement is significant (especially to incumbents in the healthcare IT space), it is also significant, and important, to note that they are entering healthcare IT in a classically disruptive manner:

1. **Understand the important and unsatisfied jobs of key stakeholders:** Physicians today are not just caregivers, they are businesspeople forced to deal with the bureaucracy of managed care and the headaches of managing an office. Any solution that enables them to spend more time with clients and less time on paperwork without a significant impact on the bottom line will be quickly embraced.
2. **Create an innovative business model:** With its understanding of physicians’ important and unsatisfied jobs, it was likely easy for WalMart to create a solution with an appealing value proposition. However, they likely realized that additional resources would be needed (or at least helpful) to execute the strategy. Enter Dell and EClinicalWorks. Each brings its unique experience and reputation to the solution creating something greater than the sum of its parts:
 - **WalMart** claims that its role is one of an integrator (see related reference). While this is true, largely because of their purchasing scale, it does offer three other key resources: widely recognized expertise in logistics and coordination, an existing physician customer base of approximately 200,000 physicians, and an existing distribution network through its 600 Sam’s Club stores.

- **Dell** supplies the hardware – either a desktop or tablet PC – and the installation services. While WalMart could likely have partnered with another hardware vendor, Dell’s experience in supply chain management and reputation for good customer service likely gave it an edge over cheaper but less well-known hardware companies.
 - **EClinicalWorks** supplies the Internet-based electronic medical record and practice management software, training, and maintenance. Already used by 25,000 physicians, EClinicalWork brings credibility in the healthcare IT space.
3. **Use an emergent strategy:** This is neither the beginning nor likely the end of WalMart’s foray into healthcare. In 2007, it partnered with the University of Arkansas and Blue Cross Blue Shield to conduct research on how to improve healthcare IT in the US. In February 2008, it opened co-branded clinics with a common EMR platform operated by EClinicalWorks (surprised? You shouldn’t be), and in September it promised to provide all employees with access to electronic health records. It’s reasonable to assume that each of these activities were small steps to resolve assumptions related to IF and HOW WalMart should enter the EMR space.

Supported by the Obama administration’s \$19 billion investment in healthcare IT via the Recovery Act, WalMart’s foray into EMR is likely to be yet another successful step in its journey into the healthcare space. In the short term, WalMart is likely to benefit from sales of the system and the ability to influence patients and physicians to fill their prescriptions at WalMart’s pharmacies or to buy medical supplies and durable medical equipment at Sam’s Club. In the long term, its savvy use of the principles of disruptive innovation positions it well to successfully disrupt incumbents.

Related references

<http://content.nejm.org/cgi/content/full/NEJMSa0802005v1>

<http://www.aafp.org/fpm/20030500/37impl.html>

http://www.nytimes.com/2009/03/11/business/11record.html?_r=3&ref=health

Look for Growth Barriers Among Existing Customers

By Rebecca Waber



Given the shaky state of the world economy, companies are in a tough spot: while there is the need to be fiscally conservative, it is more important than ever to push initiatives for current and future growth. However, attracting new customers can be an expensive process, and a common response to a financial crunch is cutting marketing and advertising budgets.

We here at Innosight always recommend that companies address nonconsumption, since doing so is the surest way to create new growth. But nonconsumption does not exclusively refer to noncustomers; an oft-overlooked dimension of nonconsumption is the nonconsuming occasion. In other words, consumers of your product may not be consuming in all the ways and at all the times that they could.

That's why existing customers might be the easiest place to look for new growth. Among the population of consumers that already know and like a product, there may be barriers preventing them from more frequent consumption. Understanding these barriers to full consumption helps to illuminate solutions. Two disparate industries, pharmaceuticals and home cooking, illustrate what such solutions might look like.

Pharmaceuticals and Packaging

Although more than half of Americans take at least one prescription drug, massive nonconsumption exists in the form of medical noncompliance. Noncompliance is such a widespread problem, in fact, that the *Boston Globe* reported (see related reference) recently that the US economy loses \$100 billion annually as a result. In addition, health insurers pay for expensive hospitalizations and procedures that might have been preventable, employers experience reduced employee productivity, and, of course, the patients themselves may face injury or death. And yet one of the major contributing factors to medical noncompliance is simple forgetfulness.

Accordingly, combating forgetfulness would be a logical way to boost sales for the pharmaceutical industry (not to mention reduce costs for health insurers). One new product that offers a potentially inexpensive and effective way to remind people to take their medication is Vitality GlowCaps (see related reference), pill container lids that glow and eventually play a tune when it's time to take your medicine. Already available for sale, the company believes that with volume, such technology could be a fairly cheap and ubiquitous part of medication packaging. Embedding such a sensor and alert system into pill bottles could eliminate the forgetfulness barrier, reducing nonconsumption among existing pharmaceutical users.

Home Cooking and Marketing

PAM cooking spray has long been a choice of home cooks for preventing cookies and muffins from sticking to the pan. Con-Agra has recently decided to push PAM into contexts in which consumers currently use other products like oil or butter, or in many cases, nothing at all. Con-Agra is banking on the idea that consumer awareness of PAM's myriad uses is a barrier to consumption in those additional contexts.

A recent print and tv advertising campaign (see related reference) educates consumers that PAM spray can perform such tasks as helping cooks work with sticky food like popcorn balls, give baked potatoes a crispy skin, and prevent spaghetti from clumping while cooking. Even simple marketing solutions — like printing additional use suggestions on packaging — could spell big returns if they overcome such awareness barriers.

It is worthwhile to periodically consider your existing customers and any barriers they might have to more frequent consumption. Opportunities like these may be low-hanging fruit for growth, without the need to create a new product or attract a new customer. Keep an eye out for them!

Related references

http://www.boston.com/business/technology/articles/2008/11/17/its_time_to_take_your_medicine/?page=2

<http://www.rxvitality.com/>

<http://www.pam4you.com/pages/kitchentips/index.jsp>

Innovation Links Posts

We've started posting once or twice a week annotated links to various news and blog items of interest in the innovation world. Since the last *Strategy & Innovation* was published, this link has been posted:

March 13: <http://www.innosight.com/blog/331-innovation-links-for-march-13.html>

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