CHAPTER 4

Markets and Product or Service Development

redBUS BUILT ON FIRST-HAND MARKET EXPERIENCE

During the holiday season of 2005, M. Phanindra Sama became frustrated with Bengaluru, India traffic as he waited long hours in traffic and could not make it to the ticket counter in time to buy a bus ticket to spend the holiday with his family. He realized at that moment that many people like him faced the same situation. That triggered the concept of redBus. Phani realized the inconvenience of not knowing the schedule and availability of buses, and the problem of not being able to buy a return ticket from another state until you reached your destination. Phani wanted to make the booking system and experience for customers similar to the online airline ticket reservation process.

With his college friends, he did market research and discussed the idea with several bus operators, consumers, and potential investors. They learned the gaps in the existing system and the value in streamlining the process. Phani explained that a travel agent in India might say that the last bus for Cochin was at 8:00 p.m. because that's the last bus of the operator he works with. But, that doesn't mean there aren't any buses available later from another operator. That was the common issue that many Indian passengers faced. Also, the return ticket could not be purchased until they reached their destination. redBus solved those problems by providing access to multiple bus operators' schedules and advanced booking options with seat availability in real-time inventory.

About 60,000 people ride buses in India every day, but the bus industry is very unorganized. There is no one easy and convenient platform for customers to buy tickets. redBus was the first company to recognize and implement a solution to make the bus reservation experience easier. It targets the middle and upper-class segments of society and is launching services like mobile payments and call centers in local languages. redBus faces huge competition from bus operators who may sometimes lower their cost and other online travel booking websites.

One of redBus' major tasks was to convince bus operators to allow online ticket sales as they were comfortable dealing with their traditional travel agents.

Phani submitted the idea with his two co-founders to TiE—The Indus Entrepreneurs—and received funding for their company. Initially, Phani started with only one office in Bengaluru and had 60 destinations on it schedule. As he received more angel funds, he opened four more offices in different cities.

Continued

Pahni's concern is to keep pace with the organization's growth. The company is growing at such a fast rate that it is getting difficult for the founder to have time for his friends and family. He believes in human relations and does not want to be considered rude but he is spending less time with his family and friends.

Source: *http://www.redbus.in*

4.1 INTRODUCTION

In the previous chapter we discuss the process of generating ideas for a product or service.

Just like what occurred in the case of redBus, a technology venture is often built around a new technological product or service that solves a significant, presently occurring, problem. In other cases, an idea, technology, or product may first be created and a market for that idea, technology, or product would then be thereafter developed. This is often the case with respect to particularly novel and disruptive technology.

In any event, once an idea is conceptualized, it needs to be screened—evaluated—through an appropriate systematic process. In previous chapters we discuss the "Lean Start" approach, where evaluation of the idea-technology-product is performed as an integral part of the build-measure-learn feedback loop involving presentation of successive minimally viable products to consumers. We will now discuss how screening can also be accomplished through, for example, a product planning and development process, an idea development process, and/or an opportunity assessment plan.

The screening process needs to consider the degree of newness that the new technological idea presents—the extent to which the idea involves new technology or a new marketplace—to the venture (including the entrepreneurs, the distribution system, and the consumer).

4.2 PRODUCT PLANNING AND DEVELOPMENT

A standard approach used by many technology entrepreneurs to evaluate new products and services is the product planning and development process. This process, indicated in Exhibit 4.1, consists of four stages, with an evaluation being done at the end of each stage—(1) idea stage, (2) concept stage, (3) product development stage, and (4) test marketing stage. To work effectively, evaluation criteria must be established and employed at each stage to either reject an innovation or allow it to proceed to the next stage. This is essentially the stage-gate product development process mentioned in Chapter 2 and shown in Exhibit 2.2.

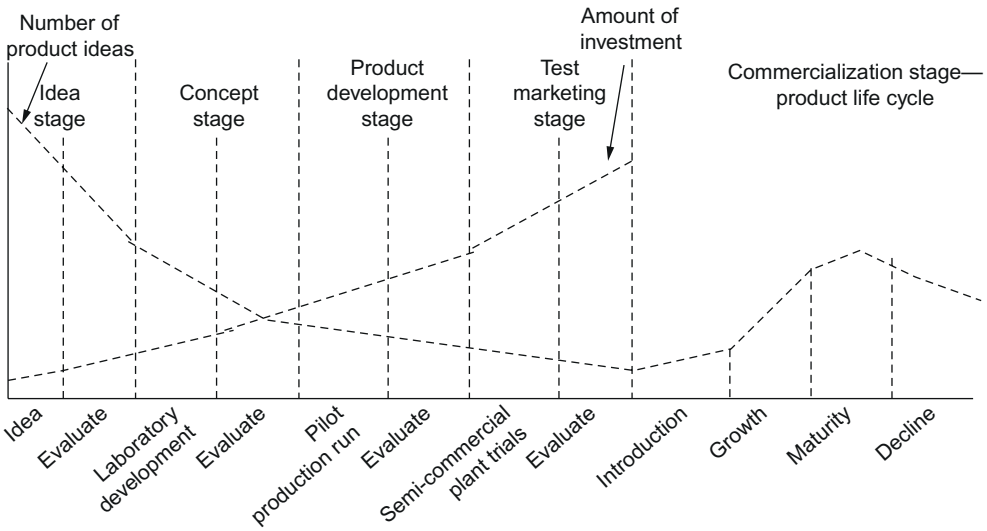

EXHIBIT 4.1

The product planning and development process. *Source: Hisrich, R.D., Peters, M.P., Shepherd, D., 2013. Entrepreneurship 9E. McGraw-Hill/Irwin, New York.*

The first stage, the idea stage,[1] is when the innovation is formulated and developed. There are many ways these innovative ideas occur. Sometimes the innovation comes from observing trends. There are several trends occurring today that will provide the opportunity for new innovations.[2] These include the organic food trend, the green trend, the health trend, the clean energy trend, and the social media trend. Just look at the increasing aging of the population around the world or the number of people tweeting, and you can see the trends and their increasing size. Other sources of innovative ideas include assessing the inventor's own research, evaluating existing products and services in the marketplace, listening to the consumers' complaints and suggestions, and observing new legal requirements to doing business in a country. Regardless of the innovation, it needs to be evaluated at this stage by applying the evaluation criteria established to determine if the product or service should move to the next stage.

After the innovation has passed the evaluation process in the idea stage, it moves to the *concept stage.*[3,4,5] In this stage, the modified innovation is tested to determine market reaction and the degree of acceptance. Although various methods can be employed, one of the easiest, cost-effective methods is to discuss the innovation with individuals in the defined market. This is called a "conversational interview." Various features, price, and promotional aspects of the innovation should be discussed in comparison to competitive products or

services available in the market—particularly the ones presently being used to fulfill the market need. Again, the information needs to be analyzed using the evaluation criteria established before passing on to the next stage—the product development stage.

In the *product development stage*,[6] a final version of the product, based in part on the evaluations obtained in the concept stage, is subjected to consumer input. Again, consumer feedback is obtained, and the refined innovation is evaluated against the evaluation criteria established.

Following a successful product development evaluation, the innovation moves into the final stage for final evaluation and launch, which starts the product life cycle (see Exhibit 4.1). In this, the *test marketing stage*,[7,8] a market test of the innovation is done to help ensure successful commercialization. Due to the costs of test markets and the nature of some products or services, this stage is often bypassed with the innovation going from the product development stage direct to commercialization.

MINI-CASE

IDEO Specializes in Design Thinking

IDEO is a global design firm. The award winning consulting firm assists in growth and innovation of organizations in both the public and private sectors. In addition to management consulting, IDEO works with firms to create brands and design and launch new products and services. They use a "design thinking" approach to solve problems and construct innovative strategies. IDEO is ranked one of the most innovative companies in the world by Boston Consulting Group.

4.3 THE IDEA DEVELOPMENT PROCESS

The idea development process results in developing successful, sustainable, innovative new ideas.[9] It is composed of six stages as shown in Exhibit 4.2.

4.3.1 Describe the Idea and Competition

As indicated in Exhibit 4.2, the first stage is to describe the idea; evaluate any products or services that are filling the same need; and determine the advantages, benefits, and features that provide these benefits of your idea. Although this is further discussed in the Section 4.5, it is important to describe the details of the idea, the problem it solves, and the need it fills as succinctly and completely as possible. It is helpful to determine the country system code that best describes the product. For example, NAICS (North American Industry Classification System) is the country code in the United States, and SIC (Standard Industrial Classification) is the country code in China and Korea. This code can help you identify competitive products or services and their prices. This will allow the

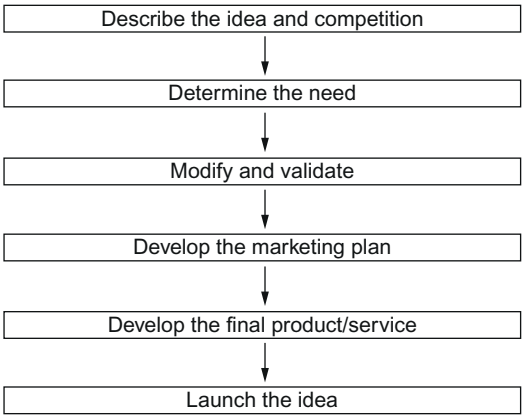

EXHIBIT 4.2
The idea development process.

determination of the unique features of your innovation (compared to the competitive products or services presently on the market filling the same need) and the features that deliver each of those benefits.

4.3.2 Determine the Need

The second stage is to determine the need for your innovation. This requires that the description developed in stage one is as in-depth as possible. At least three different groups of consumers or firms that might benefit from your innovation should be identified, and a customer profile for each group should be established. For business-to-consumer (B2C) groups, this profile should at least include age range, income range, and gender. Listing family size, education, occupation, and race are helpful, but not as critical. For business-to-business (B2B) groups, the profile should include industry, type of products or services, location, and size. A concept survey instrument should be developed that includes a brief description and, where applicable, both a diagram of your innovation and survey questions to elicit the desired feedback. The results of the concept survey of members of each of the three groups should be analyzed to indicate the important criteria that interest your potential customers.

4.3.3 Modify and Validate

Modify and validate, the third stage, involves developing a prototype template of your innovation and interviewing individuals concerning this prototype. The questions concerning the prototype should focus on features and benefits of your prototype, the important aspects of this particular product, and the buying process involved.

4.3.4 Develop a Marketing Plan

Stage four involves developing a detailed marketing plan. The marketing plan, which is further discussed in Chapter 7 when discussing the business plan focuses on pricing, distribution, and communication (promotion). The pricing data obtained in your competitive analysis (stage one) should be evaluated along with cost data to determine an initial price. A distribution plan laying down the geographic area where your innovation will be sold, how you will physically get it there, and distribution channel(s) should also be developed when applicable. Finally, all the possible marketing communication tools appropriate should be considered, including the importance of social media.

4.3.5 Develop the Final Product or Service

The development of the actual idea is the fifth stage. This involves the development of the features of the final idea, its marketing theme, naming, and packaging (if appropriate). The marketing theme needs to focus on key benefits or unique selling propositions that appeal to your target customers. The package, when appropriate, has many aspects, the most important of which is eye appeal when using a retail distribution.

4.3.6 Launch the Idea

The sixth and final stage is to launch the final product or service. This starts the product life cycle, which was previously discussed (see Exhibit 4.1).

MINI-CASE

Neostem Innovates from Its Research

Neostem is a firm in the emerging industry of cellular therapy. Cellular therapy is a new therapeutic technology that uses stem cells for tissue regeneration and disease prevention and treatment. Neostem develops proprietary cellular therapy products and provides contractual services to other firms in the regenerative medicine industry. By combining these revenue-generating services with their own research and development for new products, the firm is able generate cash flow and develop products in a more cost effective manner.

4.4 THE CONCEPT OF NEWNESS

One of the critical concepts affecting the successful launch and sustainability of an innovation is its *newness*—its novelty and disruptive nature. Even though, of course, newness or uniqueness is needed (and in fact is an essential part of an innovation), the degree of newness of the innovation affects its acceptability and the length of the adoption cycle for consumers, the individual investor and/or the organization, and the distribution system.

An example of a technology with a high degree of newness is regenerative medicine and, specifically, stem cell therapy. These therapies have the potential to empower a body to fight ailments and in some cases build entirely new parts such as new neurons or heart tissue. However, because of the newness of the technology, there is a resistance to its acceptance.

One area of medicine that holds much promise yet has all problems of newness is regenerative medicine and, specifically, stem cell therapy.[10] These therapies have the potential to empower a body to fight ailments and in some cases build entirely new parts, such as new neurons or heart tissue.

The science has been slowly advancing in bits and spurts in spite of religious outcries and political sanctions in some countries. Stem cell therapy, having been used successfully in animals and having successful preclinical trials in rodents, has resulted in healing such as having the paralyzed walk and making the impotent virile. Specifically, various forms of cancer, diabetes, heart disease, and Parkinson's disease have been eradicated in mice. When translated to humans, regenerative medicine and stem cell therapy will be a platform and breakthrough that rarely occurs in any field, and particularly medicine. Even though the effect will be substantial both economically and socially, such as what occurred with the Internet, transistors, and powered vehicles, all the problems with newness will need to be resolved. Particularly problematic are the long-time horizons, regulatory issues, money for the large research and development costs, public opinion, and political sensitivity.

MINI-CASE

Biogenomics Invents Biosimilars

Biogenomics is a young firm in the business of developing biopharmaceuticals and biotech products. Renowned scientists, business professionals, and a team of microbiologists, molecular biologists, and protein engineers comprise the firm. The firm has developed their own clones and cell lines to efficiently deliver cost-effective technologies and products. Biogenomics is particularly active in the manufacturing of biosimilars. Biosimilars are medical products that are created or derived from biological organisms using recombinant DNA techniques. This new technology holds the potential to provide effective medical products at a fraction of the cost of similar products on the market today.

4.4.1 Newness to the Consumer

Regardless of whether the innovation is for the consumer market (B2C) or the industrial market (B2B), if it is too far in advance of the present state of the market, problems can occur. Consider the newness of the innovation in terms of its disruption in the established consumption patterns or lifestyles of the target market. The least disruptive innovations—continuous innovations—have little impact or influence on the lifestyle of the purchaser and therefore usually do not take very long in the evaluation and adoption stage. The majority of innovations are in this category.

A single focus on a particular item in a restaurant chain is an example of a continuous innovation.[11] Even though it is important for the innovative item to have a broad enough appeal and versatility to be the main feature on the menu, the item itself can vary from eggs to soups to chicken to roast beef. The Another Broken Egg Café, an upmarket brunch restaurant, focuses on the preparation of eggs in various ways and provides about 150 items on the menu. Original Soup Man has 16 locations featuring between 6 and 12 varieties of soups daily, with staples such as lobster bisque and Mexican bean soup along with different sandwich selections. Kentucky Fried Chicken is an internationally oriented chain focusing on chicken, while Arby's focuses on roast beef sandwiches.

The concept needs to be broad enough and to have appeal as a main item, preferably for at least two meal times. This was not the case for PB Loco, a gourmet peanut butter and jelly chain that, in 2005, started franchising. Although initially heralded for its unique flavor combinations, the concept did not have appeal for breakfast and dinner and was considered an occasional novelty item, not a constant or regular eating experience.

On the other hand, it takes time for truly disruptive innovations to be accepted and adopted in the marketplace. Potential resistance to replacing an existing base of still operating old-technology products should be evaluated. Relatively recent examples of disruptive technology include digital video recorders and entertainment on demand, inexpensive video cameras and YouTube, and smartphones and wireless Internet access.

4.4.2 Newness to the Organization

The newness of the innovation to the sponsoring organization is also important to assess. The first time an individual invents, or the first time an innovation is in a new area of endeavor for a venture, there are more difficulties in developing and launching the innovation. This is reflected in the rule that most venture capitalists use: make sure someone on the management team, if not the entrepreneur, has experience in the industry of the new venture.

When an innovation has not only technological newness but also market newness for an organization, (referred to as *diversification*; see Exhibit 4.3), the highest level of problems (and even failures) is encountered by companies regardless of size. This is evidenced from the failure of the Gillette LCD watch, which was well outside the parameters of the typical products of the company.

4.4.3 Newness to the Distribution System

The final area of concern is newness to the distribution system.[12] Like consumers, individuals, and organizations, distribution systems have lifestyles—ways of doing things. An innovation outside its typical product category, size, shelf fit, or packaging will have a more difficult time gaining access. A new dog treat that was odorless to humans but loved by dogs could not access the retail stores

Market

Technology newness →

Product objectives	No technological change	Improved technology	New technology
No market change		Reformation Change in formula or physical product to optimize costs and quality	Replacement Replace existing product with new one based on improved technology
Strengthened market	Remerchandising Increase sales to existing customers	Improved product Improve product's utility to customers	Product life extension Add new similar products to line; serve more customers based on new technology
New market	New use Add new segments that can use present products	Market extension Add new segments modifying present products	Diversification Add new markets with new products developed from new technology

EXHIBIT 4.3

New product classification system.

in the United States until a new package size and design was developed, allowing the dog treat to be displayed on the shelves set aside for this type of product.

4.5 OPPORTUNITY ASSESSMENT PLAN

Probably one of the best methods to use to ascertain the marketability of an innovation is the *opportunity assessment plan*.[13] The opportunity assessment plan is usually shorter than a business plan (discussed in Chapter 7); focused on the opportunity and market rather than the business; and has no financial, marketing, or organizational plan. It is used to determine if the innovation has at least three to five unique features (unique selling propositions) compared to the competitive product or service presently on the market and filling the same need. The opportunity assessment plan also determines if the product or service has a viable market that is large enough, growing, and accessible enough to warrant pursuing the innovation.

The opportunity assessment plan has four parts—two major and two minor parts. Part 1, a major part, focuses on the product or service idea and the competition. It requires obtaining the country system code of the country, such as NAICS for the United States and SIC for China and Korea. After defining the innovation as thoroughly as possible, the various aspects of the product or service filling the need are identified, thus indicating the innovation's unique selling propositions.

The second part—another major part—focuses on the market for the innovation. The size of the market over the past three to five years should be obtained in order to identify any trends. The growth rate of the market should also be obtained. An innovation has a much stronger chance of success in a large, growing market than one that has leveled or is declining.

Parts 3 and 4—minor parts—focus on the skills, experience, and background of the team, as well as the steps needed to launch the innovation (see Exhibit 4.4).

Exhibit 4.4 Opportunity Assessment Plan.

An opportunity assessment plan is NOT a business plan. Compared to a business plan, it should:

- Be shorter
- Focus on the opportunity, not the venture
- Have no computer-based spreadsheet
- Be the basis to make the decision on whether to act on an opportunity or wait until another, better opportunity comes along

Part 1

A description of the product or service

- What is the market need for the product or service?
- What are the specific aspects of the product or service (include any copyright, patent or trademark information)?
- What competitive products are available filling this need?
- What are the competitive companies in this product market space and their strengths and weaknesses?
- What are the country counting codes for this product or service?
- What are the unique selling propositions of this product or service?

Part 2

An assessment of the opportunity:

- What market need does it fill?
- What is the size and past trends of this market?
- What is the future growth and characteristics of this market?
- What are total industry sales over the past 5 years?
- What is anticipated growth in this industry?
- What is the profile of your typical customers?

Part 3

Entrepreneurial self-assessment and the entrepreneurial team:

- Why does this opportunity interest you?
- What are your reasons for going into business?
- How does it fit into your background and experience?
- What experience is needed to successfully launch the product or service?

Part 4

What needs to be done to translate this opportunity into a viable venture?

- Establish each critical step in order.
- Determine the time and money needed at each step.
- Determine the total amount of money needed and its source.

Part 4 is particularly important because it gives an indication of the time and money needed for successfully developing and launching the innovation.

4.6 DISRUPTIVE TECHNOLOGY

The newness of a product or service can cause difficulties to the consumer, organization, and distribution system (if applicable). When the technology is *disruptive*, as in the case of regenerative medicine and stem cell therapies, these difficulties are heightened. In disruptive technologies, multiple players are involved and need to be dealt with. Sometimes this requires the assembly of different downstream resources. One of the best cases is Thomas Edison. Not only did he invent the, but also (through Edison Electric Light & Co.) he developed the infrastructure needed to employ the light bulb, such as coal-fired generators, transmission lines, and the wiring system for streets and buildings.

Many disruptive technologies are not as clearly groundbreaking as the light bulb or the Internet. In some cases, which will be discussed in the next section, innovations making existing products or services better, cheaper, or more acceptable to the market can be disruptive. Amazon did not create online shopping, but it made online shopping easier and cheaper by bringing millions of products to one storefront. Similarly, Steve Jobs figured out how to make the existing expensive, custom-made computer mouse at 25% of the existing cost. Frends, a new company based in Encinitas, California, introduced its premium designer-style headphones for women in Apple and Best Buy stores in October 2012. They had sales of $1.6 million in 2012, which are expected to radically increase in 2013. Being wrapped in soft leather and accented with hand-polished antiqued metals, the headphones are less likely to cause hair snagging. The company combined fashion and electronics in a new disruptive way.

Frends,[14] Apple, and Microsoft were able to successfully bridge a gap which resulted in a sustainable technology (see Exhibit 4.5). This, of course, rarely occurs and particularly not as quickly as it occurred in these cases. Usually, the market does not embrace the new disruptive technology so quickly or even ever.

4.7 THE MARKET

Regardless of the nature of the technological idea and its degree of disruptiveness, it is essential for every idea to have a *market*. From an economic viewpoint, a market is a mechanism that bridges the gap between supply and demand and consists of a group that may buy the product. There are three types of markets for a technological product or service: *consumer markets*, *industrial markets*, and *government markets*. The consumer market, also known as the B2C market,

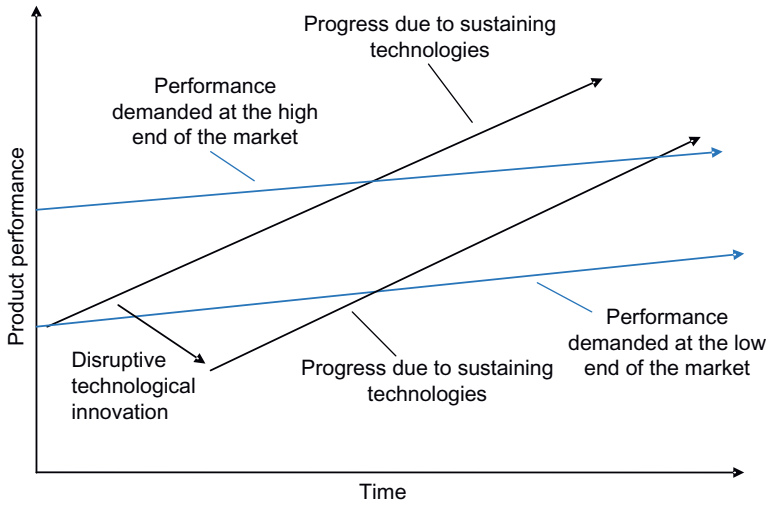

EXHIBIT 4.5

The impact of sustaining disruptive change.

consists of private individuals who purchase products or services for personal satisfaction and use. The industrial market, also known as the B2B market, consists of a variety of different entities involved in the purchase or resale of the product or service not for final consumption or use like the consumer market. The industrial market purchases for further process, use in operations, and resale and can be classified as retailers, wholesalers, institutional users, and manufacturers. The *government market* (B2G) is composed of purchasers in four broad categories: municipalities, county governments, state governments, and the federal government.

To meet the definition of a good market in any of these three markets, the following criteria must be present: measurability, accessibility, profitability, and stability. Measurability determines the degree, size, and other aspects of the market that can be determined. Some markets for technical products or services are more difficult to determine. Julie Uhrman had no idea how big the market was for her idea for her new game console, Ouya, with an open-source platform allowing developers to create games and incorporate accessories priced at $100. Unable to raise the needed capital from any other source, she was able to raise $2.4 million through Kickstarter, a crowd funding website that increased through capital to $8 million. She also ultimately received a $15 million VC funding round led by Kleiner Perkins Caulfield & Byers.

MINI-CASE

Kickstarter Helps Fund Disruptive Technologies

Kickstarter is a paradigm shifting way to fund projects. The website provides a platform where regular people can help fund projects in anything from films and music to design and technology. Since its inception in April 2009, almost $950 million has been pledged by over 5.5 million people, helping fund more than 55,000 projects. Kickstarter does not involve themselves in the projects, only the funding. Kickstarter is open to anyone with a project that fits their guidelines. The project creators make their own goals and deadlines for receiving funds. If the funding goal is met by the set deadline, then the full amount will be given to fund the project.

Accessibility, the second criteria, measures the capability of the company to effectively market and deliver the technical product or service to this defined market. Although the market identified may be of sufficient size, the venture may not be able to reach it profitably. Arnolite Pallet Corporation identified some potential large users for its new plastic-molded modular pallet, but could not effectively and profitably sell it due to high transportation costs.

The profitability criteria defines whether the market identified is large enough and easy enough to be worthwhile.[15] The size of the market identified needs to be large enough to justify the effort and expense of reaching and serving it. Many drugs that can cure diseases cure such a small number of patients that they are not worth marketing by large pharmaceutical companies. Some of these with smaller, but sufficient, size come to market as orphan drugs which are successfully marketed by smaller technology companies with a lower overhead burden.

The final criteria, the political stability of the market now and in the future, needs to be favorable. Many technology products that could be successful in developing economies may not be profitably marketed due to instability of the market or country.[16] The risk of building a plant which may soon be nationalized by a country precludes some products from being produced and marketed there.

4.7.1 Market Segmentation

Market segmentation, or further defining the market by some criteria, is important to focusing the efforts of the technology entrepreneur. Although a technology entrepreneur may think his or her technical product or service is ideal for every market identified, rarely if ever is that the case. A market segment, a smaller subset of the market, should be identified, and the appropriate marketing strategy (the right combination of product, price, distribution, and promotion, discussed in Chapter 10), can be developed and created. The segmentation techniques available by type of market are indicated in Exhibit 4.6

Exhibit 4.6 Market Segmentation by Type of Market

Segmentation Criteria	Basis for Type of Market		
	Consumer (Business to Consumer)	**Industrial (Business to Business)**	**Government (Business to Government)**
Demographic	Age, family size, education level, family life cycle, income, nationality, occupation, race, religion, residence, sex, and social class	Number of employees, size of sales, size of profit, and type of product lines	Type of agency, size of budget, and amount of autonomy
Geographic	Region of country, city size, market density, and climate	Region of country	Federal, state, and local
Psychological	Personality traits, motives, and lifestyle	Degree of industrial leadership	Degree of forward thinking
Benefits	Durability, dependability, economy, esteem enhancement, status from ownership, and handiness	Dependability, reliability of seller and support service, efficiency in operation or use, enhancement of firm's earning, and durability	Dependability, reliability of seller and support services
Volume of use	Heavy, medium, and light	Heavy, medium, and light	Heavy, medium, and light
Controllable marketing elements	Sales promotion, price, advertising, guarantee, warranty, retail store purchased service, product attributes, and reputation of seller	Price, service, warranty, and reputation of seller	Price, reputation of seller

for all three markets—consumer (B2C), industrial (B2B), and government (B2G). The basic segmentation criteria—demographic, geographic, psychological, benefits, volume of use, and controllable marketing elements—can be effectively used by the technical entrepreneur to define a target market for focus in the launch of the new technical product or service.

Demographic segmentation is one of the most widely used segmentation techniques for identifying potential individuals who are most likely to purchase and use the new technical product or service. This is in part because most published data on each of these markets is collected on some demographic basis. The most widely used segmentation criteria are age, gender, and income in the consumer (B2C) market, type of product, sales, and size of profit in the industrial (B2B) market, and size of budget and/or number of employees in the government (B2G) market.

Most all demographic data regardless of market is collected on a geographic basis—the next segmentation criteria. These geographic clusters look at the demographic information based on country, region, state, province, or municipality (Standard Metropolitan Statistical Area—SMSA). This allows for a focused launch because only a certain geographic area will be approached in the first year. This selected area is the basis for the rollout of the technical

product or service in future years. The Internet allows for successfully marketing to multiple disparate geographic markets at the same time. Even though Frends targeted women in the New York SMSA to launch the company's new headphone, sales were achieved outside this targeted geographic area with online sales through the company's website.

Psychological segmentation is not frequently used by technical entrepreneurs, particularly in the heterogeneous consumer market due to the absence of published data and the high cost of collecting new original data on such things as personality traits motives or lifestyles of the market.[17] If original data can be collected, it is beneficial for the technical entrepreneur to particularly evaluate the technical product idea with those already on the market through psychological segmentation. Positioning the new idea in terms of market perception of it and existing leads provides a significant advantage to the technical entrepreneur.

Benefit segmentation, the fourth segmentation criteria, can be one of the most effective segmentations for the technical entrepreneur. This is particularly true when very specific benefit segmentation criteria can be identified in the consumer (B2C), industrial (B2B), and government (B2G) markets. Although only very general benefit criteria are indicated in Exhibit 4.6, very technical product or service criteria need to be identified for this technique to achieve the best results. An extremely successful new product or service launch can be achieved when the technical product or service attributes or its unique selling propositions, previously discussed in this chapter, match the specific wants or needs, or both, in the market. This occurred for a unique innovative delivered food concept—Gourmet to Go—when launched. It delivers entire nutritional meals for a family, accompanied by a foolproof recipe (cooking for dummies) that allows the dinner to be prepared in no more than 20 min. The benefits desired by the upper income market segment targeted are ease of cooking, desire to be involved in the preparation, time savings, and nutrition—a great match!

The volume of use segmentation criteria clarifies the market based on size. Because this occurs based on some demographic dimension anyway, it is not a widely used segmentation criteria.

This is similar for controllable marketing elements criteria; the specific aspects of product price, distribution, and promotion are selected in the marketing plan used to launch the new technical product or service.

4.7.2 Target Market and Positioning

The smaller subset of the market—selected through market segmentation—is the target market, all or part of which is the focus of the launch of the new technical product or service. Specific market positioning concepts for this target market need to be identified and the appropriate marketing mix needs to be developed for the launch, as discussed in Chapters 9 and 10.

4.8 CHAPTER SUMMARY

This chapter focused on developing the technical product or service and its market. Three techniques (the product planning and development process, the idea development process, and the opportunity assessment plan) for evaluating the new technological idea were discussed. Regardless of the technique(s) employed, the degree of newness to the consumer, organization, and distribution system needs to be taken into account. The chapter concluded with a discussion of the three types of markets—consumer (B2C), industrial (B2B), and government (B2G); market segmentation and its techniques (demographic, geographic, psychological, benefit, volume of use, and controllable marketing variables); and the target market.

KEYTERMS

Concept stage The stage where the modified innovation is tested to determine market reaction and the degree of acceptance.

Consumer market The purchase of products or services for personal satisfaction/use.

Demographic segmentation Characteristics of the target market.

Disruptive innovation A novel innovation that disrupts an existing market and ultimately displaces an existing technology.

Diversification When a product is not only new technology, but also in a new market for a venture.

Government market Consists of purchasers in four broad categories: municipalities, county governments, state governments, and the federal government.

Idea stage When the innovation is formulated and developed.

Industrial market Consists of a variety of different entities involved in the purchase or resale of the product or service not for final consumption or use.

Market A mechanism that bridges the gap between supply and demand and consists of a group that may buy the product.

Market segmentation Defining the market by certain criteria.

Newness A product or service that is unique or new to the market.

Opportunity assessment plan Is shorter than a business plan, is focused on the opportunity and market and not on a business, and has no financial plan, marketing plan, or organizational plan.

Product development stage The stage when a final version of the product, based in part on the evaluations obtained in the concept stage, is subjected to consumer input.

Test marketing stage The stage when a market test of the innovation is done to help ensure successful commercialization.

ADDITIONAL READINGS

Beard, C., 2012. Insights into US tech success. NZ Business 26(6), 68, The article gives advice on how technology startup companies should approach the U.S. market. Even though the article focuses on New Zealand startups, it is for all technology startups that want to enter the U.S. technology market.

Blank, S., Dorf, B., 2012. The Startup Owner's Manual: The Step-by-Step Guide for Building a Great Company Volume 1. K&S Ranch Press, Pescadero, California, The book is a guide to the customer development process for startups. Among other topics, it describes how to gain, maintain, and enlarge a customer base and how to fit your product to the market.

Engelen, A., et al. 2011. Market Orientation and Inter Firm Knowledge in Inter Organizational Relationships: Market-Driving Behavior: Performance Consequences in High-Tech Start-Ups. In: AMA Summer Educators' Conference Proceedings, August 2011, 22. p. 520, The article describes orienting a business to influence and shape the market, rather than orienting a business around a set of existing consumer needs. The study details how market-driving leads to greater business performance.

WEB RESOURCES

http://www.entrepreneur.com/businessideas/interest/40.html: This site is a business idea center at entrepreneur.com.

http://ideamensch.com/50-tech-entrepreneurs/: This site contains examples of tech entrepreneurs.

https://plus.google.com/102279327257897906655/posts: This is a free online learning site.

http://www.ugcs.caltech.edu/ kel/FEI/: This site contains free entrepreneurial ideas.

ENDNOTES

1 Grégoire, D.A. and D.A. Shepherd. 2012. "Technology-Market Combinations and the Identification of Entrepreneurial Opportunities: An Investigation of the Opportunity-Individual Nexus." *Academy Of Management Journal*, 55(4): 753–785. DOI:10.5465/amj.2011.0126.

2 Bluestein, A. 2012. "How and Where to Make Money in 2013 (and beyond)." *Inc*, 34(10): 58–65.

3 Wouters, M. 2010. "Customer Value Propositions in the Context of Technology Commercialization." *International Journal of Innovation Management*, 14(6): 1099–1127.

4 Lorinc, J. 2013. "The Inventor's Playground." *Profit*, 32(4): 9–10.

5 Katzy, B.R., G.H. Baltes, and J. Gard. 2012. "Concurrent Process Coordination of New Product Development by Living Labs - An Exploratory Case Study. *International Journal of Product Development*, 17(1/2): 23–42.

6 Song, L.Z., M. Song, and M.E. Parry. 2010. "Perspective: Economic Conditions, Entrepreneurship, First-Product Development, and New Venture Success." *Journal of Product Innovation Management*, 27(1): 130–135. DOI:10.1111/j.1540-5885.2009.00704.x.

7 Srivastava, P., J. Yoo, G.L. Frankwick, and K.E. Voss. 2013. "Evaluating the Relationship of Firm Strategic Orientations and New Product Development Program Performance." *Journal of Marketing Theory & Practice*, 21(4): 429–440. DOI:10.2753/MTP1069-6679210406.

8 Hong, J., T. Song, and S. Yoo. 2013. "Paths to Success: How Do Market Orientation and Entrepreneurship Orientation Produce New Product Success?" *Journal of Product Innovation Management*, 30(1): 44–55. DOI:10.1111/j.1540-5885.2012.00985.x.

9 Willoughby, M., J. Talon-Renuncio, J. Millet-Roig, and C. Ayats-Salt. 2013. "University Services for Fostering Creativity in High-technology Firms." *Service Industries Journal*, 33(11): 1103–1116. DOI:10.1080/02642069.2011.623777.

10 O'Brien, J.M. 2012. "The Great Stem Cell Dilemma." *Fortune*, 166(6): 186–195.

11 Food. 2011. *Hospitality Design*, 33(1): 74–75.

12 Neel, K.C. 2010. "Discovery's Dangar Finds Challenge in Distribution Game." *Multichannel News*, 31(4): 4.

13 Tibergien, M. 2013. "Vision, Mission, Goals, Objectives." *Investment Advisor*, 33(9): 59–60.

14 Wang, J. 2013. "The Disrupters." *Entrepreneur*, 41(7): 50–53.

15 Arora, A. and A. Nandkumar. 2012. "Insecure Advantage? Markets for Technology and the Value of Resources for Entrepreneurial Ventures." *Strategic Management Journal*, 33(3): 231–251. DOI:10.1002/smj.953.

16 Jain, V. 2011. "Indian Entrepreneurship and the Challenges to India's Growth." *Ivey Business Journal*, 75(5): 9–11.

17 Gabay, G., L. Flores, H. Moskowitz, and A. Maier. 2010. "Creating Technology-based Merchandising Ideas for Hair Coloring through Weak Signals, Concept Optimization and Mind-Set Segmentation." *Journal of Consumer Marketing*, 27(3): 211–223. DOI:10.1108/07363761011038284.