Developing Product and Business Innovations: Voice of the Customer Approach, Outcomes Strategies, and Beyond

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Abstract

Innovation involves the creation of new value. It is the “lifeblood” of startups and established firms. To be innovative, established and startup firms need to be able to create new value via its products and services that customer will want to use, and purchase. It is not just about coming up with new ideas, but rather new ideas and models that resonate with customers and effectively gain share in competitive markets.

This paper focuses on several aspects that drive innovation. First, it examines the strategies that engage in established (“Red Ocean”), new (“Blue Ocean”), segmented, or cloned markets. Second, it discusses sustaining and disruptive approaches to innovation. Third, it explores approaches to gain customer insights into innovation. These include the voice-of-customer approach associated with sustaining innovation (product-based improvements to remain competitive in a dynamic marketplace) and the “outcomes-driven” (customer “Jobs-to-Do” and needs) innovation that supports both sustaining and disruptive innovation. Fourth, the paper delineates innovation strategies that can either leverage existing or pursue new technologic competencies (established and new), business models to create new value, or both parameters. Such interactions can lead to either routine, radical, disruptive, and architectural types of innovation.

Keywords: Architectural innovation; Business model; Blue Ocean strategy; Disruptive innovation; Innovation; Job-to-Do; Outcomes-driven innovation; Outcome-based innovation; Radical innovation; Red Ocean strategy; Routine innovation; Technologic competencies; Voice of the customer; VOC

Introduction

What is innovation? It is a term that many individuals in academic, corporate, and entrepreneurial settings advocate and embrace. However, it is a term that is subject to many different definitions and views. Some mistake it for some magical creative process or design initiative that will lead to the next great multibillion-dollar startup, the latest interactive application platform, or a cure to some rare disease. Others tie the term directly to tech-based products. Probably the most straightforward characterization of innovation is that defined by Phadke and Vyakaram in their book Camels, Tigers, and Unicorns- innovation is about the creation of new value [1]. Nonetheless, the most significant problem that startups make involves the building of a product that no one wants [2]. Entrepreneurs need to build it around the construct of the customer and the market spaces in which they exist.

To this end, it may be the entrepreneur’s “Field of Dreams” mentality that might be the root cause. Many times, these individuals believe they have a great idea and cannot free themselves from it to listen to their customers and the market. Unfortunately, most firms fail to create real value for their customers. Consider the dismal statistics that reflect significant fallout from all the new business entities that entrepreneurs start every year. From the over 600 thousand new businesses started annually, less than one percent obtains venture funding, and only half are still in business five years later [3-6]. This reality is because many entrepreneurs make assumptions about their firms’ customers and marketplace without validating these guesses or hypotheses.
To this end, these individuals can miss critical pieces that investors seek when considering an initial investment of capital. Eric Gasser, Vice President, Technology Assessment for the San Diego Chapter of Tech Coast Angels, highlighted that investors’ lack of support of such ventures lies in the entrepreneur’s inability to define “Product/Market Fit” (“P/MF”) and the inability to pivot to an idea that would better address the venture’s customer needs [7]. Garrett Smith, Ph.D., a Stanford Biodesign Fellowship graduate and serial entrepreneur, added that the primary reason for failure involved building products customers did not want [8].

Hence, essential to the innovation journey are three dynamics. The first being the market. The second being the strategy the firm needs to use to engage the market. The third is the “Voice of the Customer” (“VOC”). These insights are essential to both startups and established firms in their search for improving established products, creating next-generation products, and finding breakthrough products.

As a result, this paper is structured to examine several different strategies that underlie innovative processes to bring to markets products that offer value and perform commercially. First, it examines several general strategies that firms need to consider when bringing in new products. Second, it will discuss the “VOC” approach. The third area dives into the “outcomes-driven” approach to innovation, an area that delves more in-depth than the traditional “VOC” approach. The fourth area focuses on disruptive innovation. The final area covers innovation strategies that can either leverage existing or pursue new technological competencies (established and new) and business models to create new value, which can lead to either routine, radical, disruptive and architectural types of innovation.

**General Strategies for Startups to Consider**

Essential to the innovation process and the ability to reach “P/MF” is to understand what type of market the entrepreneur or manager will enter and what type of strategies to pursue related to the market space. Further, these individuals will want to understand the roles and needs of their customers and competitors. Concerning the type of market, Steve Blank points out product and market relationships fit one of four strategic frameworks [9]. The first one involves that of existing markets. These are those of established billion-dollar markets. Examples include the mass markets in the consumer space including beverages and personal electronics. This space offers tremendous market size. It presents the opportunity to capture a defined piece quickly. While these features are attractive, existing markets do come with significant challenges to entry. Low barriers to entry have led to the fragmentation of these markets. However, even with fragmentation, a few firms dominate the space. These firms, such as Coca-Cola and Pepsi in the beverage space, have tremendous market share and power. Thus, the number of competitors and entrenched market leaders presents a significant challenge to the new entrant. In essence, such a market requires a “red Ocean” strategy. The focus within the existing market space is to capture share. The firm will have to compete through strong product differentiation and branding efforts, and perhaps pricing strategies. Some have called such an approach as a “Fast Follower.” Such efforts will require significant investment to be able to create awareness and to establish a foothold and ultimately a customer following. Facebook® exemplifies this approach well in entering the market space that Myspace® occupied. HUMIRA® was able to take over the biologic disease-modifying antirheumatic drugs market over established players including REMICADE® and ENBREL®. Finally, the iPod® was a later entrant to the MP3 player market, but quickly became the dominant player in the space.

The alternative to taking on established firms in established markets is to pursue new product/new market space, with more of a “Blue Ocean” strategy. This approach involves creating an uncontested market space, making the competition irrelevant, building and capturing new demand, breaking the value-cost trade-off, and pursuing low cost and differentiation [10]. Examples of such a strategy include that of [yellow tail]® wines, Net Jets with fractional jet ownership, and Cannon with the desktop copier, Netflix with mail order and streaming video, Amazon with online book and retail sales, Groupon, and Space X. While this approach offers the opportunity to a startup or firm, it involves much work. With such a strategy, a firm will need to spend much effort in defining, sizing, and cultivating the market. These are new market spaces. A firm might engage in initial growth and product adoption with an innovator or early adopter type of customers, as illustrated by in Roger’s adoption lifecycle model [11]. However, this initial growth may be misleading. Many times, such products may not realize the full potential of the market until several years in the market, resulting in a “Hockey Stick” type of growth over time. This lag in market adoption behavior may be due to the need to cross the chasm to the early majority, a concept that Moore describes in Crossing the Chasm [12].

In this space, one needs to target a “Beachhead” group of customers. Much effort is put forth in educating this targeted audience so this group can realize the benefits and move off the status quo. Space X and Amazon are good examples of this phenomenon. Related to the new market is the re-segmented market. This strategy involves re-segmenting as either a low-cost participant, niche entrant, or finding geography, audience, or space on which to focus. Michael Porter highlights such an approach as part of his seminal Harvard Business Review publication, “What is Strategy?” [13]. In many ways, the “Blue Ocean” strategy reflects that of segmentation. It allows the product to capture a defined share of the market and achieve fast growth. However, it may not let the product enjoy the full potential of the market. In many ways, it is the beachhead that Moore describes in his book, Crossing the Chasm, in which a firm need to stake out lead audience within
the early majority to enter an established market successfully with entrenched incumbents [12]. This scenario is what Clayton Christensen and colleagues propose with his model of disruptive innovation [14]. Examples of such successful approaches include Southwestern Airlines, Airbnb, and Uber.

The final market strategy involves that of cloning. In many ways, it is another type of regimentation as described by Porter. This approach involves taking a successful model from one geographic marketplace and replicating it in another one. Entrepreneurs have cloned business models in the United States, Europe, India, and China. Baidu is a great example in creating its version of the Google Search Engine for China. San Diego IPA, which distributed its beer outside of the United States to international American military unit locations (e.g., South Korea, Japan). Flipkart is an online portal similar to Amazon that established itself in India [15].

These markets do face challenges as well. The act of merely copying a product identically in another market will most likely lead to failure. One example is that of what Colgate-Palmolive experienced when it tried to take its successful soap brand, Cleopatra®, from Paris to Quebec in the 1980s [16]. Hence, when entering a clone market, one has had to account for local factors such as different cultures, consumer preferences, government regulations, and market dynamics. Such consideration allowed Flipkart to succeed with its online digital model of Amazon by pivoting to a cash on delivery payment model instead of credit cards for purchases as Indian consumers were not as heavy credit/debit card users [15].

**Voice of Customer (VOC)**

To be able to identify which strategic approach makes the most sense for a firm, startups and established firms need to engage customers to gain valuable insights. David Garvin of Harvard has indicated that studies comparing successful and unsuccessful innovation have identified that the primary discriminator was how extensive the firm fully understood the user needs [17]. However, one needs to understand what “VOC” research is and how does it play to innovation. The “VOC” approach is one technique that many established firms use to gain customer input into their innovation and product development processes. It, in essence, is about getting the customer’s voice (or feedback) integrated into the development of new or improved products. Thus, “VOC” is about capturing the changing customer requirements so a firm can offer better solutions. “VOC” involves a firm’s collection of information via multiple sources. Interviews are a critical piece like one of these sources. Others include surveys, focus groups, customer specifications, observations, warranty data, field reports, and complaint logs.

Typical questions involved with “VOC” research tend to be very product-oriented. Examples include: (1) How would one improve this product?; (2) What features would one like added or subtracted from the present solution?; and (3) Why is the present solution making one unhappy? So, what is familiar to these questions? They are product-oriented queries. Thus, while the customer’s voice is “King” with “VOC,” such research only leads to incremental breakthroughs because of its focus on the product or solution.

Several examples illustrate this incremental approach. Of course, there is an iPhone and its revisions in order to improve the model with new features to make it more competitive. Apple makes such updates based on what it hears from its customers and the marketplace. There is also the example of where BMW adds new features to its 3 Series each year based on customer mechanism in order to enhance its technologic, performance, and style offerings. A more detailed example involves the process of improving the digital projector [18].

Furthermore, customers had experienced “Pain Points” with setting up, manually adjusting settings, and having to work with multiple adaptors with present projectors, if they had an early-generation model. “VOC” research highlighted the need for a more user-friendly adjusting projector and associated tools that are easy to use so individuals using the projector can more efficiently and effectively connect their computers, saving time and increasing productivity. These learnings led to a more “user-friendly” adjustable projector and associated tools that are easy to use. The customer research led to incremental improvements with digital advances with projector features including a remote to advance PowerPoint slides, along with autofocus and adjustments for rapid sync up with a PC or Macintosh computer.

**An “Outcomes-driven” Approach to Identify Customers Real Needs to Develop Breakthrough Products**

Unfortunately, in using “VOC,” such as product-oriented interviewing and research fails to identify the customer’s real needs and needs-driven products. Because startups and established firms cannot wholly trust “VOC” research to uncover the real unmet needs of its customers, what research approach can they use? An “outcomes-driven” approach appears to be a strategy that can address such a need. It is an approach that companies such as Proctor & Gamble (e.g., Swiffer®), Intuit (e.g., Turbo Tax®) have used. This approach involves several steps. First, as Christensen points out, it needs to identify the job to be performed or “Job-to-Do” by the customer, who is “hiring” the product to fulfill that need [19, 20]. Second, to understand the job to be performed or the “Job-to-Do,” the firm needs to identify “Pain Points” and Unmet Needs. Third, these insights lead to the firm’s understanding of the desired outcomes by the customer. Finally, with these learnings, a firm can develop a solution. It is the interviewing of the customer by the firm that is essential to the first three steps here.

An “outcomes-driven” approach involves an understanding...
of the customer’s “Jobs-to-Do” and delivering on such needs. In essence, one can characterize a “Job-to-Do” to do as either a “Painkiller” (e.g., acetaminophen for headaches) or a “Gain” “Creator” or “Object of Desire” (e.g., a cupcake, a novelty piece of clothing, an exotic automobile). Christensen shared his quintessential story about the milkshake fulfilling a “Job-to-Do” for a specific audience, tradespeople going to work early in the morning [20]. In this narrative, he highlights how observational research identified the target audience, and subsequent interviews uncovered the driving requirements (i.e., provides something easy to handle, a distraction during a long, boring commute, and fill the stomach beyond midmorning) for hiring the milkshake [20]. From these observations, the company was able to reposition the milkshake from its traditional role as a dessert to complement a lunch or evening meal, and now to promote it for the morning commute hours.

Let us return to the previously discussed example of the Liquid Crystal Display (LCD), which identified incremental improvements and added to the next generation product. However, it is the development of the original LCD projector that presents an excellent example of a significant breakthrough, particularly for those individuals giving presentations in the academic and corporate settings. In this case, the developer of the LCD projector learned through customer discussions about the desired job-to-do, pains, and gains concerning the ability to give presentations using documents created using laptop computers. The developers of the LCD determined that the “Job-to-Do” of being able to quickly share data, graphics, and presentations on one’s laptop. Insights from interviews discovered that the status quo of acetate transparencies did not fulfill the needs around the job effectively.

Another example of this “outcomes driven” approach involves that of satellite radio [18]. Customers initially did not know that they needed satellite radio, but they knew what they wanted. What the founders of Sirius and XM learned from interviewing customers is their targeted audience had several needs. These included: (1) a wide range of music and talk listening options; (2) the ability for individuals to listen to music and talk programming everywhere where they travel with little or no interference of transmission due to limited broadcasting ranges with traditional (AM or FM) radio; and (3) less advertising during the times. These needs became the drivers of subscription satellite radio.

Essential to the “outcomes-driven” approach is that one must detach from existing solutions from real unmet needs. This point is critical since it is fallacious to think that many entrepreneurs and corporate managers think about how they are going to try to fit their product(s) to a specific customer or job (i.e., square peg into a round hole). Instead, they should be thinking about the customer and market and what needs and gaps exist. By interviewing the customer, those involved with developing new products or businesses can gain customer insights that allow the firm to develop a minimum viable product that one can test and modify based on feedback. The requirements for the “Job-to-Do” is that it is one that is stable and long term. While customers use many products to perform it, the job remains constant. Thus, firms need to capture the unmet needs that exist around a job, rather than the job solely, in order to make customer-satisfying products or services. These needs can include not only product-related aspect but also associated support services. They can even consider the journey that the customer takes to address the “Job-to-Do.”

A jobs statement based on customer discovery can help define the parameters and needs. Let us consider the examples of (1) doing one’s taxes, (2) treating a simple wound at home, (3) installing filters in the house, (4) cleaning a public restroom, (5) cleaning inside of a car, and (6) replenishing metalworking going into the machine shop. Thus, the creation of a job statement gives entrepreneurs and corporate managers a sense of what they should be thinking about when they distill down their research- what is the “Job-to-Do.” Furthermore, through the customer discovery process, entrepreneurs and managers should identify motivation. These statements led to the development of products such as Turbo Tax® and Band-Aid® adhesive bandages.

The job statement helps to identify how critical the need is to the customer and how motivated the customer may be able to move off the status quo. In essence, those creating new businesses and/or products need to be aware of the “9x” effect, which reflects the degree that consumers overweight the incumbent product’s benefits (including that of the status quo) by a factor of three and the degree that firms overweight the new product’s advantages by a factor of three [21]. It is through the discovery process that entrepreneurs and managers through questions can better understand the “Job-to-Do.” Figure 1 highlights such questions involved with associated solutions using the “Job-to-do” with doing taxes by oneself.

Critical queries that entrepreneurs and managers are essential in identifying critical insights to hone into the customer’s “Jobs-to-Do.” The requirements defined by such questions can drive a minimum viable product, such as Turbo Tax® in this case.

The take away here is that the essence of an “outcomes-driven” approach is to understand the customer’s job, the degree of pain (or desire) a customer associates with it, the challenges with existing solutions, and the motivation to move off the status quo. The desired outcomes are those that the entrepreneur or manager can be performed well if they are conducting the process correctly. The “outcomes-driven” approach can move the firm away from incrementalism. Furthermore, customer jobs represent a domain that both Porter and Christensen advocate as an area by which an existing or startup firm can segment or re-segment its business effectively within a competitive market space [22,13]. In the end, it will produce stronger marketing and financial outcomes, both in the short and long term, including building customer satisfaction and loyalty to make a firm a more robust competitor by creating barriers to entry.

**Disruptive Innovation**

Related to an “outcomes-driven” approach is that of disruptive innovation. While many have given varied meanings to this term, Clayton Christensen at Harvard has most clearly defined this concept along with the “Jobs-to-Do” theory. As previously discussed, Christensen characterizes traditional corporate innovation by incumbents as that of improving a long sustaining innovation trajectory (Figure 2) [19].

**Figure 1**: Essential Questions to Define the Customer’s “Job-to-Do” (TurboTax® Example) [18].

![Figure 1](image)

**Figure 2**: Christensen’s Disruptive Innovation [14]. Adapted and redrawn from Christensen et al. *Harvard Business Review*. December 2017.

With disruptive innovation, Christensen points to customers whose needs have not been adequately addressed by incumbents [19]. In using this approach, entrepreneurs and managers identify
such customers and develop scaled-down versions of such products or services to open up these spaces to such audiences. In many ways, this strategy is consistent with Porter’s segmentation by audience approach [13]. Entrepreneurs and managers need to identify such audiences and query what the job-to-do is to develop an appropriate, more minimalistic, product that represents a relevant value proposition to the audience and disrupt the incumbents.

Several examples illustrate such disruption in practice. One of the earliest cases involved that of Southwest Airlines in which its founder and chief executive, Herb Kelleher, identified the need for a low-cost, short-haul airline in the 1960s that would compete with the large carriers. It kept a focus on local commutes, simplicity in the seating of passengers, rapid turnaround times, and low fares. It carved out a strong position in the short-haul business throughout California, Texas, and the southwestern part of the United States. The airline remains a profitable independent carrier situated in an industry that has seen tremendous consolidation. Another example involves Netflix in which it changed the business model for delivery of DVDs based on the frustrations that Blockbuster customers experienced with late fees. It initially set up by offering older DVDs, a subscription model, and unlimited DVDs via the mail. The success of Netflix disrupted Blockbuster to such a degree that to this date only one store remains. A third example involves that of [yellow tail]® wine in which the distributor focused on a “Blue Ocean” audience, those who did not necessarily drink wine and found the beverage and prices to be unapproachable. It is positioning itself within a highly fragmented business by targeting and understanding this customer. The wine was very approachable, affordable, and the approach was fun, not complicated. This combination opened up significant space for the brand that led to substantial growth that led to over 8 million cases in 2009 [23]. Finally, two recent examples of disruptive business models include that of Airbnb as an alternative to hotels and Uber as an alternative to taxis and limousines.

### The Need for an Innovation Strategy: Technologic Innovation and Business Model Innovation

Pisano in his 2015 *Harvard Business Review* article titled, “You Need an Innovation Strategy,” points out that one must ask how will innovation create value for potential customers. He continues on that unless it induces the customer to pay more, save them money, or provide a more substantial society benefit (e.g., improved health, safety, security, clean water), the innovation does not provide value. Pisano highlights four innovation strategies that firms can use and ties them in an innovation landscape map (Figure 3). This two by two matrix lays out based on either leveraging existing or pursuing new technological competencies (X-axis) and business model (Y-axis).

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**Figure 3:** Pisano’s Innovation Matrix [24]. Adapted and redrawn from Pisano. *Harvard Business Review*. June 2016.
In this matrix, Pisano highlights that most traditional businesses conduct routine innovation within an established business model (lower left-hand corner) [24]. Routine innovation is a strategy that many established firms (e.g., ethical pharmaceutical or automobile companies) rely on predictable enhancements to build upon their present competencies. These improvements fit an existing business model and customer base. Pisano emphasizes that many corporations drive their innovation of products using this approach. It helps create products that are new, somewhat innovative, successful, and profitable. One can see this practice when a company develops outline extensions, broader label, or extensive product portfolio within a therapeutic area. Notable is when such firms have established products and want to bring in new versions to stay competitive or because the lifecycle for the established technology is very short. In many ways, “VOC” research provides valuable insights to aid the firm in improving existing products in competitive spaces vis-a-vis more of a sustaining innovation approach.

Pisano also highlights innovative alternative models (Figure 3). For instance, he highlights that businesses can remain within their established models and employ radical innovation that is purely technologic (lower right-hand corner). Biotech exemplifies this type of innovation, which calls for high research and development investment supported by several high-margin winners. However, the process for deploying and commercializing these innovations remain within the constructs of the firm’s established business model. Pisano points out that firms can significantly change up their business models to offer a new and relevant value proposition [24].

Businesses can embrace business model innovations, leading to disruptive and architectural innovations. Disruptive innovation involves changes in the business model with its reliance on present technologies (upper left-hand corner). Examples include Netflix and its displacement of Blockbuster, and Uber and its challenge to established taxi and limo services. Architectural innovation combines both technologic and business model innovations (upper right-hand corner). Examples include the concepts of personalized medicine, digital imaging, Internet news, and digital publishing.

Conclusion

Innovation is the lifeblood to startups and established firms. Some think that innovation is about creativity or design. However, to truly embody innovation, entrepreneurs and innovation managers need to be able to create new value via its products and services that customer will want, use, and purchase (and repeatedly). Therefore, they need to understand their markets, competitors, strategic direction to take, and most importantly, customers and their needs in order to identify opportunities to create successful innovations. Startups and firms should be aware of the type of market in which they compete and the strategy they wish to employ within these markets. Strategies for entrepreneurs and managers to engage include established (“Red Ocean”), new (“Blue Ocean”), segmented, or cloned market approaches. Innovation, as described by Christensen, can be sustaining (conventional, incremental improvements) or disruptive (focusing on unmet customers with base products and innovative business models) in attacking these markets.

Furthermore, an innovation strategy, as described by Pisano, can either leverage existing or pursue new technologic competencies (established and new), business models, or a combination of both to create new value. Such interactions can lead to routine, radical, disruptive, and architectural types of innovation. At the end, essential to the innovation process is that startups and firms should target and tap into their customers during the discovery and innovation process. So, while some consider just some type of creative process, all should agree that it should be about the customer. “VOC” and “outcomes-driven” approaches focus on gaining relevant customer insights. VOC tends to focus more on feedback that is focused on the firm’s product to develop next-generation products to compete in a dynamic marketplace. It also is seen with sustaining (or incremental innovation) approaches. An “outcomes-driven” approach takes the customer to develop one-step further. It focuses on the customer’s “Job-to-Do.” This approach is essential to developing innovative products and new firms that respond to the user’s and buyer’s real needs.

References