

Using Business Intelligence to Discover New Market Opportunities

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Executive Summary

Many companies have customers of which they are only minimally aware, people who started using a given product while seeking a solution for an apparently unrelated need. These atypical customers represent an untapped opportunity to grow the business in a new direction at minimal risk and cost, thereby achieving competitive advantage. This paper discusses how companies can:

- **discover who these atypical customers are;**
- **study them as a test market;**
- **find more customers like them; and**
- **adopt a continuing customer discovery process into the firm's business intelligence activities.**

Organizational resistance to less readily apparent and more intuitive uses of business intelligence frequently constrains the effective use of this application of business intelligence. The authors discuss the principal reasons for this type of corporate myopia and suggest some arguments to counter it.

Keywords:

Business Intelligence, Marketing, Competition, Customer, Gatekeeper

About the Authors

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Frates received her Ph.D. from USC, with a concentration in Health Services Administration. Her recent research and publications focus on Medicaid managed care, state health policy options to expand health insurance coverage for the uninsured, health services for Limited English Proficient patients, and consumer directed health care. Her consulting projects encompass program evaluation, proposal writing, business development and market research.

Seena Sharp established Sharp Market Intelligence in Los Angeles in 1979 following a successful corporate career in New York City. The firm's innovative and comprehensive approach uncovers opportunities and potential threats, unknown customers, substitute competitors, alternative distribution channels, market drivers, barriers to entry, trends and changing customer demands.

The company is known for their ability to identify early signs of market change, examples of which are published monthly in SharpInsights. Clients include Fortune 500 and emerging companies, in the US, Europe and Asia, primarily when they are involved in new market entry, line extensions, business development or strategic planning.

Seena is a popular speaker at professional conferences and associations throughout the US and Europe, including Harvard Business School's Entrepreneurial Conference, and the European Business Information Conference. She has been quoted frequently, including the premier issue of Peter Drucker's "Leader to Leader," "Competitive Intelligence" by Larry Kahaner, The Conference Board's "Global Finance 2000," and The Los Angeles Times. Bylined articles include the Journal of Business Strategy, Boardroom Reports, Chief Information Officer, World Trade, Competitive Intelligence, Marketing News.

Seena holds a Master's degree in mathematics from New York University, and serves on several boards, including the Association for Strategic Planning.

Introduction: Avoiding and Seeking the Unexpected

Business Intelligence (BI) is most often about avoiding surprises and minimizing exposure to risk. This important and necessary defensive strategic purpose is the most common and easily understood benefit of a firm's business intelligence program, with the highest perceived value for executives (Sawka 2002). Earnings shortfalls, regulatory agency investigations, negative publicity, CEO firings and other adverse events often result from being caught off guard, not anticipating, looking for, nor heeding, problem indicators that in hindsight were quite clear. Thus, many BI tools and techniques are designed to seek out, interpret and explain early warning signals of danger from unexpected sources (Gilad 2004, Rafii and Kampas 2002)

In marketing however, the unexpected can be a good thing because it can lead to the discovery of new customers and, through them, new market opportunities. In the pharmaceutical industry, it is not uncommon for physicians and patients to find that a drug prescribed for one condition has a beneficial side effect on another. Viagra, the leading drug for erectile dysfunction, was initially developed as a hypertension medication and Rogaine's effect on hair growth was discovered as a side effect of clinical trials for a prostate enlargement treatment (Croghan and Pittman 2004). Another more recent example of a serendipitous product function is the use of mobile text messaging by deaf and hard of hearing people, a new and unlikely group of cell phone customers.

A Broader View of Competitive Intelligence

What to call competitive intelligence is one of the enduring controversies in the field (Fleisher 2003). We prefer and use the term "Business Intelligence"

(BI) to “Competitive Intelligence” (CI) in this paper for two principal reasons. First, BI reflects a broader strategic orientation and use for information than does the more narrow definition of CI. Business intelligence reflects what we consider the best meaning of the term “competitive intelligence,” targeting any information in the business universe that affects a firm’s ability to compete (Sharp 2000).

A second reason for BI as our preferred terminology is that competitive intelligence is too frequently limited to competitor intelligence, which focuses on identifying, monitoring and understanding specific current competitors. While an important subset of competitive intelligence, competitor intelligence is insufficient, and potentially misleading. If all a company does is track known competitors within its own industry, it is likely to suffer from marketing myopia (Levitt 1960). The general business and CI literature is replete with examples of industries and corporations that were blindsided when unrecognized competitors developed products or services which better met their customers’ needs. Classic examples include:

- **Railroads’ failure to recognize they were competing with other modes of transportation, not just other railroads (Levitt 1960);**
- **IBM and Apple’s struggle to dominate the personal computer hardware market while Microsoft software became ubiquitous (Sharp 2000); and**
- **Microsoft’s original dismissal of the potential of the Internet (Gates, Myhrvold and Rinearson 1995).**

Business intelligence, with its broader perspective, targets developments beyond the current competitors and the immediate industry to anticipate significant marketplace changes that affect both a given industry and a particular competitive market arena. When BI seeks to uncover threats from unlikely sources, the competitive playing field becomes bigger, and its boundaries more fluid. The opportunity horizon likewise expands when companies use business intelligence to discover how their products have become or

are becoming substitute products or services in another market venue. Business intelligence enables the firm to recognize and preempt substitutes early; to spot opportunities for its own products to become substitutes for another industry segment (Sharp 1998); and to develop creative partnerships to pursue the new market opportunity.

Barriers to Using Business Intelligence

Why doesn’t every company already know about and apply this simple concept? Barriers to the use of BI include traditional marketing and management conventions as well as psychological, organizational-cultural and political factors.

Challenge to Conventional Wisdom

Business intelligence is new knowledge, often counterintuitive, that confronts long-held assumptions and threatens executives’ perceptions of their own expertise. A key marketing practice is to focus on the heavy users, following the Pareto principle commonly known as the 80/20 rule. The Italian economist’s work in the early 1900s demonstrating that a small percentage of causes produces a disproportionately large effect has been widely adopted in marketing and management (Eisenberg 2002), because typically 20% of customers account for 80% of revenues. Quality guru Dr. Joseph Juran found that 20% of defects caused 80% of problems, and adapted the Pareto principle in his characterization of the “vital few and trivial many” (Reh 2002). Customer segmentation is one of the key principles of strategic marketing, and customer segmentation analysis is a standard element in a firm’s external analysis. Its purpose is to identify and develop strategies to retain profitable customers (Fleisher and Bensoussan 2002). Busy managers interpret the Pareto principle in practice as an admonition not to waste time on customers who fall below the 20% “vital few” cutoff point. However, the 80/20 rule focuses on past and current customers, and is not useful for identifying customers who represent emerging market segments. Future

growth opportunities are more likely to come from the atypical customers who are in the 20% revenue sector.

Weak, Unclear Signals

Because BI focuses on the future, it is largely composed of soundings and signals that lack intrinsic relevance or easily perceived applicability. They are not supported by quantitative data or even readily verifiable evidence, and are subject to a variety of interpretations. They are fragmented, and sometimes contradictory, and may require extensive cross-checking for coherence. These weak signals are hard to prove, and easy to ignore, so are often discarded and may be irretrievable when managers belatedly recognize their value (Blanco, Caron-Fasan and Lesca 2003). By the time the information can be formally verified, it is pretty much public knowledge and the opportunity to respond to the early warning signal or to gain competitive advantage from it is lost (Raffi and Kampas 2002).

Organizational Culture and Politics

Powerful, charismatic leaders take great pride in being visionary and communicating their vision widely, to the point where it becomes a mantra. But corporate visions, and the strategies that flow from them, can become obsolete and turn into blindspots (Gilad 2004). This happens so often that blindspot analysis has become a standard technique in strategic and competitive analysis to identify potentially fatal flaws in the organization's strategic decision making capacity (Fleisher and Bensoussan 2002).

USING SURPRISE TO AVOID SURPRISES

Surprise is inherent in business. An overwhelming majority (92%) of middle managers working mostly in Fortune 500 companies reported in 2002 that within the past five years their company had been surprised at least once by an unexpected event that could have significantly impacted their firm's long-term market position (Gilad 2004). As academic research into surprise military attacks has revealed,

retrospective analyses of business surprise upsets typically find that early warning signals were present, but ignored, and that highly placed and powerful executives are particularly prone to hold fast to their internal convictions (Gilad 2004). As Harold Geneen noted, "The worst disease which can afflict executives in their work is not, as popularly supposed, alcoholism; it's egotism" (TPCN Quotation Center 2004).

Johnson & Johnson (J&J) was one of the first companies to develop a cardiac stent, a device that props open clogged arteries to facilitate coronary blood flow, and by 1997 dominated the market. Competitors with better and cheaper products moved into first and second place in the late 1990s, but in April 2003 J&J appeared poised to recapture the lead with its new Cypher drug coated stent. The product launch followed a strong campaign publicizing clinical trial results: In about 20% of patients who underwent angioplasty with bare metal stents, the body's natural immune responses produced scar tissue that re-blocked the vessel within six months but this occurred in only 7-8% of patients who received coated stents (Tully 2004).

This breakthrough product generated a demand of over 100,000 patients whose physicians were waiting to use Cypher for their angioplasties. However, J&J had only 40,000 stents available because of two unexpected directives from the Food and Drug Administration (FDA). The first required shipment of the stents within six months of production and the second established stricter standards for the coating dosage. J&J believed that the FDA would, like European regulators, allow inventory shipments within one year of production, and that it was complying with FDA dosage requirements. The FDA's actions forced J&J to remove tens of thousands of stents from inventory and to refine its manufacturing process to demonstrate that it met the new higher coating dosage consistency standards. J&J further antagonized its end user customers' gatekeepers, the physicians who select and the hospitals that purchase

cardiac stents, with its high pricing and limited discounting policy (Tully 2004).

The martial arts provide additional insights for corporate strategists and business intelligence practitioners. Yoffie and Kwak (2001) argue that small firms or new market entrants can succeed against much larger and stronger opponents by employing judo strategy. Among the tactical elements of this approach is leveraging the opponent's strength so that it works against him. Boston Scientific exploited the antagonism J&J had created with its inventory shortages and rigid pricing to capture 70% of the market for drug coated cardiac stents within seven weeks of launching its competing product in March 2004 (Tully 2004).

Looking for and leveraging surprising findings provides another type of competitive advantage. When competitors are focusing their energies and resources on increasing their market share of known profitable competitors, a company can use these findings to develop new markets. Reebok's parent company had produced premier athletic shoes for men in the United Kingdom since 1890, and entered the U.S. market in 1979 with the most expensive shoes then on the market. Noticing the growing participation of women in sports and exercise, in 1982 Reebok introduced the first women's athletic shoe for the burgeoning ranks of aerobic dancers. Reebok also noticed that women urban office workers were wearing running shoes to walk around the city, for lunch hour shopping and between their offices and public transportation. This discovery led to a new product line of women's athletic shoes designed for street and casual wear. After learning about a fitness instructor's step training program to recover from a knee injury, Reebok sponsored research on this new form of exercise and used the results to launch Step Reebok in 1989, then grew it into an international fitness craze through partnerships with health clubs (Reebok 2004a). In 2000, the company further expanded its fitness product line with Core Board and Core Training strength and conditioning programs (Reebok 2004b).

DISCOVERING ATYPICAL CUSTOMERS

Leveraging surprise for competitive advantage requires using business intelligence more creatively. For external environmental assessment, it is important to scan for signals of market change outside the known competitive arena and traditional industry boundaries. For internal strategic development, it is vital to examine the firm's customer base to identify non-typical users with potential to become or lead the company to a new market segment.

Look Beyond the Usual Suspects

While a company needs to pay attention to and nurture relationships with the 20% of heavy users who generate most of its business, it should not ignore the remaining 80% of customers, who can add value that goes beyond the limited sales revenue they currently bring to the company. Examples include but are not limited to:

Entrée to Other Markets - Closed caption TV is an example of this type of market expansion. Originally developed for hard of hearing customers, it is now primarily used by people studying English as a second language and in places where there is a lot of background noise such as gyms, bars and airports. The discovery of this expanded product usage opened up new opportunities in both the business-to-business sector (noisy public gathering places) and the business-to-consumer sector (limited English proficient customers).

Prestige and Influence - A celebrity or super-affluent user enhances the visibility of any product. A product placement can inspire many fans and wannabes to purchase. The "Operation Gadget" weblog typically focuses on product news and reviews of electronic gadgets. When the weblog editor noticed Tour de France champion Lance Armstrong's use of a Blackberry handheld device on a television feature about the cyclist, he posted an item speculating on which model the superstar athlete was using (Aiello 2004). In every market segment there are people and organizations recognized as "leading edge" whom

others emulate. These people and organizations have the potential to create “buzz” for a product or service that can become a trend (Gladwell 2000). Scrutiny of the customer data base to discover celebrities, opinion leaders and innovators allows a company to capitalize on the influence these users can exert on the larger market.

Walk in the Customer’s Shoes

Customers are looking for solutions to their problems, regardless of who provides them. By focusing on what customers value and what they are missing instead of beating the competition, companies can find opportunities to become true value innovators (Kim and Mauborgne 2004b).

Pay Attention to Customer Behavior

A superb example of a company that has grown and prospered by noticing and responding to what customers want to do is eBay, which has taken less than a decade to become the world’s most popular Internet shopping site. When eBay created person-to-person online auction transactions, its original focus was on collectors (eBay.com 1998). When its customers began to start buying and selling used cars, eBay teamed with AutoTrader.com to launch eBay Motors in April 2000. By December 2001, eBay Motors was the most heavily visited automotive web site. In January 2002 the eBay Assurance Program was launched to provide warranty, purchase insurance, payment protection and inspection services to complement the physical product purchase transaction (eBay.com Investor Relations 2002).

Identify What Customers Need and Value

Looking at the product from the customer’s perspective can reveal the total solution buyers seek in a product or service by identifying new market niches and additional product enhancement opportunities. Companies want to be innovative, but most new products are actually variations or enhancements of something already on the market that the “innovator” does in a way that the customer perceives as adding more value. It is not always the smartest strategy to be

the market leader. The follower position offers the opportunity to learn from first-movers’ experience, and come up with a version that is better, cheaper, or both (Porter 1985).

- **The French hotel chain Accor studied customer value preferences to launch its Formule 1 line of budget hotels, and used what it learned to bridge two previously distinct market segments: Low price and high-cost, high quality. What customers wanted was both affordability and a clean, quiet place to sleep. Accor eliminated high cost features of limited value, such as restaurants, lounges and 24-hour receptionists, and cut the average cost of building a room in half by offering smaller rooms with minimal equipment and using modular pre-fabricated blocks with strong sound insulation properties. This new approach made Formule 1 the new French hotel industry giant, with a market share larger than the total of the next five largest competitors (Kim and Mauborgne 2004b).**
- **Plano Molding Company has manufactured outdoor and tool storage products and organizing systems since 1952, selling its tackle, tool and small item boxes in sporting goods and hardware stores throughout the United States. Plano learned from its retail distributors that a growing number of tackle and tool box purchasers were not fishermen, not tool users, and not men—but other people looking for a convenient, portable storage and organizing system for a variety of small items. Conference and meeting organizers used the boxes to carry all the items needed for an offsite event; women purchased them for sewing and craft items, and teenage girls bought them for cosmetic storage (Drug Store News 1992).**

Rather than dismiss these anomalistic users, Plano started to offer its tackle boxes in bright colors in addition to the standard plain grey, and found that sales skyrocketed. Plano launched its Caboodles division in 1987 as a separate product line that grew rapidly to become a new retail segment with sales estimated at \$150 million five years later, of which 80% went to market leader Caboodles (Drug Store News 1992). In 1998 Plano expanded the Caboodles line to include cosmetics, bath and body products (Brookman 1998), based on recommendations from

its 120-member teenager research panel. In early 2004, Plano sold the Caboodles cosmetics line to a former company executive and a private investment firm. (Hoover's Online 2004), and the current Caboodles web site positioning statement describes the company as "the complete teen brand."

By listening to its distributors and expanding its product line to accommodate these atypical customers, Plano was able to: 1) increase overall sales at minimal cost; 2) place the adapted products in different departments of the same stores where its other products were distributed; 3) gain new distribution channels (office supply, fabric and craft stores); 4) enter an entirely new market, teenagers; 5) develop a new brand, Caboodles; and 6) expand the Caboodles brand to develop another new product line, cosmetics, for its growing teenage customer cohort.

Redefine the Competitive Arena

Examining the customer base from a new perspective and looking beyond the traditional competitive boundaries can lead to opportunities to enter a different market territory or, even better, create new market space (Kim and Mauborgne 2004a). To cite just a few examples:

- **In Germany, female shoppers pay US \$11 for the privilege of dropping off cranky husbands at a "kindergarten" for men, where they are treated to televised sports, snacks and beer (SharpInsights 2004b).**
- **Videogames are no longer just for entertainment; they have become a hot new advertising medium, used to promote products virtually and interactively. To promote its new, super-rugged Jeep Rubicon model, Chrysler-Daimler AG's Jeep division commissioned a game entitled "Jeep 4x4: Trail of Life." By offering it free online, Jeep collected the names of 250,000 people within six months and attributes several hundred sales to the game giveaway. U.S. Army recruiters found that awareness ratings among young adults were higher for its "America's Army" virtual boot camp videogame than any of its other marketing communications (Delaney 2004).**

- **LeapFrog jumped over its traditional competitors in the educational toy market when it forged a partnership with the United States Department of Health and Human Services to purchase 20,000 LeapPad electronic touch screen "talking books" for distribution to women in rural Afghanistan. LeapFrog worked with an Afghani physician to adapt its signature product, a preschool reading readiness toy, for use as a public health educational tool targeted to a mostly illiterate adult population. The firm thereby leveraged its expertise in interactive learning technology to move into a related but new market arena of publicly funded health education (Kim 2004).**

Convert Problem Customers into New Market Segments

Customers who demand more from a product or service than the company had intended to deliver are difficult, but their demands offer opportunities for product enhancement or new product development.

- **In the early 1980s, staff at the East County YMCA (San Diego, California) were concerned and irritated because so many youngsters who attended the center's after school youth activity programs were "hanging around" until or after closing time waiting for their parents to pick them up. The center staff originally viewed the de facto use of their organization and facility for child care as a problem. It raised some liability issues for the board of directors and the staff identified themselves as recreation specialists, not child care providers. The agency executive and board of directors carefully considered the situation, and recognized that the center's customers were asking, by their behavior, for the YMCA to expand its traditional programs to include child care. Today, YMCAs throughout the nation proudly provide affordable high quality child care, mostly in collaboration with local public schools (YMCA of the USA 2004).**
- **Traditionally, bookstores have tolerated, and subtly discouraged, browsers; customers were expected to purchase books in the store and read them somewhere else. Barnes and Noble and Borders turned this tradition upside down by reconfiguring the physical space and altering the**

ambience of their book superstores—adding music, greeting cards and stationery to their product offerings and opening cafes with Internet access. These companies redefined their customers as readers, not just book buyers and themselves as providers of a delightful reading experience, not just booksellers. Longer store hours, knowledgeable staff, reading tables and armchairs throughout the store are all attributes designed to encourage customers to browse and enjoy the literary oases these megabookstores have created. The market entry of either one of these companies, with their unique approach to retailing, often increases book sales by over 50% (Kim and Mauborgne 2004a).

- The proprietor of a high fashion clothing store for large size women developed another highly profitable niche within a niche market when she realized, at first with dismay, that male transvestites and cross-dressers were surreptitiously purchasing her clothes for themselves. She capitalized on this discovery by establishing a personal shopper service for these customers, offering private evening appointments and special showings in the store and in clients' homes. As public attitudes toward homosexuality have relaxed, the gay and lesbian market has gained recognition as an attractive niche market segment—the median household income for gay men is 25% above the U.S. national figure (Chain Store Age 1998); however, accommodating these customers calls for creativity.

CAPITALIZING ON SPONTANEOUS TEST MARKETS

Atypical customers that already use a company's products or services comprise a ready-made test market. It is well worth taking the time to contact them to learn how they discovered the company's product/service. Typical questions might be:

- **What problem were they trying to solve?**
- **Where else did they look?**
- **How did they find the company's product or service?**
- **How did they decide to accept it as the best available solution?**

- **Are there product or service enhancements that would meet their needs even better?**

Examine Value Chain Access Points

Distributors, suppliers, salespeople, customer service representatives, and repair personnel all gain information from their interactions with customers. Interviewing them about customers' comments, questions and complaints yields a wealth of information on what customers are looking for; what problems they are trying to solve; how they are using the company's products; and what they like and dislike about the company's and competitors' products.

Recognize Complaints as Gifts

Customers who take the time to tell a company what they need offer the firm an opportunity to continue to serve them. The majority of customers do not bother to register their dissatisfaction (Kotler and Clarke 1987); they just walk away and find another solution. The company thus loses both that customer and an opportunity to improve its service quality. A few companies have developed "service recovery" programs that not only train staff to listen and respond empathetically to complaints but empower them to authorize reimbursements to correct a mistake or to resolve a customer's problem (Economist 2004).

Learn from Product Failures

The repair and technical assistance functions offer a variety of opportunities for product enhancement and risk reduction. Service technicians' anecdotal, often amusing stories about how a product got broken yield information about customers' solution seeking behaviors. Repair product distributors can also become channels for the company to learn about potential product malfunctions when customers attempt to use the product in ways the company never imagined. The company needs to: 1) Make it both easy and worthwhile for customers or repair personnel to report problems at the point of service with both a web site forum and a toll-free telephone number; 2) acknowledge their report, with thanks; 3) tell them what action the company will take; 4) share

information with other repair/technical support providers; 5) check to see if they have experienced similar problems; and 6) report back on how the problem was solved or the potential risk reduced.

Invite Customer Feedback

In addition to eliciting and measuring explicit expressions of customer satisfaction, a company can study implicit communications from consumers that it receives in the form of inquiries, return and refund requests. To be even more proactive, a firm can create incentives for customers to use its products in novel ways.

Customer Product Development

The Pillsbury Bakeoff cooking contest is a very creative application of this tactic. For many years, the contest rules called for the use of Pillsbury flour in an original recipe using all fresh ingredients. Today, the only requirement is the use of a Pillsbury product, and many entries include canned, frozen, packaged or processed foods. This highly popular event attracts thousands of home cook applicants every year who hope to be among the 100 finalists competing for over \$1 million in prizes and 15 minutes of fame. The prize winning recipes are featured in recipe books, web sites, newspapers across the country, thus further leveraging the results (Pillsbury Bakeoff 2004).

Customer-to-Customer Communication

The Internet provides new opportunities for companies to learn more about consumers' needs, values and preferences from the communications they have with each other in online discussion groups. Many of these virtual communities are market-oriented in that they serve as vehicles for customers to search for solutions and information. Health related web sites provide information on new treatments and medications, results of clinical trials and report cards that assess the quality of hospitals, nursing homes and medical groups. Operation Gadget (2004) features information on all types of electronic equipment and peripheral products, including books and software. Yahoo! chat room categories include many topics oriented

toward consumers and collectors, as well as all those organized by demographic and geographic segments (Maclaran and Caterall 2002). Amazon.com and Netflix.com invite customers to write book and movie reviews, respectively (SharpInsights 2004a).

Motherproof.com reviews cars in terms of how they accommodate mothers with young children (Neubert 2004). Planetfeedback.com and thecomplaintstation.com teach consumers to complain effectively, providing instructions, templates and follow up tools. Planet Feedback also publishes companies' responses and customers' compliments (Intelliseek 2001). Marketing Sherpa (2004) claims that up to 70% of complaining customers will air their dissatisfaction in a public online forum.

Some communities are specifically organized as virtual brand communities, with both positive and negative aspects. Microsoft, Linux and Oracle all sponsor user groups for their software customers. The New England Palm Users Group (2002) web site directory lists Palm Pilot user groups in almost every U.S. state (13 within California alone) and over 30 countries. Labor and human rights activists have established a number of sites to boycott Nike products (Maclaran and Caterall 2002).

EXPLOITING AND GROWING THE NICHE

To find more atypical customers and expand the market segment, the company needs to learn what these customers have in common at the wholesale and retail levels, and what media channels will reach them.

Gatekeepers

Other organizations that serve a business's target customers can open the door to new customers and become new distribution channels. A payroll services firm that had traditionally grown by sales to individual businesses wanted to expand their marketing to include gatekeepers. Accountancy firms had in the past carried out payroll services for smaller businesses, but many dropped this service when they rec-

ognized that those businesses could now handle this function themselves using more sophisticated computer technology that evolved during the past decade. Business intelligence research conducted for the payroll services firm revealed that many businesses preferred their accountants to handle payroll as part of a consolidated financial management service. However, accounting firms did not consider providing payroll services to be a core accountancy activity nor a profitable use of their staff time.

The payroll services firm used this business intelligence to develop a co-marketing strategy targeting accounting firms as gatekeepers for small to medium size businesses. To implement this strategy, the payroll service firm needed to inform the accounting firms that their customers were interested in having them provide more comprehensive financial services, including payroll. After expanding the accounting firms' view of their business to encompass a broader set of financial management activities, the payroll service firm was able to present a strong business case for doing so through a collaborative relationship. Adding payroll services offered an opportunity for both the accounting firms and the payroll service firm to grow in tandem.

Current gatekeepers and distributors remain an important information channel for identifying atypical customers and potential new uses for a product. However, each industry presents its own set of challenges for the company to make this business intelligence actionable. For the United States pharmaceutical industry, there are actually three gatekeepers: physicians, regulators and payers. Physicians are the principal gatekeepers of prescription drugs because of their prescribing authority. The Food and Drug Administration (FDA) serves as regulatory gatekeeper because it must approve new drugs and new uses for currently approved drugs. Insurers are financial gatekeepers because they typically resist paying for a new drug for which a cheaper product already exists or for one not approved for treatment of the condition.

Physicians are also the primary contact for patients to report both adverse and unexpected positive side effects of prescription drugs, and pharmaceutical companies expend considerable resources tracking these reports for risk mitigation and product expansion purposes, respectively. But in recent years, patients have also begun sharing much information about drugs through over 3,000 online patient advocacy groups organized around specific conditions. These groups have become a new strategic vehicle for pharmaceutical companies to lobby for FDA approval and insurance coverage (Carpenter 2004).

The FDA strictly prohibits pharmaceutical firms from encouraging physicians to prescribe drugs for off-label uses, but imposes no restrictions upon physicians. Thus, physicians willing to prescribe off-label, and their patients, are preliminary test markets for new uses of existing drugs. What physicians and their patients are saying about off-label use, especially to and through advocacy groups, are signals that can become actionable business intelligence for pharmaceutical companies. They still have to go through clinical trials to prove the drug is both safe and effective for the new condition. However, the FDA does allow pharmaceutical firms to release findings from off-label clinical trials that are published in scientific journals. Thus, pharmaceutical firms can indirectly promote the off-label product use to both physicians and patients before obtaining regulatory approval, as well as build patient and physician support for FDA approval and insurance payments.

Internet auctioneer eBay pays close attention both to its customers and to the vast range of potential competitors in its external environment. It has grown largely through developing partnerships with other companies that also serve its customers as competitors or gatekeepers. By providing these companies an opportunity to grow their businesses through affiliation, eBay co-opts them as competitors and offers them an alternative to going public or pursuing the increasingly attractive option of being acquired by a larger firm (Pham 2004).

Media Channels

Reaching more atypical customers directly may require shifts in the company's marketing mix and the use of new advertising strategies, messages and venues. To do this, the company's marketing function needs to know what sources of information these customers regularly receive—and, more importantly, which they respect and pay attention to. The firm can then allocate resources to grow this market niche in the most cost-effective manner. Online forums, videogames, and text messaging are just a few of the new channels for reaching out to a defined group of customers (Delaney 2004, Cho 2004, Lawson 2004).

SUMMARY AND CONCLUSION: INSTITUTIONALIZING A CUSTOMER DISCOVERY PROCESS

To continually discover new customers requires both attitudinal and behavioral changes in a company's business intelligence function and in the way it obtains information from and about its customers.

- **Expect the Unexpected. Scan the entire business environment to expand the company's strategic perspective for both defensive and offensive purposes. Suppliers, distributors and regulators all may have a significant effect upon the company.**
- **Think about Substitutes. Use business intelligence to look beyond a company's known direct competitors to recognize threats and spot opportunities.**
- **Look for Anomalies. Analyze the customer data base to ascertain who is using the company's products and services, and why. Study those who are atypical to discover how they became customers. When feasible and appropriate, reward their input and publicize their innovative use of the company's product. Identify their information sources and develop pertinent marketing communications to attract more atypical customers like them.**
- **Listen to Weak Signals. Weak signals are most likely to come from limited or anecdotal information and qualitative data that is not readily verifi-**

able. However, the changes are still occurring and these signals are often recognized belatedly as the first signs of danger or opportunity.

- **Proactively Communicate with Customer Service Agents of All Types. Study complaint and service records for clues about what customers are seeking but not finding from the company's products or services. Invite employees from all departments to share information and acknowledge their contributions.**
- **Identify Gatekeepers as Potential Partners. The exploratory path to find more atypical customers will also lead to the identification of gatekeepers that are potential distribution channels for a company's products or services. Develop a mutual benefit business case for these firms to facilitate access to a broader pool of customers as a first step in changing them from gatekeepers to distributors.**

Expanding the use of business intelligence and applying it more creatively enables companies to leverage a key asset, their customer base, to identify, explore and expand new markets at minimal cost.

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Top IoT business opportunities, benefits, and uses in 2020. Alicia Phaneuf. 2020-02-19T17:46:00Z.Â Business Insider Intelligence forecasts that there will be more than 64 billion IoT devices installed around the world by 2026, with companies and consumers spending nearly \$15 trillion on IoT devices, solutions, and supporting systems. And as the IoT expands, it will have a particularly profound effect on businesses. Across industries, the IoT will create numerous opportunities in the coming years as we head into an increasingly connected world. Below, we've compiled a rundown of new IoT business platforms and the potential those platforms will create in the near future. IoT Benefits for