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Victor Castro
University of Pennsylvania

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Innovation Importance Across Dimensions for Business-to-Business and Business-to-Consumer Firms: A Case Study-Based Analysis

Abstract

The majority of innovation research seeks to establish frameworks regarding the definition and identification of innovation; complementarily, there exists a dearth of research attempting to provide frameworks for evaluating the effectiveness of innovation within a firm. Adapting an existing “web” framework, we created the redesigned innovation “web” with redefined dimensions of innovation and a clarified rating system. After testing this redesign to ensure it produced consistent results across users, I worked to generate hypotheses, based on various case studies, about how the importance of innovation dimensions may differ across types of businesses. The research findings indicated that for business-to-business (B2B) firms, the Internal Processes & Capabilities and Product Mix dimensions are the most important, and that for business-to-consumer (B2C) firms, the Brand, Presence, and Customer Experience dimensions are the most important.

Disciplines

Business

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Introduction

Introduction to Innovation Frameworks

Existing frameworks for innovation primarily focus on how to identify innovation within a firm. Traditionally, a firm can be said to be innovating if it is:

- Extending an existing offering to a new customer base or market
- Introducing a new offering to existing customers
- Combining these two, putting forth a new offering to a new customer base

This framework is commonly represented in a matrix format, often with slightly different axes and quadrant definitions. Examples of these depictions can be found below in [Appendix A](#).

The initial stages of our research have focused not on identifying innovation, but rather on rating it. We have adapted an existing “Innovation Web” framework to allow for more accurate and more standard judgments about the quality of innovation within a firm.

Redesigned Innovation Web

The original innovation web sought to not only help identify innovation but also rate it; this version, created in 2013, can be seen below in [Appendix B](#).ⁱ Fundamentally, this framework was used as a tool to help individuals understand how certain companies excelled in their respective industries by mapping out different aspects of the companies’ innovation strategies. The dimensions utilized numerous strategic management factors, encompassing the factors relevant to many businesses - ranging from brand offerings to supply chain management, involving both

customers and internal processes. When attempting to apply the “web” to analyze companies, we found that there were various shortcomings in the original version.

Shortcomings of Original “Web”

The first issues we discovered in attempting to apply the existing web were with regards to the dimensions of innovation. As it stood, the dimensions were neither mutually exclusive nor collectively exhaustive, which created problems both in classifying innovations that fit into multiple categories or into none. Additionally, some of the dimensions were highly internal to a firm’s operations and were difficult to evaluate. In order for an individual to complete the web sufficiently, he or she would likely have had to possess intimate knowledge of a firm’s supply chain procurement, the organization of the corporate headquarters, or other difficult-to-obtain information.

The next issues stemmed from the ranking rubric itself, initially based on a scale of 1 through 7. The original ranking system identified the highest rating as requiring “introducing a novel innovation strategy that has substantial customer value and product sales.” However, simply *introducing* a strategy does not necessarily mean that that strategy is more innovative. The ranking system identified a score of 7 as the introduction of a novel strategy and a score of 6 as the creative improvement or application of a strategy. This does not necessarily track innovativeness, considering some of the best work has been produced by quick followers and copiers. Also, more practically, the number of different ratings (7) was simply too high. It is a non-intuitive scale and leaves too little room for distinction among the different innovativeness scores.

Due to these shortcomings, we found that there was no consistency in evaluating companies among different surveyors. Additionally, the results could not be utilized to evaluate the actual “innovativeness” of a company because the dimensions were not necessarily measuring innovation as we had defined it.

Redesign Process

We wanted the redefined dimensions to be indisputable driving forces behind all strategic business decisions that outsiders (to the business’s operations) could identify to be a crucial component of the operation of the business. We grouped all internal processes and capabilities together into one category, recognizing its significance but also the lack of transparency and rating difficulty for that aspect of a company.

Additionally, we hoped to ensure that the dimensions were now mutually exclusive and collectively exhaustive in terms of capacities in which firms could innovate while still being applicable to a diverse set of industries. For example, while platform might be crucial to an e-commerce firm, it may not be as crucial to a manufacturing or a product development firm. In order to accomplish our objective, we started with the 4 core competencies of any company and expanded from there: product, customer, strategy, and financial. The product is simply what the

company sells, and whether it's a physical product or a service, the product itself needs to be evaluated. In the case of GoPro versus Sony, or the Nook versus Kindle, there are heated debates about whether the winning product is actually superior in quality. For both instances, industry analysts argue that offering the superior product is not actually necessary to become a leader in that industry. Customers drive sales, and we wanted to capture the importance of the company understanding, identifying, and communicating to customers in a new, innovative way. Strategy is the most internal aspect of this web and perhaps where there's more room for subjectivity.

Above all, we wanted to dictate the process of evaluating firms, not just the web itself. Early on, it became clear that unless you dictate and limit a timeframe at which you're evaluating competitive firms, the ratings could be highly contingent on time. Sony in the 1990s innovated in a very different way than Sony does now. McDonald's shaped the food industry early in its existence, but now it is being beaten out by smarter, more innovative players such as Chipotle, cognizant of the changing landscape.

In the end, we arrived at a final iteration of the "web" and rating scale, pictured below in [Appendix C](#).

What is effectiveness for an innovation rating framework?

What we hope to achieve with our redesign of the web framework is the construction of a widely applicable, repeatable, and accurate innovation quality rating system. It is only in the creation of such a framework that hypotheses based on this model (or variations of this model) are valid.

In order to test this redesign and ensure its viability, we organized trials of this framework by Wharton School undergraduate students. By using students with similar academic training and business acumen, providing them with the same information base, and using companies whose business processes will be largely unfamiliar to the students, we can create a controlled environment for testing.

To fulfill these requirements, we chose a sample of Wharton undergraduates and provided them each with a short, two-page overview of the innovation efforts of two related pairs of firms as well as information about our web, rubric and how to rate innovation using them. The chosen pairs of firms were Oracle and SAP, and GoPro and Sony Action Cameras. The chosen firms are intentionally competitors with disparate performance records in recent years. This makes for the most accurate reflection of how this framework would be used by professionals or academics: comparisons of firms within industries for identification of winners and losers, leaders and followers.

Results of testing and conclusion

The set of charts displaying the results of our testing of 7 students can be found in [Appendix D](#).

The charts show, through a combination of small ranges, similar mean and median ratings (with

an average difference of 0.39 across all ratings) and relatively small average standard deviations (average of 0.94 across all ratings), that the redesigned innovation web and descriptions were shown to allow for consistent ratings overall. Assuming a common knowledge base within firms, this innovation framework is a viable option for leadership and management to gain an understanding of their own firm's innovativeness.

Case Studies

The above framework is meant to be widely applicable to businesses across industries and business models, fully encompassing the avenues through which a firm may innovate. What is not to be ignored, however, is that some of the dimensions of innovation are likely more important for certain businesses than others. One significant distinction to be made is between firms that sell to businesses (business-to-business, B2B) and those that market to individual consumers (business-to-consumer, B2C).

In my analysis, I seek to utilize real-world industry examples to argue that for B2B firms, innovation within the Product Mix and Internal Process and Capabilities spaces are the most vital and impactful, and that for B2C firms, innovation in Brand, Presence, and Customer Experience are most important.

Business-to-business firms – Internal Process and Capabilities

Businesses commonly maintain a major focus on efficiency in operations; this focus should lead to lower costs and higher profit margins. This is immensely important for B2B firms, which are less able to capitalize on their brand and service-based advantages than B2C firms, and this emphasis is the primary driver behind the increased importance of Internal Process and Capabilities.

A prime example of how innovation in Internal Processes can create a competitive advantage is with Dow Chemical and Corning's joint venture, Dow Corning. Dow Corning specializes in "silicon-based technology and innovation" and made a name for itself pioneering the exploration of the applications of silicones.ⁱⁱ Perhaps the most important innovation in Dow Corning's history, however, came in 2002 with its introduction of Xiameter, "a new business model comprising an online-managed, low-cost, no-frills sales channel for its commodity silicones, offering competitive pricing to customers willing to buy in bulk, without research or technical support."ⁱⁱⁱ Efficiency-seeking behavior was at the root of this innovation; Dow Corning's CEO Stephanie Burns spoke about Xiameter, saying that it exists for the purpose of "providing customers with reliable supply at a certain price point but also for [affirming] the company overall as the low-cost, highly efficient supplier."^{iv}

In contrast, most suppliers of commodity chemicals to other businesses before the introduction of Xiameter sold these products through their traditional channels. For clients who also purchased more specialized chemicals, the high level of service and additional support for these undifferentiated products was helpful; for those who didn't, however, it was a waste of money.

This was an industry-wide problem, and Dow Corning knew it could steal share from its competitors in the marketplace, including Elkem, SunEdison, and Shin-Etsu, by giving customers a lower cost option.

The introduction of this new service model required the reorganization of several parts of Dow Corning's operations, including its investing in a web presence and redeploying part of its salesforce to focus on just filling orders instead of seeking out new clients. However, the core of the innovation was a new and different Internal Process.^v

Several other firms in recent years have been successful in using innovation in Internal Process and Capabilities to succeed. Dell, since being taken private by its founder, Michael Dell, in 2013, has redefined its focus from customization to adaptability. Dell's server business initially focused on creating custom-made units to meet individual customer needs. More recently, however, the newest servers have "huge RAM capabilities and [allow] users [to] run Oracle, VMware, Hadoop – anything they want."^{vi} Similarly, LinkedIn has revolutionized the way businesses look for candidates and maintain an online presence. LinkedIn maintains the front of a consumer-focused business, but the innovation that has made it a true success is the introduction and offering of an entirely new process by which businesses interact with a global talent pool; it has created an infinite online rolodex that firms can pay to access. According to David Schueneman, a senior partner at a recruiting firm, "LinkedIn is everything today."^{vii}

Business-to-business firms – Product Mix

The other side of a corporate focus on efficiency is in B2B firms working to help their clients achieve their ideal level of efficiency. A proven way for B2B firms to do this is to increase their product mix and breadth of offerings thereby decreasing the number of suppliers with which their clients have to deal. The cost to an individual consumer of using multiple vendors for different services or traveling to a couple of different stores are miniscule compared to the cost to a multinational corporation, making this a far more important factor for B2B firms. When B2B firms succeed in creating an exceptional product mix, they acquire customers and can dramatically increase their Share-of-Wallet with existing clients.

A prominent example of this exact strategy in a B2B setting is with Oracle, one of the world's largest providers of enterprise software. Oracle has created a "vertically integrated, single-vendor solution that significantly lowers customers' total cost of ownership."^{viii} By strategically acquiring other software and hardware firms, such as Peoplesoft, Siebel Systems and Sun Microsystems, and bringing its offerings under the Oracle umbrella, Oracle has been able to steal share from the once-established market leader SAP. SAP created partnerships to offer much of what Oracle offers, but clients are then left to purchase "software and hardware products from multiple vendors and incur significant integration and implementation costs that aren't present with the Oracle solution."^{ix}

This extensive Product Mix in one place makes Oracle the clear choice for businesses looking to increase efficiency. This strategy has also been extremely successful financially, resulting in the

average annual revenue growth for Oracle of around 20% since 1996.^x Combining this with a renewed salesforce focus on profitability and a new open-source software system, Oracle has broken into a previously concentrated industry.

There are several other success stories that mirror Oracle's in how innovation in Product Mix has led to success for B2B firms. One example is Caterpillar, a firm that primarily manufactures heavy equipment for the Construction, Resource, and Power Systems industries. Through extensive acquisitions, namely of SEM and Bucyrus, Caterpillar has been able to keep its offering extensive enough to meet the changing needs of its clients.^{xi} When one of Caterpillar's construction company clients, for example, undertakes a new project that requires a new piece of machinery, the client is able to work through its existing relationship with Caterpillar to acquire the equipment, which Caterpillar will almost invariably offer.

Business-to-consumer firms – Brand

B2C firms operate in a fundamentally different way than B2B firms. B2B firms are dealing with relatively rational, theoretically purely profit driven customers. For this reason, they logically must focus on dimensions of innovation that will allow them to deliver the most concrete value to customers. B2C firms must also consider these factors, but they are markedly less important than other, more outward facing dimensions of innovation.

Apple provides a prime example of exactly how one of these highly external dimensions of innovation, Brand, can create a competitive advantage for a firm. Laptop technology is relatively well shared across firms, therefore one can secure a near identical product from Apple and a PC manufacturer like Hewlett-Packard. [Appendix E](#) features screenshots from the Apple Store and from HP's website displaying laptop computers with near identical specifications in terms of processing speed, memory, hard drive storage space, etc. The only major difference one can find is that one product features an Apple logo and costs 90% more than the equivalent HP product (which in fact has an upgraded Intel i7 processor compared with the i5 in the Apple laptop). These types of comparisons often lead observers or technology experts to note that comparable PCs "use a faster processor than what's used in the MacBook. So what are you paying for?"^{xii}

The answer: Brand. The reason this seemingly inexplicable price discrepancy persists is that Apple has crafted a brand that demands a high premium. A 2014 estimate by Wharton School Marketing professor David Reibstein pegged the overall worth of Apple's brand at \$124.2 billion, approximately double the value of the Microsoft brand at \$63 billion.^{xiii} This premium is reflected in nearly every product Apple sells, but is especially noteworthy in a highly fragmented laptop market where nearly every major producer is using the same processors (Intel), perhaps the largest determinant of laptop performance.

The pattern of firms creating a brand that allows them to win in a certain industry is common. Another example comes with the emergence and subsequent success of Beats Audio. Beats was started by Interscope Records executive Jimmy Iovine and hip-hop icon Dr. Dre in 2006; in just 6 years, in 2012, Beats controlled approximately 70% of the luxury headphone market.^{xiv} This

left previous market leader, Bose,^{xv} as an undifferentiated player with a relatively tiny piece of the market. This meteoric rise in the headphone ranks was again due to superb branding. Realizing that other luxury headphone producers represented clean brands for which they could provide the antithesis, Iovine and Dre set out to ““make a beautiful black object that will play it back”” and decided to “market this product just like it was Tupac,”^{xvi} a controversial and wildly popular rap artist. Amazingly, this plan to use Brand innovation to battle the big players in this market has worked, despite a consensus among experts that “in terms of sound performance, [Beats Headphones] are among the worst you can buy.”^{xvii} All of this success eventually culminated in an acquisition of Beats Audio by Apple for an astounding \$3.2 billion.^{xviii}

Business-to-consumer firms – Presence

Another of the crucial, customer-facing dimensions of innovation is Presence. When B2C firms are able to create additional points of access to their product or service, they make their product significantly more attractive. More ways for customers to access a product means there are more opportunities to buy or spend.

Zipcar has recently taken on traditional rental car firms by giving individuals access to cars where they need them. Traditional car rental firms, like Hertz, typically house their cars in only one or two locations, even in large cities. Zipcar leaves cars in various small lots and on street corners throughout cities; customers need only walk around the corner to be in a car that they can rent on an hourly basis to make trips they may be unable to with public transportation or by walking. Moreover, Zipcar is not only local. A Zipcar member can access Zipcars in 63 cities in the United States and 24 cities in 7 other countries.^{xix} These factors made Zipcar the only car rental firm with significantly differentiated Presence.

Tremendous success has followed for Zipcar. In 2007, Zipcar had 50,000 members, a figure that grew to 760,000 by 2013.^{xx} The business model that gave renters unprecedented access was “heralded as a game changer, potentially disrupting car sales and traditional car rentals alike.”^{xxi} Eventually, the success of Zipcar proved too frightening for traditional car rental players, leading to the 2013 acquisition of Zipcar by Avis for nearly \$500 million.^{xxii}

This same pattern is one that can be observed by examining Netflix in its battle against Hulu to dominate the video streaming market. Netflix began as a service where subscribers had access to an immense library of DVDs which they could have delivered to them via mail without additional charge. As computational advancement made viewing video online a far more common occurrence, pressure began for Netflix to move its services online, making some of its content available to stream. In 2007, Netflix began to move some of its content online.^{xxiii} It was only 6 months after this that Hulu launched the first ever private beta of its streaming service.^{xxiv} Additionally, Netflix was first to launch an iPad and iPhone app in April 2010^{xxv}; Hulu did not follow suit until late June of the same year.^{xxvi} Innovating in terms of points of presence, and doing so before a primary competitor, gave Netflix the exact competitive advantage it needed to find itself atop the streaming market today, boasting revenues of \$4.37 billion in 2013^{xxvii}, compared to Hulu’s \$1 billion.^{xxviii}

Business-to-consumer firms – Customer Experience

Finally, a third critical dimension of innovation for the success of B2C firms is Customer Experience. By providing customers with a differentiated or new experience through service or by altering the way individuals interact with their product, firms can succeed in their industry.

A prime example of how a novel customer experience can lead to success, even in a mature market, is Chipotle. Chipotle has taken on the largest players in the fast food market, namely McDonald's, by pioneering the "fast casual" customer experience. Fast casual dining gives the customer a far more refined, higher-quality dining experience than one would get at McDonald's, and Chipotle has been at the forefront of the popularization of this experience; Chipotle makes a point of using "'fresh' food, meaning at the very least, not frozen," and "where possible, meat from animals raised without hormones or antibiotics."^{xxxix} Additionally, Chipotle offers clean, simple interiors in its restaurants and a high level of customization in its foods, though its assembly line ordering process is no different than what Subway has been doing for years.

All of these factors mean higher prices, but prices consumers are clearly willing to pay. Since 1999, Chipotle "has seen its sales more than quadruple."^{xxx} Over this same period, McDonald's revenue has grown 107%^{xxxi}, but with a marked revenue decline of 7% taking place in 2014.^{xxxii} Chipotle, "having once been controlled by McDonald's... is now a threat to its former parent."^{xxxiii}

The story is true for other firms as well. Facebook, for example, has become one of the world's most valuable corporations, dominating established social network players like Myspace at its inception ([Appendix F](#)), by creating a unique customer experience. Facebook put all of the most central pieces of information with which young people are concerned online, and in one place. The firm has continued to create new products (mobile app, mobile messenger) and acquired other services (i.e., Instagram, Whatsapp) to keep the best online social networking experience in one place.^{xxxiv}

Conclusion and Discussion

These examples are all illustrative of the fact that different dimensions of innovation have disparate levels of importance for B2C firms and B2B firms. Applying this to decision making within firms regarding where innovative efforts should be focused requires some importance-weighted system for defining overall innovativeness. The importance of each dimension is inherently different for every firm; however, a general model for B2B firms can be expressed as:

$$I(i) = W_{Int}I_{Int}^i + W_{Mix}I_{Mix}^i + W_{Brand}I_{Brand}^i + W_{Pres}I_{Pres}^i + W_{Plat}I_{Plat}^i + W_{Exp}I_{Exp}^i \\ + W_{Val}I_{Val}^i + W_{Comp}I_{Comp}^i$$

and for B2C firms as:

$$I(i) = w_{Int}I_{Int}^i + w_{Mix}I_{Mix}^i + W_{Brand}I_{Brand}^i + W_{Pres}I_{Pres}^i + w_{Plat}I_{Plat}^i + W_{Exp}I_{Exp}^i + w_{Val}I_{Val}^i + w_{Comp}I_{Comp}^i$$

Where:

W = Higher weight for more important attributes for that business type

w = Lower weight for less important attributes for that business type

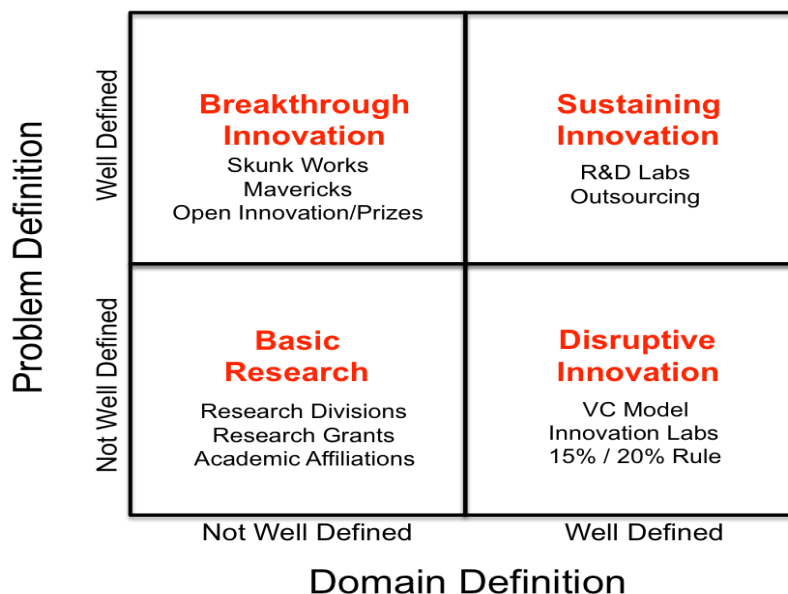
$I_{Dimension}^i$ = Innovativeness score for firm i on that given dimension of innovation

$I(i)$ = Overall innovativeness score for firm i with adjusted weights

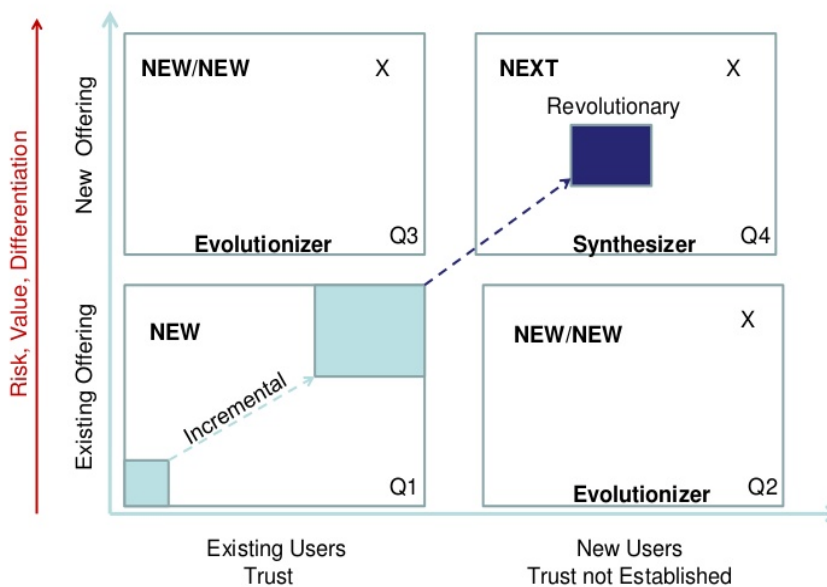
In sum, this system should allow for more accurate and more realistic overall innovativeness ratings for both B2C and B2B firms.

Additionally, it is important to note that although these examples seek to collectively illustrate the most and least important dimensions of innovation for B2C and B2B firms, this is only a general model on which to base innovation decisions and rate the innovativeness of a company. It is inherently possible that any firm's idiosyncratic characteristics could far outweigh its level of conformism to typical traits of B2B or B2C firms for which this model is applicable.

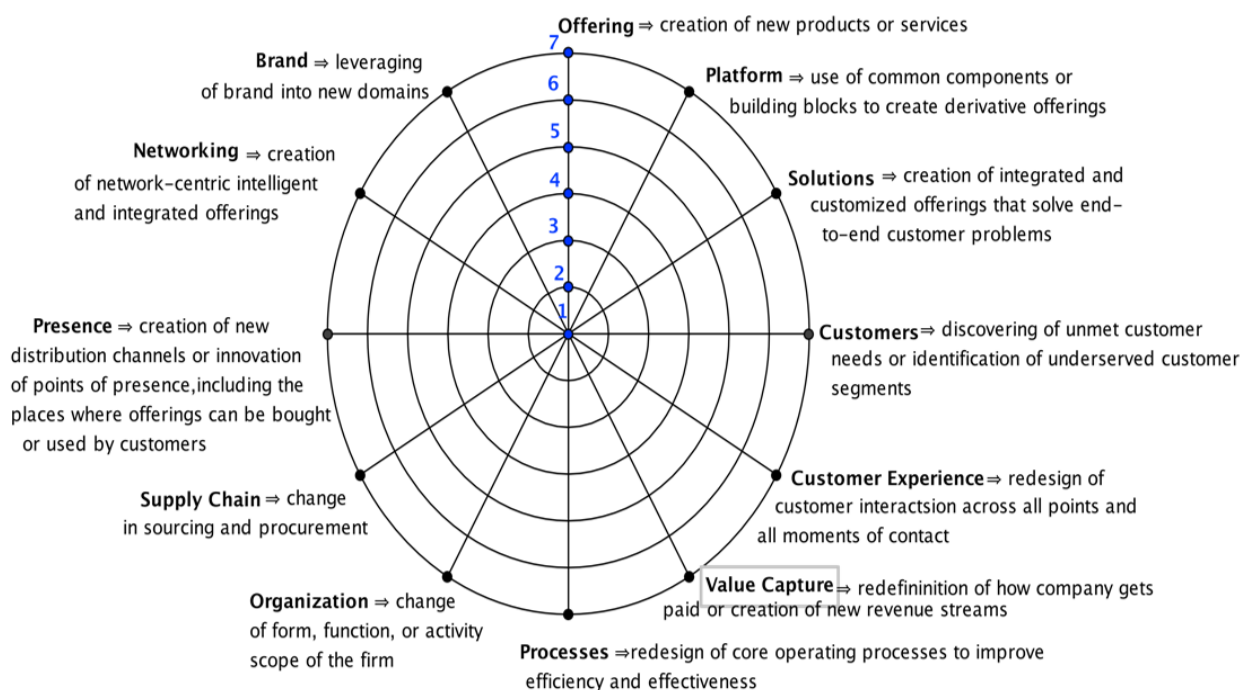
Innovation Matrix



Innovation Quadrants

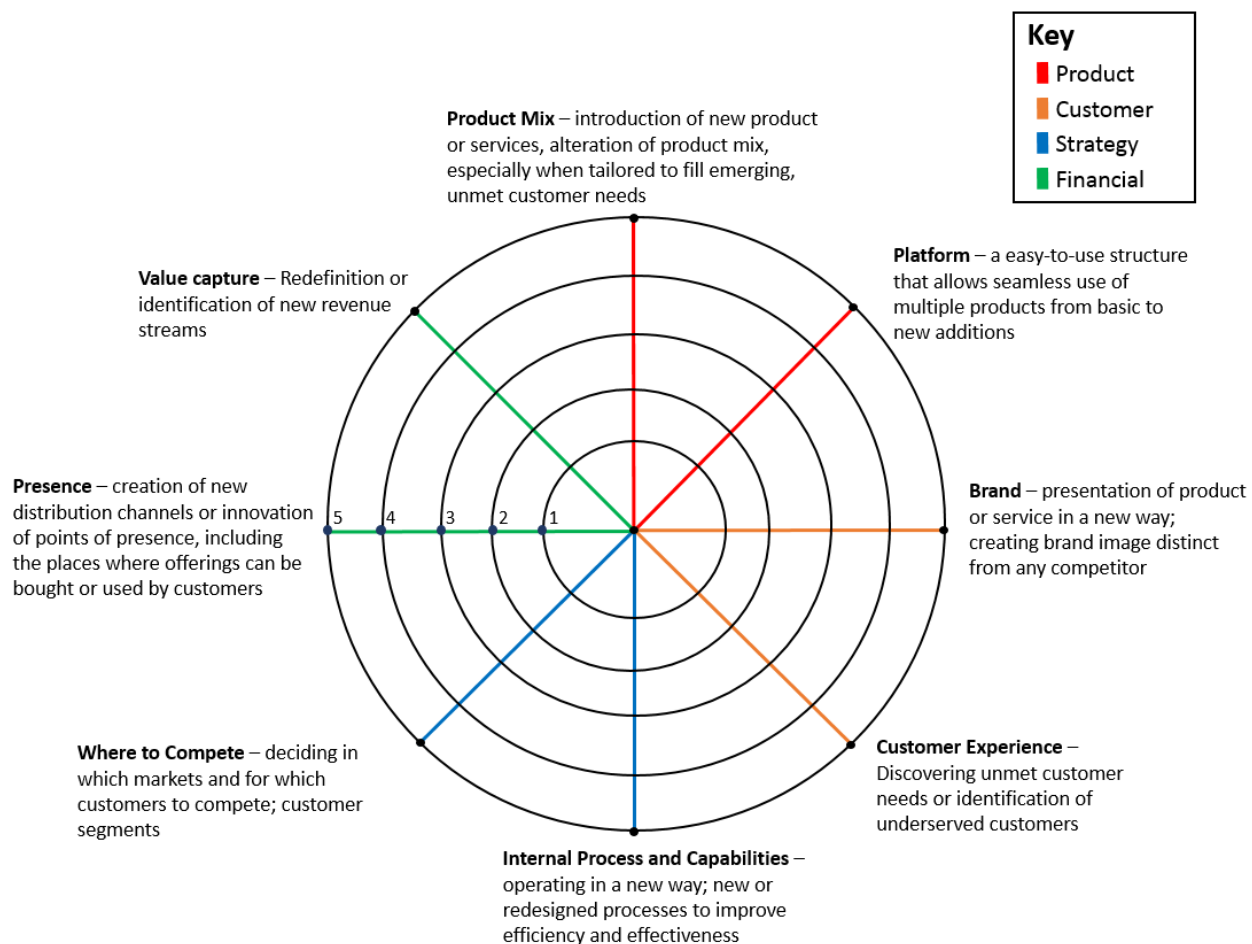


Appendix B



Ranking	Description
1	No attempts at innovation at all.
2	Maintenance of industry status quo, but no introduction of improvements or new techniques
3	Innovation attempts that unintentionally result in negative or undesirable impacts on product performance
4	Slight/moderate improvement to current innovation strategies resulting in increase in customer value, but incremental positive impact on overall product sales
5	Significant improvement to current innovation strategies resulting in meaningful increase of customer value and/or substantial positive impact on overall product sales
6	Significant improvement to and creative application of an innovation strategy that improves areas of product performance thought to already be maximized
7	Introduction of a novel (i.e. never-before-seen) innovation strategy that has substantial customer value and product sales

Appendix C



Ranking	Description
1	Maintenance of industry status quo, but <i>no introduction of improvements</i> or new techniques
2	Slight/moderate improvement to current innovation strategies resulting in increase in customer value, but <i>incremental positive impact</i> on overall product sales
3	Significant improvement to current innovation strategies resulting in <i>meaningful increase</i> of customer value and/or substantial <i>positive impact</i> on overall product sales
4	Significant improvement to and creative application of an innovation strategy that improves areas of product performance <i>thought to already be maximized</i>
5	Introduction of a <i>novel</i> (i.e. never-before-seen) innovation strategy that has substantial customer value and product sales

Appendix D

SAP

Respondent	SAP Innovation - Product Mix	SAP Innovation - Platform	SAP Innovation - Brand	SAP Innovation - Customer Experience	SAP Innovation - Internal Process and Capabilities	SAP Innovation - Where to Compete	SAP Innovation - Presence	SAP Innovation - Value Capture
1	3	2	2	1	2	1	2	1
2	2	2	3	3	2	2	2	2
3	4	2	3	2	3	3	4	3
4	3	2	3	1	2	1	2	1
5	2	2	2	3	3	2	2	2
6	3	1	1	2	4	3	3	2
7	3	3	4	3	1	4	5	4
Average	2.86	2.00	2.57	2.14	2.43	2.29	2.86	2.14
Median	3.00	2.00	3.00	2.00	2.00	2.00	2.00	2.00
 AVG-MEDIAN 	0.14	0.00	0.43	0.14	0.43	0.29	0.86	0.14
STDEV	0.69	0.58	0.98	0.90	0.98	1.11	1.21	1.07

Oracle

Respondent	Oracle Innovation - Product Mix	Oracle Innovation - Platform	Oracle Innovation - Brand	Oracle Innovation - Customer Experience	Oracle Innovation - Internal Process and Capabilities	Oracle Innovation - Where to Compete	Oracle Innovation - Presence	Oracle Innovation - Value Capture
1	3	4	4	4	5	4	4	5
2	3	4	3	3	5	2	2	2
3	4	5	3	4	5	4	3	5
4	4	5	2	2	4	2	1	3
5	3	4	4	5	4	4	4	4
6	4	4	2	3	4	4	4	5
7	5	3	4	5	4	2	5	3
Average	3.71	4.14	3.14	3.71	4.43	3.14	3.29	3.86
Median	4.00	4.00	3.00	4.00	4.00	4.00	4.00	4.00
 AVG-MEDIAN 	0.29	0.14	0.14	0.29	0.43	0.86	0.71	0.14
STDEV	0.76	0.69	0.90	1.11	0.53	1.07	1.38	1.21

GoPro

Respondent	GoPro Innovation - Product Mix	GoPro Innovation - Platform	GoPro Innovation - Brand	GoPro Innovation - Customer Experience	GoPro Innovation - Internal Process and Capabilities	GoPro Innovation - Where to Compete	GoPro Innovation - Presence	GoPro Innovation - Value Capture
1	5	3	4	5	4	4	4	5
2	5	2	4	2	2	4	4	2
3	4	4	5	3	3	4	5	4
4	4	2	4	3	1	5	3	3
5	5	3	5	5	4	5	5	5
6	4	5	5	5	5	3	4	4
7	5	4	5	5	5	5	5	2
Average	4.57	3.29	4.57	4.00	3.43	4.29	4.29	3.57
Median	5.00	3.00	5.00	5.00	4.00	4.00	4.00	4.00
 AVG-MEDIAN 	0.43	0.29	0.43	1.00	0.57	0.29	0.29	0.43
STDEV	0.53	1.11	0.53	1.29	1.51	0.76	0.76	1.27

Sony Action Camera

Respondent	Sony Action Camera Innovation - Product Mix	Sony Action Camera Innovation - Platform	Sony Action Camera Innovation - Brand	Sony Action Camera Innovation - Customer Experience	Sony Action Camera Innovation - Internal Process and Capabilities	Sony Action Camera Innovation - Where to Compete	Sony Action Camera Innovation - Presence	Sony Action Camera Innovation - Value Capture
1	3	1	2	2	2	1	1	2
2	3	3	1	2	1	1	1	1
3	5	3	3	3	3	3	2	3
4	3	2	2	3	1	1	1	2
5	3	3	2	2	3	3	2	2
6	4	3	3	2	2	4	4	2
7	3	4	4	4	2	3	1	1
Average	3.43	2.71	2.43	2.57	2.00	2.29	1.71	1.86
Median	3.00	3.00	2.00	2.00	2.00	3.00	1.00	2.00
 AVG-MEDIAN 	0.43	0.29	0.43	0.57	0.00	0.71	0.71	0.14
STDEV	0.79	0.95	0.98	0.79	0.82	1.25	1.11	0.69

Appendix E^{xxxvi}

The screenshot shows the Apple website's MacBook Pro specifications page. The browser address bar shows the URL: <https://www.apple.com/macbook-pro/specs/>. The navigation bar includes links for Store, Mac, iPhone, Watch, iPad, iPod, iTunes, and Support. The main heading is "MacBook Pro" with sub-links for Features, Design, Performance, OS X, Built-in Apps, Tech Specs, and a "Buy Now" button. The specific model is the "13-inch MacBook Pro".

Display

Display: 13.3-inch (diagonal) LED-backlit glossy widescreen display with support for millions of colors

Supported resolutions: 1280 by 800 (native), 1152 by 720, 1024 by 640, and 800 by 500 pixels at 16:10 aspect ratio; 1024 by 768, 800 by 600, and 640 by 480 pixels at 4:3 aspect ratio; 1024 by 768, 800 by 600, and 640 by 480 pixels at 4:3 aspect ratio stretched; 720 by 480 pixels at 3:2 aspect ratio; 720 by 480 pixels at 3:2 aspect ratio stretched

Price	\$1099
Processor	2.5GHz dual-core Intel Core i5 processor (Turbo Boost up to 3.1GHz) with 3MB L3 cache <small>Configurable to 2.9GHz dual-core Intel Core i7 (Turbo Boost up to 3.6GHz) with 4MB shared L3 cache.</small>
Memory	4GB of 1600MHz DDR3 memory <small>Configurable to 8GB.</small>
Storage ¹	500GB


The screenshot shows the HP website's shopping cart page. The browser address bar shows a complex URL: <https://store.hp.com/webapp/wcs/stores/servlet/AjaxOrderItemDisplayView?catalogId=10051&storeId=10151&krpto=7GuY4YJvZeolcglAzkDort8UOkkWeUzVjLx5Uitmq4TXMg8PzQzZ2FTsRgos7LQ6huWfjBt%3D&ddkey=http://AjaxOrderItem>. The navigation bar includes "For Home", "For Work", and "Support" with a search bar for "Search HP.com".

Store Home | Laptops | Tablets | Desktops | Printers | Ink, toner & paper | Accessories | More

Does your notebook bend over backwards for you? [Watch video](#) [See more details](#)

Your cart [Back to shopping](#) [Live Help](#) [Print](#)

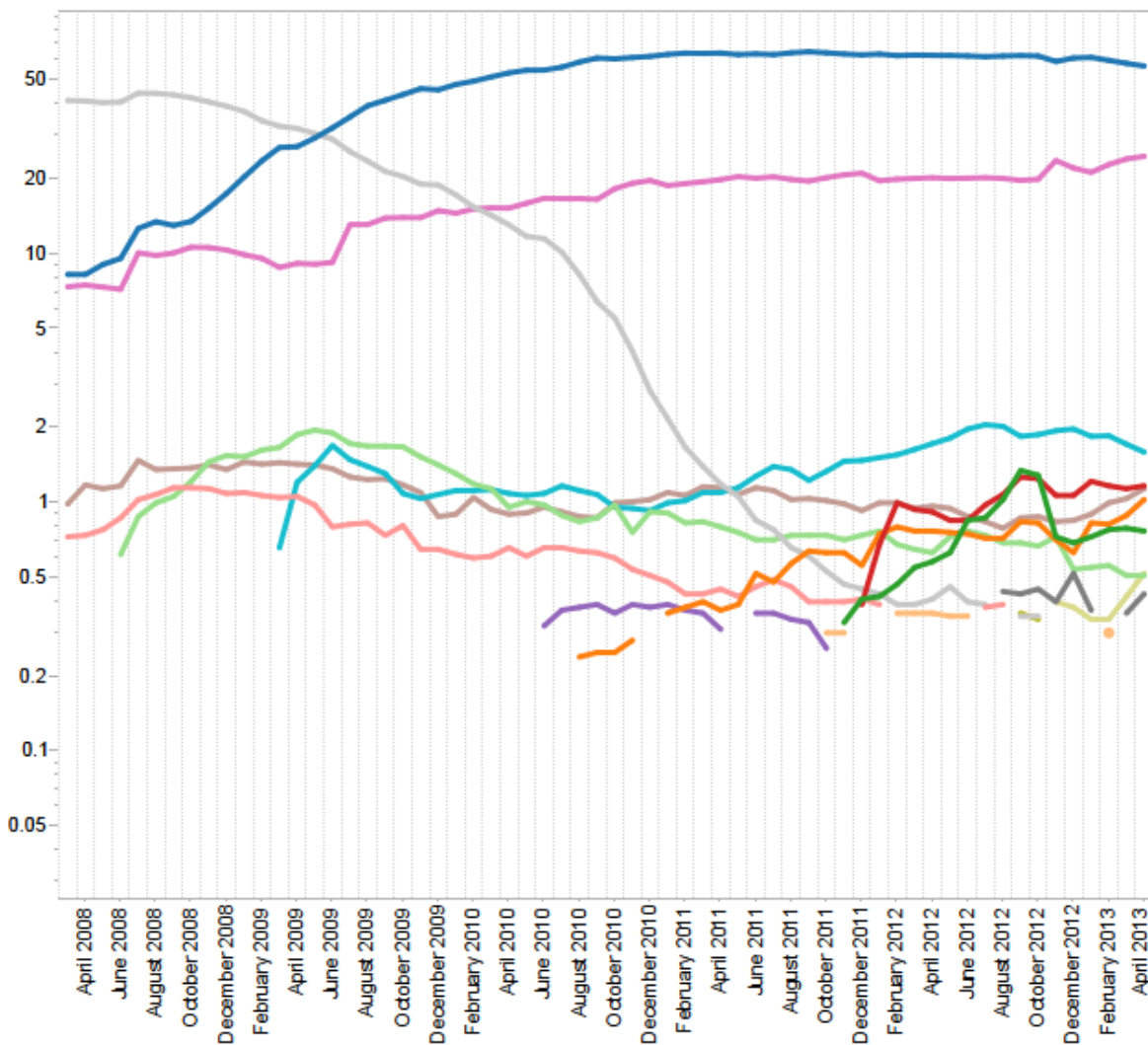
Your items

Product name	Estimated ship date	Qty.	Total
 HP Pavilion - 14t Laptop J2L31AV_1 Hide customized details 14.0-inch diagonal HD BrightView WLED-backlit Display (1366x768) 500GB 5400 rpm Hard Drive HP Laptop Natural Silver Standard Keyboard (black) Windows 8.1 S4 SuperMulti DVD burner No Additional Office Software HP TrueVision HD Webcam with Dual Digital Microphone (natural silver) 4-cell 41Whr Lithium-Ion Battery Security Software Trial 802.11b/g/n WLAN (1x1) 4th generation Intel(R) Core(TM) i7-4510U Dual Core Processor - Intel(R) HD Graphics 4400 HP Pavilion - 14t Laptop	Apr 21, 2015 Custom built for you	1	\$679.99 \$579.99 Remove

[Feedback?](#)

Top 10 Social Networking Sites 2008-2013

U.S. Market Share of Visits (Priit Kallas, www.dreamgrow.com)



Social Networking Sites

- Google+ (Green)
- Pinterest (Red)
- Instagram (Grey)
- Yelp (Orange)
- Facebook (Blue)
- LinkedIn (Light Blue)
- MeetMe/myYearb.. (Light Pink)
- MySpace (Grey)
- Mylife (Purple)
- Tagged (Light Green)
- Twitter (Cyan)
- Yahoo Answers (Brown)
- YouTube (Pink)
- Classmates (Olive Green)
- Tumblr (Light Green)

Created by Priit Kallas @
www.dreamgrow.com

Data from: <http://www.marketingcharts.com/categories/social-networks-and-forums/> Note: The Hitwise data featured is based on US market share of visits as defined by the IAB, which is the percentage of online traffic to the domain or category, from the Hitwise sample of 10 million US internet users. The market share of visits percentage does not include traffic for all sub-domains of certain websites that could be reported on separately.

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