Using Blue Ocean Strategy to Reduce New Product Failure

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Abstract

Over the last several decades, product development efforts have seen unacceptably high new product failure rates. Developers concentrate on successful methods. Thus, in some industries, line extensions, developing products similar but different than successful products, have become more common. Simultaneously, industry has reacted by refining the new product development (NPD) process to make it more reliable and accurate. The refined development techniques are so helpful in refining product benefits with which firms are familiar that they reinforce the pressure to extend the line. The result is overcrowded markets where destructive competition destroys profitability.

Blue ocean strategy promises to change the destructive cycle of market crowding. Originally the framework focused on overall market strategy. However, it has a direct application to NPD. Revising the NPD process to incorporate a blue ocean viewpoint before the idea generation stage, may reduce the failure rate and create breakthrough products that are not easily emulated.

Keywords

New product development
Blue ocean strategy
New product failure rates
Market crowding
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Introduction

Product failure can be viewed as failure to build brand equity. It is a symptom of weak brand equity. Brand equity in turn is built on the consumer's perception of the brand, its company and its competitors. As the competitive playing field becomes more crowded, it becomes more difficult to gain the consumer's attention to create a favorable impression. One strategy to build brand equity is to reduce the clutter so that consumers can concentrate on a brand.

Very little historical data on product failure rates exists in the literature. Some, which in 2009 are ancient references, cite failure rates of 33% (Booz, Allen & Hamilton, Inc., 1965), 80% (O’Meara, 1961), or 89% (Schorr, 1961). During the last millennium, new product developers lamented the unacceptably high failure rates for new product introductions. Some sources claim the rate is as high as 95% (Schlossberg, 1993). Recent references have not supplied metrics but have concentrated on 'improving' the process (Hlavacek, et al., 2009). Still others cite the crowded competitive space and attribute failure to the clutter in the marketplace (Redmond, 1995). The data reflects the risks and costs of new product development. Even the costs in a single industry can be staggering: a conservative estimate places the cost of failed product R&D in the electronics industry at more than $20 billion per year (Clugston, 1995). Those results prompted organizations and researchers to refine the new product development (NPD) processes. Researchers have explored the causes of new product failures. The literature reports significant attempts at reducing the risk inherent in new product introductions (Sarin and Kapur, 1990). Despite extensive work, new product failure rates appear to be increasing in consumer product categories (Redmond, 1995) with staggering economic and opportunity costs. One attempt to improve the NPD success rate focused on leveraging the brand equity of existing products. Others concentrated on increasing the accuracy of the process by employing new development techniques.

Line Extensions: Leveraging Brand Equity

Companies have sought to reduce their risk in introducing new products in various ways. Since firms learn from their successes, leveraging the success of an existing brand name has become a favorite. New product developers have refined the practice to include two separate areas (Farquhar, 1989). The first, a line extension, introduces a new product in the same product category as the parent. The second, a category extension, introduces a new product in a different product category.

In the 1960’s, introducing a product extension was a carefully considered decision. Companies were afraid that the unanticipated shortcomings of a line extension would damage the sales of the parent. Thus Coca-Cola reduced its risk when in 1963 it introduced a diet cola named Tab. Essentially the product was Coca-Cola with an artificial sweetener. Sensitive to consumer reactions to taste, the company saw the potential for problems. Branding the product Diet Coke or Diet Coca-Cola carried risks. The fear was that consumers would not like the taste of the sugar-free ‘Coke,’ and reduce their consumption of the original. Only in 1982 after nineteen years of Tab’s successful performance did the company feel secure enough to introduce a branded Diet Coke. The decision was responsible and entirely correct. Coca-Cola Corporation’s most valuable asset is its brand name and failure to protect it would have been irresponsible. Coca-Cola’s careful approach reduced the
risk of damaging the parent brand and validated the concept of line extension. History proved them correct. The new formula proved to be so well accepted that one year after Diet Coke was introduced, it surpassed the sales of its sibling, Tab. Research has shown that line extensions reduce the risk inherent in product introductions by allowing consumers to form expectations about the new product (Kim and Sullivan, 1998) and by leveraging the positive expectations about the parent brand (Keller and Aaker, 1992; Martin et al., 2005). Over time, critics of consumer products have lamented the proliferation of line extensions. The basis for their popularity is the increased chance of success and reduction of the potential for loss.

In the soft drink industry, Coke’s successful extensions have resulted in remarkable product proliferation. In fact, around the world there are over 30 different versions of Coke and Diet Coke. They encompass versions with and without sugar or with or without caffeine. They include new flavors like vanilla, lime, raspberry, and cherry and even include a version with added vitamins. Not to be outdone, Pepsi followed suit and introduced its own extensive lineup of parallel line extensions that cover and clutter the market.

The result of these introductions was tantamount to an industry stampede. Competitors focused on increasingly smaller segments offering a unique small benefit to offer something new. For commodity products with little to differentiate them, consumers usually respond with variety seeking behavior. Thus the brand extensions make some sense by offering an alternative that is different and not owned by a competitor. However, since some of the extensions are easy to copy, one byproduct of line extensions is an increasingly crowded competitive space. Moreover, the proliferation of a series of line extensions may dilute brand equity. One more effect is to shift the attention away from consumers who don’t want the selection of product offerings but desire something else. These consumers may comprise a viable market segment unserved by others.

Refining Marketing Metrics and Development Techniques

As product developers have developed their own craft, they have introduced a variety of refinements. They involve techniques aimed at the accuracy of information, like Voice of the Customer research (Brandt, 2008) and careful segmentation and product differentiation. Other refinements concentrate on making the NPD process itself, more robust. Even today not every product is a success and careful product development and market testing is the rule. One consumer marketing example is Pepsi-Cola’s 2001 development of its ill-fated coffee flavored cola (Bevnet, 2001). It had a catchy brand name: Pepsi-Kona, reflecting Kona coffee from Hawaii and sounding a bit like the parent beverage, Pepsi-Cola. The brand concept tried to take advantage of Starbuck’s increasing success in revitalizing the lagging coffee drinking market. Among its target audience, adults, the brand seemed to have the potential to earn market share. Its sugar free, diet version even boasted a taste indistinguishable with the sugar sweetened primary version, a rare accomplishment and potential strategic advantage. Pepsi’s marketing staff is professional and they employ tested marketing metrics including the stage-gate process (Figure One) to conduct products through the new product development (Cooper, 2009).

The stage-gate development process has reduced new product failure rates. Using the metrics, Pepsi Kona did not complete marketing testing successfully and clearly did not exceed the threshold for a successful introduction. Ironically, tools like the stage-gate process may reinforce the pressure to extend product lines.
As the marketing and product development professions have matured, their tools have become more sophisticated. Combinations of metrics, called marketing dashboards have been developed to increase efficiency and help guide decision-making. They are helpful in keeping things on track. Marketers can make intelligent decisions and monitor the results of those decisions. The metrics are so widely used that managers in a given industry are likely to develop similar dashboards and use them to guide their competitive actions. Companies can monitor their dashboards to sense competitive initiatives, changes in consumer preferences, and other factors. In some cases, the metrics help sense events with enough speed to enable an equally speedy response.

However, when competitors use similar groups of metrics there can be a similarity in competitive tactics that can lead to countervailing reactions that stifle innovation and reduce success. Still, the concentration on metrics has saved costly mistakes. The result of the competition is an increasing tempo of moves and countermoves that kill off the weaker entrants and leave the survivors no option but to continue competing. New product development that maintains the focus within the industry segment offers no hope of escape. If market growth slows, profits may decline or disappear and the competitive carnage can be dramatic.

Environmental Factors and Competition

Most research on new product failures has focused on a firm's activities in specific projects. However, recent literature proposes that new product outcomes are influenced by macro-level or environmental factors (Redmond, 1995). Environmental factors can explain why competent firms in one industry consistently experience higher failure rates than those of firms that operate in a different industry. When two different industries, food marketing and industrial marketing are compared, one finds that failure rates for new food products are consistently higher than those for new industrial products.

While entrepreneurs have created new markets some of which are currently in the early stages of the product life cycle, the majority of markets are established and are maturing. In many established markets, supply is overtaking demand and competition is increasingly a battle for market share (Trombetta, 2009). Market share competition reduces profits and the potential for growth.

One empirical finding is that using line extensions is a common technique that food companies use to achieve sales growth. Redmond (1995) notes that consistent focus on line extensions creates market clutter. Clutter makes it difficult to achieve significant differentiation, to attract a viable market segment, and to survive. Thus, crowded market space generates the equivalent of natural selection in which only the strongest brands survive. In contrast, industrial products face a much less cluttered field of competition and introduce relatively few new industrial products. In the industrial marketing case, opportunities for differentiation and segmentation increase the chances for success.

Gaining Room to Compete - Value Innovation

Recognizing the effects of market crowding is important for new product developers. Implementing strategies to overcome those effects is arguably more important. Groundbreaking research by Kim and Maubourge (2005, 2007, 2009) proposed several
strategies for avoiding the negative aspects of competition by seeking value innovation. Instead of following the straightjacket of traditional industry rules, the creators of blue oceans rejected their competitors as their benchmark. Their actions made competition irrelevant by creating a leap in value for both buyers and the company - value innovation (Kim and Mauborgne, 1995). This perspective offers the hope of escaping destructive competitive market space for a new environment with more opportunities.

Blue Oceans - Red Oceans

The perspective, blue ocean strategy, has not been reported in connection with new product development in the literature. Instead, it is focused on company strategy. That is ironic since it inherently affects the nature and scope of product and service offerings and appears to be directly applicable to NPD. Blue oceans differ from the traditional red oceans in which most competitors operate. Red oceans are the result of blood-letting competition that stains the water red. Red ocean strategy is based on competitive positioning and market players following the competition. Three major elements typify this strategy. The first is competing on the same factors as the rest of the industry. The second is accepting existing industry boundaries and rules. The third is a focus on exploiting existing demand (Trombetta, 2009; Kim and Mauborgne, 2005, 2007). In essence, lured by nearby targets, the firm is incarcerated within its industry.

In contrast, blue oceans are uncrowded market spaces in which marketers can escape from destructive competition. They are based on the premise that the competitive game can be changed and the result can be value innovation. It is also comprised of three elements. The first is to reconstruct the elements of value. That is tantamount to new product and service development. Instead of NPD in the old competitive space, the second element challenges industry operating rules and prompts competitors to look across the industry boundaries to new opportunities. The third element creates new demand from noncustomers, new revenue streams or other sources. The results convey considerable freedom but require breaking away from familiar and successful patterns.

Using Blue Ocean Strategy - The Strategy Canvas and the Four Actions Framework

The heart of applying blue ocean strategy is analyzing the relationship of the company to its customers and its industry. Firms provide value to grow and compete. Providing the right value to the right customers in ways competitors cannot duplicate is one key to success. Blue ocean proponents advise creating a strategy canvas, a graphical depiction of three factors: the industry factors of competition (the x-axis), the relative level of the factors that a competitor supplies compared to the industry (the y-axis), and the competitor's strategic profile (the line that connects the factors).

One example of its use is in the women's clothing industry. Unlike department stores or discount retailers like Wal-Mart, fashion retailers offer stylish clothing at high prices targeted to young women with disposable income. They depend on substantial advertising and offer convenient access in the form of location and access to parking. Clothing Vault, a fashion retailer based in California recognized the crowded market and sought to find new competitive space. It started by looking at non-customers, fashion conscious girls with limited budgets. CV learned that the target audience, girls without much disposable income who want a fashionable wardrobe, get one by borrowing clothes from friends. That insight
prompted a novel concept—clothing sharing. The first step was to chart the relative level of attributes supplied by firms in the industry. It created a strategy canvas for fashion retailers shown in Figure Two. In relative terms, price (high price), advertising, and convenient access are offered in higher quantities than assortment.

Careful research uncovered more about the non-customer. The new social networking trend seems common to the age group, the millennials, including both customers and non-customers. Thus websites such as MySpace, Facebook, and Secondlife, were very familiar and of importance to the segment. It was clear that such social networks are an important means of communication creating word of mouth and supplanting traditional advertising. In addition, research also uncovered the most relevant definition of convenience: easy location of the right style and the right size. Retail stores are arranged to maximize the visibility of specific styles that are grouped together. Physically searching through clothing racks is less convenient than reading through a list using a computer. The canvas makes it possible to take one or more of four basic actions that can be used to create a value innovation. The four actions are eliminate, reduce, raise, and create, and are detailed in Figure Three. The factors are similar to product attributes like cost, convenience, new versus used, accessible parking, and anything else that is relevant.

Companies have used the canvas to assess where they stand versus competitors and in relation to consumer desires. By adjusting the levels of the factors they provide, they can often satisfy customers who are currently being served by others. By surveying potential customers and current non-customers, CV gained insight into what level of each attribute the non-customers desired.

- The primary attribute they desired was affordability in the form of low cost.
- Ambience was not important and a warehouse atmosphere that delivered 'fashion at a fraction'—low cost clothes with the full measure of style—would be acceptable.
- Convenient location, at or near a local mall was not necessary; non-customers would go out of their way to save.
- Service, while valued, was not worth paying for. Instead, the ideal of being able to find the exact size and style in a short time was important.
- The target audience did not really value assortment. It seemed important but they just wanted to find the items that they wanted.
- Parking was identified as important but not highly important. Subjects who were used to shopping at malls with parking lots tended to assume that it would be provided.
- Social networks played an important role in the daily lives of the subjects. They became almost a substitute for email. In fact, posting pictures on social network pages has reduced the need to attach a picture to an email. Instead of sending it to a friend, the friend could use the social network page and just find it.
- The final attribute, selection convenience was rated as important. Making it easy to find the right garment would be highly valued.

Figure Four depicts the differences between Clothing Vault (CV) and the rest of the industry. The y-axis scale reflects the original differences in Figure Two, but the absolute values offered by CV and the rest of the industry compresses the scale. By saving on several expensive elements including advertising and substituting several inexpensive attributes including social networking, CV has achieve significant cost advantages while serving its target audience very well.
The Six Paths Framework

Blue ocean strategists provide a tool to create new market space: the six paths framework (Kim and Maubourge, 2009). Instead of competing within a given market space, firms and product developers are encouraged to compete across them. The six paths refer to the six boundaries that constrain competition. They are 1) alternatives within industries, 2) strategic groups of customers, 3) buyers (as distinct from purchasers, deciders and users), 4) scope of product and services (including complements), 5) function-emotional orientation (the balance between functionality and emotional connection), and 6) time (the logical extension of a trend). Figure Five depicts the paths. Together, they present marketers with six distinct opportunities to develop new offerings and escape to uncluttered markets. Each one allows new product developers to create a value innovation that will satisfy customers and be insulated from competition. One can apply the four actions framework to each path to create new offerings.

In most cases, marketers are challenged to focus on the customer and determine what values are missing. Blue ocean strategy is a change in approach that forces developers to look beyond their tested methods of discovering product opportunities. Some of the best methods carry a bias bred of past success. Even the tested technique of listening to the voice of the customer (VOC) (Brandt, 2008, Cooper and Edgett, 2008) carries with it the danger of functional fixedness that focuses too closely on the current consumer. VOC techniques work; marketers do get a deeper understanding of customer wants, needs, and challenges. That may also be a problem. In the typical red ocean competitive arena, focus on customers and successful solutions to their needs led to the clutter of line extensions. Focusing on groups like non-customers, underserved strategic groups or other targets may be more successful. While each path deserves its own explication, exemplifying each of the six pathways is beyond the scope of the paper. The Clothing Vault example, used to illustrate the Four Actions framework, follows Path One: alternatives within industries. However, it is instructive to exemplify one and then note the key elements in the rest. The first three paths explicitly deal with consumers, either non-customers, underserved strategic groups of customers, or the chain of customers. The fifth deals with establishing an emotional link between products and customers. Perhaps, Path Four dealing with the scope of products and services may offer a useful example.

An Example of Path Four - Across Complementary Offerings.

Trombetta (2009) notes that few products and services are used in a vacuum; instead they gain or lose value in the context of other services and products. Just as diesel engine automobiles need service stations that sell diesel fuel to be useful, other products need complementary products or services to maximize their value. Product developers should think about the process consumers use to consume the product. Trombetta (2009) also offers the example of the Belgian cinema industry in the mid-1980's. The industry suffered diminishing demand for three decades as alternatives such as videos and DVD's, cable and satellite TV provided entertainment with higher convenience, choice and cost savings. The alternatives were so powerful that the interval between cinema release and DVD production shrunk progressively. The result was shrinking profit margins.

Typically, Belgian movie theatre operators waged a competitive war that cost money. One way to reduce empty theatre seats was to divide the space into smaller screens each showing
a different movie. The multiplex concept, a theatre complex with more than three screens, seemed a way to economize. The unintended consequence was that differences between the small multiplex screen and the living room shrank. In facing this situation, Kinepolis Group, which resulted from the merger of two smaller theatre chains in 1997, analyzed the industry. One part of the analysis was the customer experience in going to the cinema. Parents had to find babysitters then drive to the city theatre location and find parking. The theatre itself was small, cramped and often had an inferior sound system. After the movie, parents had to drive home and had no time to enjoy the evening.

Kinepolis used to four actions framework to revamp their theatres. They eliminated city locations by moving to the suburbs. That raised parking ease. They also raised the level of comfortable seating and the cinema experience. They reduced advertising to save costs. Finally, they created babysitting services and after movie meal options. The result was stunning success by reinventing the cinema experience.

Kim and Mauborgne (2009) offer examples of value innovations in each of the six paths. In each case, the focus is away from that of the industry. Path one targets non-customers. Path two looks at underserved strategic customer groups. Path three looks at the extended chain of buyers. Path four looks at complements to products from the consumer's point of view. Path five challenges the price/quality trade-off of functional products to gain more emotional connections. Finally, path six looks at trends taken to their logical conclusion. In each case, considering these paths opens new possibilities for competition and new opportunities for blue oceans.

Applying Blue Ocean Strategy to New Product Development

The first tool, the strategy canvas, would help with ordinary new product development since it focuses on product attributes, the competition, and consumer preferences. However, using the strategy canvas alone will not provide uncluttered market space. Firms that remain within their original industry boundaries may gain temporary competitive advantage from their insights. Inevitably, competitors will initiate changes and erase the advantage.

NPD teams seeking new product ideas may find it valuable to apply six paths analysis before they develop any ideas. By studying market conditions including consumer preferences and competition, they may be able to select targets that will avoid competition. Thus, applying blue ocean concepts early in the process promises the potential of a lower product failure rate. The value of the approach is enhanced by the fact that the six paths cover all the possible options. They provide a palette of strategic options that can be used in a variety of situations. Most important, they free teams from the destructive market share battles and cannibalistic line extension trap. To accomplish this change, companies must supply structures that encourage this approach along with resources and reward systems that free managers from the old industry focus. Used for product development, the six paths could lead to a distinct product assortment, aimed at different segments and industries, and transforming functional products into emotional-experiential ones. The product portfolios might be unlike those in use today. It must be emphasized that traditional product development techniques still have their place in insuring a successful outcome. They, in combination with picking the right targets will offer a measure of value that should not be ignored.
References


Schorr  Burt  Many new products fizzle despite careful planning, publicity.  Wall Street Journal 1961; (April 5).

Figures

Figure One - The Stage-Gate Process in NPD  (Cooper, 2009)
Figure Two - The Strategy Canvas for Fashion Retailers
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<th><strong>Eliminate</strong></th>
<th><strong>Reduce</strong></th>
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<td>Which of the factors that the industry takes for granted should be <em>eliminated</em>?</td>
<td>Which factors should be <em>reduced well below</em> the industry's standard?</td>
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<tr>
<td>Which factors should be <em>raised well above</em> the industry's standard?</td>
<td>Which factors should be <em>created</em> that the industry has never offered?</td>
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Figure Three - Four Actions for Creating a Value Innovation (Kim and Mauborgne, 2009)
Strategy Canvas for Fashion Retailers

Key elements of product, service, and delivery

Figure Four - Strategy Canvas for Clothing Vault
Figure Five - The Six Paths Framework (after Kim and Mauborgne, 2007)