ROADMAP for PATTERNS OF ENTREPRENEURSHIP

Getting Started as an Entrepreneur

- An Entrepreneurial Perspective
- Commonly Shared Entrepreneurial Characteristics
- The Need to Control
- Entrepreneurship Roller Coaster
- So Why Become an Entrepreneur?
- The Spiderweb Model
- Finding Early Mentors
- Managing Stress
- The Five-stage Entrepreneurial Process
- The Growth of Entrepreneurial Companies
- Why Innovation Is Important
- Definition and Types of Innovation
- Frameworks for Learning Innovation Skills
- Finding and Assessing Ideas
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- Opportunity: Five Phases to Success
- Formulating a Successful Marketing Plan
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- The Value of a Business Plan
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- Sole Proprietorship
- C-corporation
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- Business Start-up Checklist
CHAPTER 3

THE ART OF

INNOVATION—DEVELOPING IDEAS

AND BUSINESS OPPORTUNITIES

“I think all great innovations are built on rejections.”

LOUIS-FERDINAND CÉLINE

OBJECTIVES

■ Understand the changing role of innovation.
■ Create frameworks for innovating.
■ Source and filter ideas and build them into opportunities.
■ Analyze opportunities using a five-step process.
■ Use a framework to evaluate a business opportunity.

CHAPTER OUTLINE

Introduction
Profile: Becky Minard and Paal Gisholt—Finding a Point of Pain
Why Innovation Is Important
Definition and Types of Innovation
Frameworks for Learning Innovation Skills
Finding and Assessing Ideas
Converting an Idea into an Opportunity

Opportunity: Five Phases to Success
Summary
Study Questions
Exercises
Interactive Learning on the Web
Appendix: The Bayh-Dole Act
Additional Resources

INTRODUCTION

Entrepreneurs are often considered highly innovative, always coming up with unique ideas for new businesses. In fact, entrepreneurs do not have to be innovative to be successful, but they do have to understand and manage the innovation process within their companies. They may use innovations found elsewhere or use those continually...
developed within their own companies, even when they themselves are not the source of innovation. Therefore, it is important that an entrepreneur has a grasp of the nature of innovation and how it is generated and managed.

Innovation can have many facets. For example, Michael Dell is rightly considered an extremely successful entrepreneur. Yet for many years, Dell has built products similar to its major competitors, Hewlett-Packard, Compaq, Lenovo, and so on. What is unique about Dell is the way that these products are sold, manufactured, and delivered to its customers. The business methods employed religiously by Dell are what make the company successful, not innovation of new products. (Chapter 11 has a more detailed discussion of Michael Dell.) In contrast, Steve Jobs of Apple fame is the driving innovator behind Apple’s ability to continually come out with unique-looking and uniquely functioning products. Therefore, we cannot understand entrepreneurship without exploring the entrepreneur’s relationship with innovative processes. It could be claimed, of course, that Michael Dell was innovative when he conceived the direct sale, made-to-order business model that has driven the success of his company. His competitors, after all, failed to see this model; having been caught unawares and locked into their old ways of doing things, they were unable to compete directly for a long while.

This chapter is about innovation in entrepreneurship. We begin with explaining the changing role of innovation in business, including definitions and types of innovation. We then show how you can learn to be innovative, how to seek out and screen ideas, and how to build them into creative new business opportunities.

PROFILE: BECKY MINARD AND PAAL GISHOLT—FINDING A POINT OF PAIN

Becky Minard and Paal Gisholt met when they were students in the Harvard MBA program. In 1999 they formed SmartPak on Cape Cod. According to Becky, a horse lover, the company was born of necessity. “Feeding supplements was a disaster at our boarding barn. I have a horse that needs daily vitamin E, joint supplement, and a dose of daily wormer. I assumed he was generally getting his supplements. Then I noticed that the vitamin E lasted months longer than it should have. It’s a white powder, so I checked his feed tub to see if it was in there. No trace of white powder. He did have a hefty dose of his daily wormer in there; maybe that would explain why I was going through it twice as fast as I should. Now it’s hard to blame the barn staff since they have to feed thirty-five horses with an average of three supplements per horse. That works out to 105 supplements to be opened, measured, fed, and ressealed. What a headache for them.” Becky had just recognized the “point of pain” for both the horse owners and their minders.

Becky continued: “We wondered if others had the same problem, so Paal and I went out and talked to boarders, owners, and managers at other barns. All had many of the same problems. In a few cases, we found some moldy supplements or contaminated supplements (mouse droppings). We found many outdated supplements. The most consistent thing we found was that most of the feed rooms we visited had containers that had not been resealed after each use. Since then we have learned from manufacturers that oxygen, moisture, and sunlight are devastating to the potency of many supplements. Money down the drain.”

These “points of pain” were solved by creating SmartPak™. A horse owner can go to a Web site and order custom-packaged daily supplies for individual horses.
All the minder has to do is tear off the seal—similar to those used for six-packs of yogurt—and empty the different food supplements into the horse’s feed. Each patented pack comes clearly labeled with the horse’s name and list of additives. The owner can now rest assured that his horse is well taken care of and the barn helper’s tasks are greatly simplified. SmartPak has now branched out into other pet supplies, allowing the company to grow to more than $40 million in sales.

The Changing World around Us

We often hear such broad statements as “competition is becoming brutal,” “markets are global,” “the Internet has changed the rules of business,” and so on. Let’s look at some of the facts and see how they influence an entrepreneur.2

The Growth of the Internet and Access to Knowledge and Ideas

Relatively recently, computers (and other digital devices) have become connected in networks, and companies such as Google have developed automated search techniques. This is resulting in a cataclysmic shift from an emphasis on local products and productivity to global knowledge sharing. We are only just beginning to understand the implications and effects of this connectivity. Although it is notoriously difficult to accurately size the Internet, any estimate provides staggering statistics. According to research from the Minuwatts Marketing Group3 in March 2008, more than 1.4 billion people worldwide had Internet access, which equates to a 21 percent penetration rate, North America having the highest at 73 percent, and Africa, the lowest at 5.3 percent. These numbers represent an average growth of 290 percent over the period between 2000 and 2008. At the same time, the information available to these Internet users is exploding, with more than 7 million new Web pages being added daily to the more than 29 billion that, according to an estimate by Boutell.com4 in February 2007, already exist on 109 million independent Web sites, up from 70 million in 2005. Google and Yahoo! claim that they regularly scan and index billions of Web pages. Now it is just as easy to find an expert at a university in Melbourne, Australia, as it is to find one in Melbourne, Florida, or a corporate partner in Cambridge, Massachusetts, as it is in Cambridge, England.

To remain competitive today, it is no longer sufficient to rely on local know-how; indeed it is vital to access the best ideas, technologies, research resources, and experts, wherever they are. For example, the networked world can support a biotech company with headquarters in Seattle; basic research undertaken at universities in San Diego, Edinburgh, and Auckland; scale-up of production in Singapore; and clinical trials in the newest members of the European Union. Its advisory board will undoubtedly be international in makeup. A management challenge—yes—but by assembling appropriate resources to compete quickly and efficiently, more certain success is in the offing. These knowledge-centered structures are variously referred to as “virtual knowledge networks” or “virtual clusters.” They are fluid and may form and dissolve in short shrift when they are no longer valuable, whereas
geographical-based clusters may take years to evolve with the danger of being outmoded and redundant. We can envision a world not long in the future where nearly everyone will be able to search the world’s knowledge, locate experts on demand, and do this more or less for free. For an entrepreneur, this means access to more ideas, more stimulation, and more expertise when conceiving and growing a business opportunity. The Internet should be one of the entrepreneur’s major tools.

The Internet and Customer Expectations

The Internet is also changing the way customers view suppliers. It enables us to find and compare products, even sometimes having the product made to order instantly; to choose when and how to have it delivered; and to decide how to pay for or finance the purchase. This is true in both business-to-business (B2B) and business-to-consumer (B2C) sales. We are being subtly educated to expect customized service and instant gratification as part of our buying experience. Products are being surrounded by service. We want our problems to be solved, not a standard product to buy. This shift, of course, is at the center of entrepreneurial companies such as Dell, eBay, Amazon, and Google. The lesson is this: think service, not product; personalized solution, not third-party handoff. As you will see in the many cases in this book, these ideas can be applied to the most mundane product areas.

Example: Greif Packaging (www.Greif.com)

A supplier of metal drums for shipping bulk chemicals, many of which are toxic, realized that it had no real competitive position and that profit margins were thin. An internal entrepreneur decided to listen carefully to customers. He saw there were unmet needs and new sources of value to be accessed. Customers did not want to buy and own steel drums; they just wanted to move toxic chemicals efficiently and safely. They did not want to deal with all of the details, such as finding a licensed trucker, filling in the government forms; and washing, cleaning, and refurbishing the drums. To meet its customers’ actual needs, Greif converted its business model into a “trip leasing” company for specialty chemicals—the FedEx® of problem chemicals. Now it solves the total trip problem for its customers—drum supply, cleaning, refurbishing, regulatory compliance, transportation, and tracking. Greif built a new Web application and became an “Internet company.” Although it subcontracts most support functions, it captures the value in the supply chain and builds long-lasting client relationships. The business model also builds barriers against competitors.

Barriers to Trade

Historical trade barriers for goods and services are rapidly being dismantled, opening up all markets to global suppliers. According to the World Trade Organization, the number of international agreements signed annually to open up trade has ballooned from less than ten in 1950 to close to two hundred in 2000 and more than 250 in 2007. Any new product can be copied within days, then manufactured and shipped into most markets within a few weeks. The entrepreneur’s defenses against this happening are having a sound intellectual property strategy (see below and Chapter 10) and an innovative business model that supplies more than just a product (see Chapter 11).
Access to Capital
Simultaneously with the elimination of trade barriers for goods and services, restrictions on currency trading have also been almost entirely removed. Now daily cross-border trading in currency dwarfs the value of imports and exports. Although most currency trading is on a short-term basis, the lack of restrictions in the majority of economies to inward or outward foreign investment means that funds may now seek opportunities on a global basis and firms must compete internationally for finance. Fully 20 percent of mutual funds managed in the United States and a mainstay of U.S. personally-managed pensions are now invested overseas. Geographical location no longer provides any significant advantage for access to major sources of capital. Venture capital (VC) remains one source of funding that prefers proximity, but overall, VC funds are a very small part of total growth capital. Even venture capital is trending international. As reported recently, leading “Sandhill Road” VC firms are looking to target a significant part of new funds for investment in early-stage companies in Asia, hoping to bring their startup management skills into markets where U.S.-style venture capital is little known. For the entrepreneur, this means that the competition for growth capital is becoming tougher, making the “bootstrapping” skills described in Chapter 7 important.

Technological Obsolescence
A product life cycle is the time that a product is able to command a high profit margin in the market before it becomes obsolete or develops intense competition. They are continually declining. It is much more likely to be true for fast-moving consumer products such as food and detergents and for products in which the underpinning technology is driven by Moore’s law or is impacted by major technological shifts. According to an internal study conducted in the mid-1990s by Hewlett-Packard (HP), the average period that HP’s products remained major contributors to sales had fallen from four years in 1980 to well less than two years in 1995. More recent studies measure product development times that have declined from an average of 225 days three years ago to less than 200 days now. In the portable communication business sector populated by such companies as Motorola, Nokia, and Research in Motion, the maker of the BlackBerry device, market life cycles are now shorter than product development cycles; that is, it takes longer to develop a product than the time it will be successful in the market. This is a challenge to even the most efficient engineering departments, which are shifting to around-the-clock global teams. Managing such complex projects across corporate, national, and cultural boundaries requires new skills that ensure the ability to “get it right the first time.”

Of course, in slower-moving sectors such as machine tools and locomotives, the evidence for rapidly declining product life cycles is not so obvious. However, even here, the impact of low-cost electronic computing power and the ubiquity of the Internet are accelerating the upgrades that customers expect. They want more than just a product; they anticipate nothing less than a total solution to their requirements throughout their ownership. These additional service components may cover not
only financing and operator training, but also remote condition monitoring for 24/7
online support and maintenance, performance guarantees with financial penalties,
and even returns of the product for recycling at the end of its life cycle. For example,
Dell has recently started a recycling service for used computers. The acceleration
of product life cycles changes the way that intellectual property must be managed.
In the past, the seventeen to twenty years of protection afforded by a patent was
often valuable over its full life. But when technology evolves rapidly, twenty years
of protection loses its value. Research by one of the authors shows that companies
are reevaluating the ways that they protect their intellectual property and are carefully
selecting areas for long-term patent coverage, usually on fundamental inventions,
and are forgoing patents for trade secrets elsewhere. Patent law requires inventors
to “teach” what they have done within the patent document; this inevitably exposes
concepts and know-how that may be better kept secret rather than giving competitors
a jump start to catch up. An agile company has moved on by the time patents are
issued, so the patents may be of more value to competitors than to the owner. In the
new innovation model, churning out patents is replaced by including the protection
of intellectual property within the overall business strategy rather than a way of
protecting an invention. And when patents are filed, they are written to protect both
the “hard” invention and the unique business model surrounding it.
In some sectors, of course, patents will continue to be the principal method to
retain protection from competition. For example, the long and expensive develop-
ment cycles and regulatory hurdles governing pharmaceutical products encourage
the use of patent protection. Even here, however, careful selection of what to patent
and when to retain maximum advantage after perhaps a ten-year development cycle
is a challenging task.
The budding entrepreneur can learn several lessons here:
● It is becoming more and more difficult to build a company around a single prod-
  uct idea without strong patent protection. This is particularly true for consumer
  products that have a very short life cycle.
● Protective barriers must become part of any business model, whether via patents,
  trade secrets, uniqueness in the business model, or fast movement to market to
  stay ahead of competitors.
● Innovation is not a single event; one should never stop innovating.
● You should always imagine that there is someone, somewhere, having the same
  idea.
● The entrepreneur needs to solve customers’ problems: think service, not product.

WHY INNOVATION IS IMPORTANT
So we are in a world in which access to knowledge and expertise, labor, and capital
is truly global and transparently accessible, and in which technology relentlessly
advances. Technical breakthroughs are no longer confined to just a few centers
of excellence such as Bell Labs or MIT; the next breakthrough can just as easily
occur in Bangalore, Beijing, or Brisbane as in Birmingham, Boston, or Boca Raton.
Shorter product life cycles and rapid technological obsolescence make patents lose
their power in monopoly preservation. In addition, companies can no longer rely on
the earlier protections of trade and monetary restrictions, local labor preeminence,
and cozy knowledge clusters to provide competitive advantages. The only way that sustainable advantages can be earned is through continuous innovation—innovation not only in product development, but in all aspects of business activity and at an ever-increasing rate. Of course, there has always been innovation in corporations. Indeed, William Baumol\textsuperscript{13} argues that the unprecedented wealth generated in the major economies in the twentieth century would not have been possible without innovation. However, until relatively recently, many firms could survive and prosper without innovating: they competed in a protected environment. Now innovation is no longer a luxury; it is a necessity.

**DEFINITION AND TYPES OF INNOVATION**

**Definition of Innovation**

In this book we will use the following definition:

Successful innovation is the use of new technological knowledge, and/or new market knowledge, employed within a business model that can deliver a new product and/or service to customers who will purchase at a price that will provide profits.

This definition is built on the generally accepted work of Alan Afuah.\textsuperscript{14} In order to focus the discussion and to emphasize the new innovation, we have added the following:

“Successful…”—to emphasize that we are not interested in innovation that fails to deliver and maintain value for the innovating enterprise

“…employed within a business model…”—to stress that innovation in the business model is at least as important, as purely product or process technology. (This theme is developed further in Chapter 11.)

“…who will purchase at a price that will provide profits”—to stress that success requires that the innovator be able to extract benefit from the value created and not allow it to migrate to partners, customers, or offshore manufacturers

**Types of Innovation**

There are two major classes of innovation: incremental and radical. Incremental innovations are continual improvements on an existing product or service or in the ways that products are manufactured and delivered. Radical innovations are the result of major changes in the ground rules of competition, culminating in either a customer satisfying her needs in an entirely new way or in a totally new need being created through innovation.

The S-Curve is often used to illustrate the difference in which the performance achieved by a new innovation is plotted against time (see Figure 3-1). When the innovation is first made, a period of experimentation ensues in which little performance improvement is made while the innovator tries different ways of reaching goals. As learning improves with experimentation, the advances in improvements accelerate quickly until a plateau is reached, at which time major efforts are required to make minor improvements—the region of limited returns. Usually improvements can be made with incremental innovations, pushing the original curve higher. Then along comes a new innovation—usually from another place—which goes through
Chapter 3  The Art of Innovation—Developing Ideas and Business Opportunities

Figure 3-1  The S-Curve of Innovations.

the same cycle until it ends up giving a higher performance than the first idea and takes a major part of the market away from the first innovation. This is the radical change.

Example: The Evolution of Lighting
When Thomas Edison invented the incandescent lamp, it took many years before lamps were mainstream. First, he encountered difficulties in encapsulating the filament to prevent burnout, and houses had to be wired to receive electric power. But after twenty years or so, electric lighting became the preferred way. Electric lighting, a radical innovation, replaced candles. Since then, the electric lamp has undergone many incremental improvements, yet it remains fundamentally the same as Edison’s original innovation. There are now only a few suppliers of lamps, and none of them makes good profits. Electric lamps are a commodity and are ripe to be replaced by the next radical innovation—solid-state diodes. We can only guess where the future may lie. For example, the glowworm’s tail is a very efficient converter of electrical energy to light. With fuel costs rising rapidly, there is a big incentive to reduce energy consumption. Is the biolamp far away? The only assurance is that it will not be developed by one of the existing lamp manufacturers, for they are focused on incrementally improving the old ideas. Edison’s lamps nearly destroyed the candle industry—though not quite. There’s money to be made in candles too!

Example: Blyth Candles
In 1977 Robert Groegen, an entrepreneur, bought a small, barely surviving candle company in Brooklyn, New York. At that time the company had annual sales of about $3 million. He changed the name to Blyth Candles, and since then he has built the company to the point where it is the largest candle supplier in the United States, with annual sales greater than $1.1 billion. Groegen and his family members still own 29
percent of the company, which is now publicly traded, making his personal wealth in the company’s stock worth $130 million—not bad for a candle maker. This has been achieved entirely via incremental innovations—perfumed candles for certain occasions and seasons, candles for outdoors, ornamental candleholders, and so on, and by buying smaller candle manufacturers that were not innovating at all.

Entrepreneurs, therefore, do not need a radical innovation to create a new, successful, and profitable company. Continuous incremental innovation can also be sufficient.

**Disruptive Innovation**

The term *disruptive innovation* is often used to describe innovations that disrupt the status quo. As companies grow, they develop cultures and procedures that create internal barriers to change. The greater the mismatch of the innovation to the current know-how and the more it threatens to destroy existing product sales, the tougher it is for a large company to respond. The change can arise from a new technology. Kodak struggled with changing from being the leading supplier of photographic film and moving to an entirely new business based on digital imaging. All of the company’s chemical know-how provides no advantage in the new world, and the more digital products that Kodak sells, the faster its film business will decline. Dell entered the PC market with a new “direct to customer” business model. Google came from nowhere to threaten behemoth Microsoft. Again and again, it is entrepreneurial start-ups that can take advantage of the larger company’s inability to respond to disruption. It was start-up Intel that destroyed RCA’s vacuum tube business, Amazon that challenges established retail chains, and Netflix that attacks the location-based Blockbuster chain.

To learn more about how large companies struggle with disruptive innovation, see Clayton Christensen. And to learn how small entrepreneurial companies can partner with large companies, see Baumol’s article on the Internet. As evidence that entrepreneurs and small companies are the source of the most important innovations, see Table 3-1.

So don’t be scared of those dinosaurs out there. Take advantage of their inability to respond to disruptive innovations, whether in products, services, or business models. Throughout this book you will find many examples of entrepreneurial ventures. Think about whether they are based on a disruptive innovation and how this will affect the existing larger firms. Can they respond?

**FRAMEWORKS FOR LEARNING INNOVATION SKILLS**

Debate continues as to whether innovators must be born or such skills can be learned. The authors’ research shows that, indeed, if someone has the desire to be an entrepreneur, then innovation skills can be effectively learned. The best way to achieve
Table 3-1 Some Important Innovations by U.S. Small Firms in the Twentieth Century

<table>
<thead>
<tr>
<th>Innovation</th>
<th>Description</th>
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<tr>
<td>Air conditioning</td>
<td>Heart valve</td>
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<tr>
<td>Air passenger service</td>
<td>Heat sensor</td>
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<tr>
<td>Airplane</td>
<td>Helicopter</td>
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<td>Articulated tractor</td>
<td>High-resolution CAT scanner</td>
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<td>Cellphane artificial skin</td>
<td>High-resolution digital X-ray</td>
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<td>Assembly line</td>
<td>High-resolution X-ray microscope</td>
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<td>Audiotape recorder</td>
<td>Human growth hormone</td>
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<td>Bakelite</td>
<td>Hydraulic brake</td>
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<td>Biomagnetic imaging</td>
<td>Integrated circuit</td>
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<td>Biosynthetic insulin</td>
<td>Kidney stone laser</td>
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<td>Catalytic petroleum cracking</td>
<td>Large computer</td>
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<td>Computerized blood pressure controller</td>
<td>Link trainer</td>
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<td>Continuous casting</td>
<td>Microprocessor</td>
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<td>Cotton picker</td>
<td>Nuclear magnetic resonance scanner</td>
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<td>Defibrillator</td>
<td>Optical scanner</td>
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<td>DNA fingerprinting</td>
<td>Oral contraceptives</td>
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<td>Double-knit fabric</td>
<td>Outboard engine</td>
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<td>Electronic spreadsheet</td>
<td>Overnight national delivery</td>
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<td>Freeewing aircraft</td>
<td>Pacemaker</td>
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<td>FM radio</td>
<td>Personal computer</td>
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<td>Front-end loader</td>
<td>Photo typesetting</td>
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<td>Geodesic dome</td>
<td>Polaroid camera</td>
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<td>Gyrocompass</td>
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<td>Reading machine</td>
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<td>Rotary oil drilling bit</td>
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<td>Six-axis robot arm</td>
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<td>Soft contact lens</td>
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<td>Solid-fuel rocket engine</td>
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<td>Supercomputer</td>
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<td>Two-armed mobile robot</td>
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<td>X-ray telescope</td>
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<td>Zipper</td>
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This expertise is by using examples and practicing the learned skills. In this section we will outline some “innovation frameworks” that will help you in this regard. These frameworks are examples, not a complete list. In fact, you may be able to develop your own frameworks that you find more suited to your own personality and style.

**Analogs**

Why innovate from nothing when many ideas have already worked well? The idea of this framework is to help transfer innovations from one field to another. Chapter 13 describes LeafBusters, a company that “outsources” the leaf collection and disposal services provided by municipalities to residents annually. LeafBusters claims that it can do this more efficiently because it can use the required expensive equipment for a longer season each year by “following the weather.” Where did the founders of this company get this “obvious” idea? They read an article about crews that harvest crops under contract to farmers in the Corn Belt moving southward each year. The underlying drivers for the two businesses are the same: more effective use of expensive capital equipment through “following the seasons.” The trick here is to analyze existing successful businesses and to get behind the immediate product or service to examine the underpinning drivers. Then ask, “Where else can these principles be applied?”

...
Let us work through another analog example. Dell is now supplying printers that connect to the Internet, and the printers have built-in “ink management software.” The software analyzes usage, recommending when to print in black-and-white only, when in color, and so on. When it is time to replace the ink cartridge, the printer has already forecasted the need, contacted Dell via the Internet, and had ink drop shipped on time. This is a valuable service to the consumer. It also locks in the purchasing to Dell supplies, preempting competition from low-cost refill stores. The consumer is happy, and Dell grows its revenue and profits. What other products/services could be analogous to this example?

Consider that household appliances that connect to the Internet are now also being offered. Initially aimed at monitoring performance so service calls can be scheduled before the appliances break down, this feature could be used as follows. The washing machine monitors usage and injects into the wash the appropriate detergent, softener, bleach, and so on, depending on the needs for the load. Like the printer, detergent usage forecast enables a supplier to drop ship the product and place it into holders built in to the machines just in time to fulfill the consumer’s needs. Currently, detergent manufacturers are not making any profits because they have to pay to have their products put on retailers’ shelves and they compete in a commodity market with expensive advertising. There is little consumer loyalty; products on “special” are purchased more often. Consumers do not like carrying the heavy containers of detergent. Perhaps there is an opportunity for a new detergent manufacturer to join with an appliance manufacturer such as GE, Whirlpool, or Maytag to provide the “total washing solution.” This would benefit the consumer both in service and cost, for it would no longer be necessary to advertise detergents separately or to use the inconvenient and expensive retail distribution chain.

Actually, Becky Minard and Paal Gisholt might have come up with the SmartPak idea by looking for an analog. Cardinal Health (www.cardinal.com) does the same for hospital patients by taking over the internal pharmacy role. Patients’ daily medicines are delivered, clearly labeled, to the bedside, reducing potentially dangerous errors and costs by eliminating the large inventories at hospitals and consolidating suppliers at central locations rather than at individual dispensaries. Both SmartPak and Cardinal provide services around their products and solve their customers’ problems. Entrepreneurs learn to think like this: always analyzing intriguing innovations and thinking about where else the principles of the concept, not necessarily the details, can be applied. Get into the habit of questioning situations in this way. And don’t look at only successes; often analyzing a failure can shine light on another situation where the reasons for failure may not apply.

**Intersection of Technology Trends**

We live in a world where technology is changing quickly. Watching cost and performance trends, particularly where they begin to intersect, can give rise to whole new innovative business opportunities. Let’s consider digital photography, high-bandwidth communications, and ubiquitous wireless communications and think about some new business ideas. For example, imagine a digital camera with a wireless Internet connection. You could have your own personal Web site to which your latest pictures are uploaded as soon as you take them. E-mails can be sent to friends and relatives immediately so they can participate with you in real time. Where is the business opportunity? What an interesting upgrade of services for a professional event photographer. Now at your wedding, bar mitzvah, or the like, a photographer can post pictures as they are taken, and those friends and relatives who are unable to be there...
in person can enjoy the event as it happens. The photographer can also sell more pictures and albums to a wider audience because they are more likely to buy when they are closely involved in the event.

Solving “Points of Pain”
Entrepreneurs are quick to notice inefficiencies, inconveniences, and other “points of pain” and to use these to build new business opportunities.

Example: Netflix (www.Netflix.com)
Netflix provides rental DVDs through the mail rather than via the bricks-and-mortar rental outlets favored by Blockbuster. The founders of Netflix realized that Blockbuster’s customers had points of pain; they had to drive to the store, search through rows of movies, often not find the one they were seeking as it was already rented out, and pay late charges if they forgot to return it on time. Netflix solved these points of pain by mailing the movies (made possible by the DVD format taking over from tapes) directly to the customer. Movies can be kept as long as a consumer wishes with no late charges. When John Antioco, CEO of Blockbuster, first encountered Netflix, he did not see it as a threat, stating, “No one will want to wait three days for a movie.” In fact, having a wish list and allowing a subscriber to hold several DVDs simultaneously avoids this supposed disadvantage. And because inventory is stored centrally, a greater selection is possible. The Netflix business model innovation is “disruptive” to Blockbuster, which has invested much in stores and local inventories. It is interesting that Blockbuster did not see Amazon as an analog to Netflix, just as Barnes & Noble never saw Amazon as a threat until Amazon had taken a major share of the book market.
Entrepreneurs are continually noticing and analyzing points of pain. Practice this in your daily life and challenge yourself to find the business opportunity.

Analyzing Existing Businesses
Understanding how existing businesses work, their cost structure, and customer points of pain can lead to ideas about how they can be effectively attacked. In our classes, students usually start with thinking of business ideas related to things near and dear to their everyday experience. This is often pizza. Their business idea is to open yet another pizza parlor, with the innovation centered around new product ideas—Thai-French or Indonesian curry pizzas, for example.

Example: Pizza-on-a-Truck
After some simple research, the students expose a number of areas where the current pizza delivery services are unsatisfactory:

<table>
<thead>
<tr>
<th>Customer Points of Pain</th>
<th>Owner’s Challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pizza arrives late</td>
<td>Location is bad</td>
</tr>
<tr>
<td>Pizza arrives cold</td>
<td>Rent is high</td>
</tr>
<tr>
<td>Phone takes forever to be answered</td>
<td>Labor is expensive and unreliable</td>
</tr>
<tr>
<td>Order taker is incomprehensible</td>
<td>It is difficult to schedule baking with deliveries</td>
</tr>
<tr>
<td>Pizza tastes of the packaging</td>
<td></td>
</tr>
</tbody>
</table>

Entrepreneurs are continually noticing and analyzing points of pain. Practice this in your daily life and challenge yourself to find the business opportunity.
Frameworks for Learning Innovation Skills

Digging further, an analysis of the cost of making and delivering a pizza shows that the storefront and labor overhead far outweigh the cost of food ingredients. And the customers are unhappy.

So let’s think outside the pizza box, and let’s think really BIG. Let’s ask ourselves how we can totally restructure the pizza business on a national basis and grab the lion’s share of the pizza market. Are there any technical advances that might impact the pizza business? Here you can get pretty creative. The following are some ideas culled from searching the patent database, surfing the Web, and talking to experts in a number of different fields. (Remember: Use the vast sources of information now available at your fingertips.)

- Package delivery companies such as UPS and FedEx have invested heavily in software to optimize the most efficient routes for their vehicles depending on today’s delivery addresses. How can this be applied to pizza delivery?
- Cars are commonly fitted with global positioning systems (GPSs) that determine where the car is and display a map and instructions on how to get to a desired location.
- Customers are increasingly becoming accustomed to using the Internet for order- ing. Can this be applied to pizza ordering?
- Because labor reliability and costs are major issues for pizza outlets, Pizza Hut has developed working prototype robots for assembling pizzas automatically based on an order input. The robots make the pizza and feed it into an oven. The time in the oven depends on the size and ingredients so a perfect pizza comes out every time.

How can all these apparently unconnected developments be combined to create an entirely new pizza business?

Think about putting the robot and oven on a truck. Pizzas are made not in the sequence of the orders as they come in directly to the truck over the wireless Internet, but in the order that optimizes delivery time based on knowledge of the location of the vehicle, the optimum routing, and the oven scheduling. Labor is reduced to one person, the driver, and there is no storefront at all. Customers are informed by e-mail or phone exactly when their pizza will be delivered, and it will always be fresh, having just come out of the oven as the driver pulls up. And there is no need for flavor-destroying packaging to keep the pizza hot for twenty minutes while the driver goes to other locations or gets lost.

The results are better service, better pizzas, lower cost of doing business. Think about starting out in one or two locations first and either raising capital to expand into other markets or using a franchising model to cover the country. (See Chapter 11 for a discussion on franchising.) Look out Domino’s and Pizza Hut! This example illustrates several ways in which entrepreneurs innovate. You may be surprised that it is a largely analytical process. The situation is deconstructed, ideas for stimulation are sought on the Internet, and a synthetic process is initiated whereby the different inputs are rearranged until a possible solution emerges. Entrepreneurs are very good at synthesizing new opportunities from a collection of apparently disparate concepts. They recognize patterns that others may not find obvious. Get accustomed to looking for such patterns through analogs, technology confluences, points of pain, and the like. You will find that you will quickly get better at this, and you may even develop your own personal frameworks for innovating. And do not be frightened to think big; often bigger is easier than smaller.
Chapter 3  The Art of Innovation—Developing Ideas and Business Opportunities

FINDING AND ASSESSING IDEAS

The previous sections show how to create new ideas for a business within innovation frameworks. For entrepreneurs just starting out, however, it may be necessary to seek some stimulation from idea sources. The world is full of ideas, but ideas are not opportunities, and opportunities are not ready-made to build a business around. Figure 3-2 shows how many ideas are required to start one business. The rest of the chapter, therefore, looks at idea sources and at how they can be built up and analyzed as real business opportunities.

During your life, you will probably generate many ideas for potential businesses. With proper training and skill development, your creativity can flourish. The value of entrepreneurship education is that you will learn how to critically evaluate your ideas to locate the best opportunities for commercial success. The pursuit of these opportunities will require significant work on your part, but the rewards are limitless.”

Sanford B. Ehrlich, Qualcomm Executive Director of Entrepreneurship and Associate Professor of Management, San Diego State University Entrepreneurial Management Center

Maybe you have some starting concepts but question how original they are. You may be surprised to hear that not all entrepreneurs come up with unique ideas. You can be innovative without that initial generative impulse. Here are five ways to build upon already existing material and still provide a profit-driven concept:

1. Develop ideas as an extension or redesign an existing service (Marriott Senior Living Services; Sam’s Club—an extension of Wal-Mart).
2. Resegment and create an improved service (overnight delivery, such as FedEx, or buying cheaper airline tickets from Priceline.com).
3. Redifferentiate and market the product at a lower price (Internet shopping, Sam’s Club).
4. Add value to an existing product or service (linked brands, such as PCs just for the Internet).
5. Develop or redesign a new version of an existing product (Snapple Iced Tea, fresh-baked chocolate chip cookies, and Krispy Kreme doughnuts).

Figure 3-2  Many Ideas Are Filtered Down to One Business.
Idea Assessment

The first step for any entrepreneur is to generate an idea for a new business. The entrepreneur must then assess the opportunities available for putting the idea into practice. Is this something that has been overdone? Has it been executed poorly in the past? Has anyone else thought of it? In short, is the idea a potential dead end, a niche on an existing opportunity, or an entirely unexplored chance to create a business?

There are many sources for ideas. The Internet has made idea searching much faster and broader, and it also makes it easy to check whether an idea has already been discovered and put into a business. Entrepreneurs source ideas from many places.

To get you started, we have assembled a “starter kit” of twenty-seven general idea sourcing Web sites. The full list can be found on the book’s Web site at www.wiley.com/college/kaplan. The sites range from a pure list of ideas to franchising opportunities, patent auction sites, and sites committed to global scanning of new ideas. Take a look at some of the sites and use a search engine such as Google to start searching on your own. You will be amazed at the wealth and breadth of idea triggers that will get you thinking.

Probably the most underutilized sources for ideas are the U.S. and foreign patent databases. Chapter 10 deals with protecting your own ideas using patents. Here we discuss patents as sources of ideas. There are more than 7 million patents issued in the United States. These can be searched by key words, owners, dates, and so on at the U.S. patent Web site, www.uspto.gov, or at a private patent database site, www.delphion.com. Many patents, of course, are filed to protect deep technology know-how. However, often forgotten are the simpler product ideas that their inventors may not have exploited for a number of reasons; perhaps they did not have the money or did not know how to develop a market, or perhaps the idea was “before its time” either because the market was not ready or the means of making them practical were not yet available. Also, every patent has to describe why the invention is important, including prior ideas, and why the idea is useful. What a great place to pick others’ brains. In fact, only about 10 percent of existing patents have actually been commercialized; the remainder are still potential opportunities.

CONVERTING AN IDEA INTO AN OPPORTUNITY

Many new companies are built around a radical or breakthrough technology. As we explained earlier, major corporations are surprisingly bad at exploiting “disruptive” innovations. Indeed, as Table 3-1 shows, many of the major breakthroughs are discovered and taken to market by small firms. Of course, many of these breakthroughs are good enough that the small company grows into a large firm. Remember that all large firms started small. The important point to grasp is that breakthroughs are more likely to be conceived and developed in small companies. An entrepreneur need not be the developer of the technology. In fact, small companies can access a wealth of new technologies from a variety of sources such as universities, government-funded research laboratories, and the companies that the government funds to carry out research and development (R & D). In fact, these sources are mandated by law to make the results of their research available to companies. (See the Bayh-Dole Act in the end-of-chapter appendix.)
Chapter 3  The Art of Innovation—Developing Ideas and Business Opportunities

Seek and use motivation, passion, and encouragement to convert an idea into a viable business opportunity and overcome many obstacles and roadblocks.

We have created two long lists of Web sites that you can visit to browse the technological inventions that are available, one for universities and the other from U.S. government sources. These lists can be found at the book’s Web site, www.wiley.com/college/kaplan.

The Evaluation Process

The entrepreneur will unquestionably need plenty of encouragement and support while developing a business idea. But in turning this idea into a concrete business, the entrepreneur will be faced with hard facts and cold reality. Armed with information gleaned from research, the entrepreneur is positioned to legitimately decide whether to proceed with the idea and work to sustain the venture.

OPPORTUNITY: FIVE PHASES TO SUCCESS

Identifying which business ideas have real commercial potential is one of the most difficult challenges that an entrepreneur will face. This section describes a systematic approach to reducing the uncertainties. The five-step model outlined in Figure 3-3 will help entrepreneurs to know a winning business area when they see one.

Figure 3-3  The Five Phases to Success.
Opportunity: Five Phases to Success

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Phase 1: Seize the Opportunity

The basic objective is to define the criteria that would make a business opportunity worthwhile to pursue. To start the process, think about how much value an opportunity can add to a business. The idea is to improve not only profits, but profitability as well. Rita McGrath’s The Entrepreneurial Mindset describes the techniques that can be used to create an opportunity register. The register is like an inventory of opportunities. It is a list of your ideas for improving, or even completely reinventing, the current business model or going into entirely new opportunity spaces. The entrepreneur wants to store good ideas so they can be revisited to see how new ideas might fit in, determine whether the timing is right to implement older ones, or figure out what to eliminate as the direction becomes more defined. The register can take the form of a database because it is easier to review and update. The important aspect is to decide how to record and revisit ideas that are generated.20

To evaluate the business opportunity, review the sequence of events in Figure 3-3 and answer the following questions from the perspective of both a personal and professional experience.

● What are the indicators that lead to this idea and opportunity?
● What are the conditions that permit the opportunity to occur?
● How will the future of this new product or service change the idea?
● How great (in terms of time) is the window of opportunity?

Time Horizon

A window of opportunity is a time horizon during which opportunities exist before something else happens to eliminate them. A unique opportunity, once shown to produce wealth, will attract competitors, and if the business is easy to enter, the industry will quickly become saturated. In this situation the entrepreneur must get in quickly and be able to get out before revenues become dispersed in an overdeveloped market.21

The entrepreneur gains the greatest ability to maneuver at the threshold of a start-up idea by creating his or her own window of opportunity. Successful companies find and exploit markets that others have missed or that new technologies have suddenly created. For example, advertising has obviously been around for some time, but when DoubleClick started, Internet advertising was a brand-new field. Its founder helped to create a wildly successful business by taking advantage of an unforeseen opportunity. The factors that help the entrepreneur create opportunity for the business are given in Figure 3-4.

Opportunity Costs

Opportunity costs are the value of benefits lost when one decision alternative is selected over another. For example, suppose a software company refuses to deliver a software program because writing the software code will require the company to miss a major deadline for another company. The order for the software program would generate revenue of $25,000 and additional costs of $14,000. Then the opportunity cost and the net benefit lost associated with the software deadline is $11,000 (i.e., $25,000 minus $14,000).22
Chapter 3  The Art of Innovation—Developing Ideas and Business Opportunities

Technology Factors
- Replace present technology?
- Niche market applications
- Infrastructure replacement
- Industry standards

Economic Factors
- Costs decreasing
- Productivity gains
- Better service
- Government and privacy issues

Demographic Factors
- Technology generation
- Market changes

Questions Entrepreneurs Must Ask Themselves:
Will these factors continue?  
For how long?  
What is the market size, growth, and outlook?  
Will this lead to other opportunities?

Figure 3-4  Factors That Create Opportunity.

Phase 2: Investigate the Need through Market Research

The first step is to identify, measure, and document the need for the product or service. This means making a specific financial forecast of the actual potential and anticipated return for this proposed product or service. This process is not the end; it’s only the beginning. The topic of marketing will be explored more fully in Chapter 4, but for now, it will be considered as it fits into the opportunity analysis.

Marketing research need not be extensive, sophisticated, or expensive but must “find a need of the consumer that is currently not getting met, or inadequately met, and fill that need in a way that is appealing to the consumer and profitable for you.” Pamela Pomerenke, Assistant Professor, Department of Management, Michigan State University.

The questions below will assist in evaluating the actual climate surrounding the new company and preparing for the early stages of a new venture. Larger companies often outsource research to a marketing company, but this process will identify the steps and questions needed to custom-design the research and conduct it productively.

Preliminary Questions
At this point the entrepreneur needs to solidify the purpose and object of the research. Those who are developing a particular product will want to focus on questions that can tell them about product features and distribution. A more service-oriented entrepreneur will consider other inquiries, directed at identifying the sources and beneficiaries of that service. Consider the goal now; it will save time and money later on. These areas and questions are meant to guide the direction of the research.

Need. Will this product/service be serving customers’ real needs? What is the overall market for the business? Are there special niches that can be exploited?

Niche/Competition. What is different about the product or service that will cause the customer to choose it over the competition’s product or service?
Opportunity: Five Phases to Success

Proprietary Questions. Can the product/service be patented or copyrighted? Is it unique enough to get a significant head start on the competition? Can the process be easily copied? Will the business concept be developed and licensed to others, or developed and sold?

Cost and Manufacture. How much will the customer be willing to spend for the product/service? How much will materials and labor time cost? How much will be needed in the future? Now?

Advertisement and Packaging. What type of advertising and promotional plans will be used to market the product/service? Will the promotional methods be traditional or innovative?

Sales. What distributions and sales methods will be used? Will the reliance be on independent sales representatives, company salesforce, direct mail, door-to-door sales, supermarkets, service stations, or company-owned stores?

Transport. How will the product/service be transported—via company-owned trucks, common carriers, postal service, airfreight, or over the internet?

Employees. Can the company attract employees with the necessary skills to operate the business venture? Who are the workers? Are they dependable, competent, and readily available?

Start with Data Collection

The entrepreneur needs to find answers to the key questions, identified above, about the potential business. Data collection can come from a variety of sources. The sources to provide data collection are given in Figure 3-5. The more sources that are consulted, the more valid the results will be. However, it is not advisable to go overboard; the amount of available data can become overwhelming. Basically, the questions should be as specific as possible, the sources as relevant as possible, and the data collection as extensive as needed for the initial investment and planning to run smoothly.

<table>
<thead>
<tr>
<th>Experts in the field</th>
<th>Internet searches</th>
<th>Library research</th>
<th>Questionnaires/surveys</th>
<th>Existing research</th>
<th>Trade associations</th>
<th>Market research firms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact well-known entrepreneurs to get advice.</td>
<td>Visit Web sites on companies and new products or technologies.</td>
<td>Use college libraries to access references and specialized biographies.</td>
<td>Use the mail, phone, Internet, or professional interviews. Write and prepare questions to make sure you collect appropriate data.</td>
<td>Use investment banking firms, advisory searches, or consulting firms to gather data on existing research.</td>
<td>Visit trade shows and read trade publications.</td>
<td>Hire a firm to prepare a report or market survey for the proposed idea.</td>
</tr>
</tbody>
</table>

Figure 3-5 Sources for Finding Information.
Design and Execute a Study to Get the Answers

Once primary sources of data have been exhausted based on appropriate questions and expectations, the entrepreneur must identify secondary resources to support the preliminary research. This is the stage when the entrepreneur should consult directly with existing business owners and experts in the field and ask pertinent, key questions.

The entrepreneur should target a small number of representative businesses. First, the entrepreneur must identify companies with similar products or services and inquire as to who may be willing to give advice or provide the names of other contacts without wasting a lot of time and money. Remember that the purpose of this exercise is to start a business, not to become a research expert.

Once the participants have been identified, solicit information from them to answer the key questions, which should be based on the most unbiased model available. To eliminate receiving questionable data, certain pitfalls must be avoided.

- Ensure that all of the participants are asked the same questions in the same manner.
- Get detailed—make certain that the answers are accurate by maintaining a precise, objective method of questioning.
- Train and monitor survey recorders and telephone interviewers to ensure consistent results.

Analyze the Data

Once the primary data have been collected, they must be analyzed. What do the data reveal? How can they be interpreted? Examine the secondary sources that have been queried. How did the survey participants interpret their results? Write a final report modeled on the most thorough sources. This ensures that a record exists for the future and that others in the organization can refer to the study as necessary.

This may all sound too extensive—and expensive. Many entrepreneurs must do their market research with limited funds. Employ these cost-cutting recommendations:

- Use search engines, Web pages, and online databases.
- Use the telephone instead of mail surveys and door-to-door interviewing.
- Avoid research in high-cost cities.
- Test more than one product or service at a time.
- Avoid collecting unnecessary data.

One example of an inexpensive source is a local university. Professors and students are often involved in projects to help small companies develop marketing plans and undertake market research. Other examples include friends and relatives who own their own businesses, published interviews with successful entrepreneurs, and library resources. More detailed discussions on market research methods can be found in Chapter 4.

Phase 3: Develop the Plan

Once an opportunity has been identified, decisions must be made regarding performance and staffing. Who is going to do what? How will decisions be made? The result of the business plan should fully capitalize on all of the company's assets while
Opportunity: Five Phases to Success

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maintaining flexibility. It also should be sufficiently broad to incorporate unexpected changes in the aim for success and profitability.

A business plan charts the current and future components of the business in about thirty to forty pages. Similar to a map, it should answer some basic questions. How far will the business have to go? What is the exact destination or goal? How will the destination be reached? What is the anticipated arrival time at each of the various stops or milestones? A good plan will do the following:

- Determine the viability of the business and application in selected markets
- Provide guidance in planning and organizing the activities and goals
- Serve as a vehicle to obtain financing and personnel for the business

The business plan is the backbone of the business. This single document guides the entrepreneur at three critical junctures:

1. It simplifies decision making during times of crisis.
2. It is the roadmap at points of indecision.
3. It is a motivational guide during setbacks or downturns.

An extremely valuable outcome of preparing and writing the plan at this stage is identifying flaws and creating contingencies. The business plan compels the entrepreneur to carefully examine the prospective venture at its initial planning stage before significant capital has been invested.

If the plan reveals insurmountable flaws, the entrepreneur may need to abandon that particular opportunity. Although it is discouraging to return to the idea stage, consider two facts:

1. The groundwork has been laid, and the initial learning curve has been completed.
2. Only a relatively small amount of time and capital have been invested.

The entrepreneur should not ignore serious misgivings. Walking away at this stage and beginning again with a new idea and a strong attitude will impress investors and others already involved with the project.

A more detailed version of the business plan is found in Chapter 5, but the entrepreneur can greatly benefit from considering these basic elements now.

Phase 4: Determine the Resources Needed

All businesses must address resource capabilities to foster venture development. However, for a start-up venture that uses new technology for its service or as its product, it is crucial. The new business must have the skills to match—and triumph over—the competition. Much like Darwin’s survival of the fittest, in the business world only the highly skilled will survive.

This section examines three aspects of assessing resource capabilities.

1. Personal contacts and networking

Resources are needed to identify, contact, and establish a network with appropriate clients and vendors. Who will devote time to meeting people by traveling? Phone work? E-mail correspondence? Time for networking may be a daily task, high on a priority list. (Do the management exercise at the end of this chapter for more on networking.)
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2. Financing requirements

Sufficient capital is required to sustain the company for a specific length of time, possibly a one- or two-year period. The entrepreneur must carefully consider the financial elements required for implementing the plan. Begin by answering the following questions:

- How much initial capital is needed?
- What resources are available for financial support?
- How long can the new business be self-financed, if necessary, and still withstand initial losses?
- How long will it take to make the business profitable?
- What kind of profit margin will eventually result from the product or service?

After initial financing, new investors may be approached at a later date for further infusions of capital.

3. Sources of technical skills

The entrepreneur may have an idea but not possess the creative process and innovative technical skills to implement it. In that case, external skilled labor is needed. This may be someone the entrepreneur already knows, such as a co-worker, or he or she might need to hire someone through want ads or an employment agency. Training costs need to be calculated into start-up costs. Furthermore, someone may be needed who can translate technical jargon to simplified terms for investors.

Phase 5: Manage the Business

So far in this chapter, we’ve evaluated the opportunity, begun developing the plan, and assessed resource needs. Phase 5 entails running the business, applying a specific management structure and style to any questions, and handling difficulties and roadblocks to successes that may arise. The emphasis here is on the act of investing. Substantial time, money, experience, and energy have been invested in setting up. Now the entrepreneur needs to break off from the path blazed by the most successful businesses and invest in people, operating procedures, and information technology. This involves the following two events:

1. Deliver a Total Solution

Traditionally, small companies have assumed unchallenged territory and special distribution channels for their products. Today, however, all companies are playing in the same markets and providing the entire range of services for their customers. Investors and customers want to buy a total solution product or service.

2. Cultivate Advanced Resources

The layoffs of highly skilled workers from major corporations that abound create an important opportunity for a start-up company. Those trained and effective personnel are looking to apply their business skills and experiences to start-ups. The results to the business include access to small companies and major corporations, capital, and productive market knowledge.
Opportunity: Five Phases to Success

Consider an example of a new technology that effectively transformed day-to-day services and how a business plan was crucial in making that opportunity a business reality.

Use the Framework to Evaluate and Test the Five-Phase Opportunity Concept

Now that we have completed the five phases of the opportunity analysis, use this framework to evaluate the issues that are stronger or weaker for the market, competition, management team, and financial requirements for the new business concept. Figures 3-6 to 3-9 list in greater detail the factors to be considered in each of these four categories.

The most successful entrepreneurs know where they fit in the market and where they want to be. The framework plan should account for and accommodate changes in...
designing, testing, and marketing to prepare for the business opportunity. The issues that need to be described in more detail should include determining the improvement needed and anticipating the necessary time frames and how to remain competitive at all times.

Know How to Protect the Idea or Product

One question that might be encountered while conducting research and formulating a business plan is whether or not the idea/opportunity/product/service needs to be protected. The following evaluation screening identifies those conditions whereby an idea may qualify for patent protection. See Chapter 10 for details on patent protection.

Evaluation Screening for Patent Protection
1. Is the service, product, or idea unique to get a head start on the competition?
2. Does the service or product represent a breakthrough (either high-tech or different from others)?
Summary

1. Is the field changing so slowly that the innovation will be valuable for at least ten years?
2. Have other, less expensive but adequate protective measures been explored?
3. Has an attorney discussed the options and recommended that a patent be pursued?
4. Is the fee for a patent search and application affordable?

If the answer to two or more of these questions was “yes,” patent protection for the idea and opportunity should be seriously considered. However, if a disclosure document, which essentially protects the idea for the first two years, will suffice, then that option should be considered first. What about marketing this idea to a large company as a customer? Most companies have their own internal research and development organization dedicated to monitoring and meeting the needs of their product or service lines. The best method for submitting an idea is to contact the company and ask for its disclosure conditions to review an idea.

Some companies, however, will sign a nondisclosure form, whereas others will not. Most will have their own protection form, which essentially states that, while they may agree to review or discuss an idea, their research department may have already thought of the idea long before. Let an attorney have the last word. Get a second (or even a third) legal opinion before committing to any legal expenditure. See Chapter 12 for more on these legal issues.

SUMMARY

Every business starts from an embryonic idea that is analyzed to create an opportunity, then built up until a complete business concept has been reached. Ideas can come from many sources. They can be a result of an entrepreneur’s own innovation, which is best accomplished using some simple analytical frameworks, or they can be found in searching the Internet or in observing points of pain. Some good opportunities are the result of assembling what might at first seem to be unrelated ideas. Once an entrepreneur has identified an opportunity that is worthy of further consideration, the entrepreneur must assess its potential. Often, after a market approach has been selected and the necessary research conducted, the idea may require revision, adding refinement and sophistication to the original spark of an idea.

Generally, a great deal of useful information is readily available. Often market research objectives must be modified to use available information. In some cases the entrepreneur may choose to survey the market to acquire data designed specifically to fit the project’s needs. In every case the entrepreneur must apply some judgment to the data while trying to project future prospects.

Once this step is completed, the planning and developing process starts. All ideas must be screened and evaluated to determine the feasibility of the opportunity. The best ideas are evaluated through test marketing and managing the resources to successfully launch the business.

From the marketing research results, the plan must be fine-tuned. The following questions should be answered: What segment(s) of the market can it serve? What does the product or service have to offer the market? Who are the customers? How will the product or services be promoted and marketed?

The next chapter will address how to develop the marketing plan for a business.
Chapter 3  The Art of Innovation—Developing Ideas and Business Opportunities

STUDY QUESTIONS

1. Why is innovation important, and how is it changing?
2. What are the two types of innovation? Give two examples of each type.
3. What are the various ways to generate business ideas?
4. Briefly describe the various methods to research a business opportunity.
5. List the five phases to complete an opportunity analysis.
6. When does an idea need to be protected?
7. Describe the evaluation screening process.

EXERCISES

1. Finding an Idea and Turning It into an Opportunity
   Go to the book’s Web site, www.wiley.com/college/kaplan, and browse a number of idea source Web sites from the three lists. Use these as starters and browse until you find an idea that you think has merit for creating a business opportunity. Write a one-page synopsis of the idea, explaining why you think it is a good idea and how you would use it to build a business opportunity argument.

2. Preparing an Opportunity Cost Analysis
   RJL Technologies provides custom services to its loyalty customers from Monday through Friday. David Lee, the co-owner, believes it is important for the employees to have Saturday and Sunday off to spend with their families. However, he also recognizes that this policy has implications for profitability, and he is considering staying open on Saturday.

   David estimates that if the company stays open on Saturday, it can generate revenue of $2,500 each day for fifty-two days per year. The incremental daily costs will be $500 for labor, $50 for transportation, and $150 for an office manager. The costs do not include a portion of monthly rent.

   David would like to know the opportunity cost of not working on Saturday. Provide an estimate of the opportunity cost, and explain why you do not have to consider rent in your estimate.

Management Exercise—Networking
If you have not read the appendix in Chapter 1, do so then go to the book’s Web site and read diary entries Prequel and Months 2, 15, 18, 27, 31, 40, 41, 47, and 57 and view the video entitled “Seven Degrees of Separation.” Either as a team or individually, produce a presentation on the following question for class discussion. Only one or two slides are required to state the key points, which will then be expanded in class.

Master-Case Q 1: Trace the evolution of Neoforma’s products from the earliest idea to a commercial product or service. Include the false turns and abandoned ideas. What type of innovation was employed by Neoforma? Who outside the company had a major influence on the product developments? What lessons can you learn from the Neoforma case concerning the evolution of an idea from conception to a business opportunity?

INTERACTIVE LEARNING ON THE WEB
Test your knowledge of the chapter using the book’s interactive Web site.
APPENDIX: THE BAYH-DOLE ACT

For decades some universities and research institutions have retained the rights to inventions developed by their employees or professors during the course of their university-based work. Many universities routinely require faculty to file disclosures of the inventions or technologies they develop.

The 1980 Bayh-Dole Act (P.L. 96-517, Patent and Trademark Act Amendments of 1980) helped strengthen some of the university and small-business claims on inventions created by their employees. Sponsored by Senators Birch Bayh of Indiana and Robert Dole of Kansas, the act allows small businesses and nonprofit institutions, including universities, to retain the rights to inventions created with federal research funds. Since the federal government dispenses research money through thousands of programs, the act created a uniform policy for dealing with the key intellectual property rights generated in the course of federally funded research.

Under the act, universities are encouraged to file patents for the inventions they hold and to work with companies to promote the use of inventions developed with federal funds. Moreover, universities are expected to give small businesses preference in licensing new technologies and inventions.

The government retains a nonexclusive right to use or practice the patents that originated with federal funding. Critics of the act see it as a giveaway and say that the public should retain a greater share of intellectual property created with public money.

The legislation has helped create a technology transfer industry at universities around the country. The Association of University Technology Managers (AUTM), which tracks universities’ commercialization efforts, reports that before the act, fewer than 250 patents per year were issued to universities and research institutions. In 1998 the 198 U.S. and Canadian universities, teaching hospitals, and nonprofit research institutes that belong to AUTM generated 4,808 new U.S. patent applications and yielded 3,668 new licenses. Those new licenses, in turn, were the foundation for 364 new companies.

Feeding that patent machine were inventions and technologies developed by faculty and employees. In 1998 university faculty declared the development of 11,784 inventions or technologies, according to AUTM.

AUTM members received $725 million in gross income from licenses and options in 1998, which was up from $611 million in gross adjusted income and options the previous year. Much of that money has been recycled back into the universities for research.


ADDITIONAL RESOURCES

- Office.com (www.office.com): “This new way we work.”
- Digitalwork.com (www.digitalwork.com): “Your business workshop”
Chapter 3  The Art of Innovation—Developing Ideas and Business Opportunities

- Workz.com (www.workz.com): “Helping small businesses grow and prosper online.”
- Edge.low.org (www.edge.low.org): “A peer-learning community for growing your company.”
- Entrepreneurship (www.entrepreneurship.org): “A world of resources for entrepreneurs.”
- Small Business Administration (www.sba.gov): “Helping small businesses to succeed.”