The FAST PATH *to* CORPORATE GROWTH

Leveraging Knowledge and Technologies to New Market Applications

MARC H. MEYER

The Fast Path to Corporate Growth

The Fast Path to Corporate Growth

Leveraging Knowledge and Technologies to New Market Applications

MARC H. MEYER

OXFORD
UNIVERSITY PRESS
2007

OXFORD
UNIVERSITY PRESS

Oxford University Press, Inc., publishes works that further
Oxford University's objective of excellence
in research, scholarship, and education.

Oxford New York
Auckland Cape Town Dar es Salaam Hong Kong Karachi
Kuala Lumpur Madrid Melbourne Mexico City Nairobi
New Delhi Shanghai Taipei Toronto

With offices in
Argentina Austria Brazil Chile Czech Republic France Greece
Guatemala Hungary Italy Japan Poland Portugal Singapore
South Korea Switzerland Thailand Turkey Ukraine Vietnam

Published by Oxford University Press, Inc.
198 Madison Avenue, New York, New York 10016

www.oup.com

Oxford is a registered trademark of Oxford University Press

Library of Congress Cataloging-in-Publication Data
Meyer, Marc H.
The fast path to corporate growth : leveraging knowledge and technologies to
new
market applications/
Marc H. Meyer
p. cm.
Includes bibliographical references and index.

ISBN 978-0-19-518086-2
1. Success in business. 2. Creative ability in business. 3. New products—Management. 4. Business planning. 5. Marketing research. 6. Market segmentation. 7. Corporations—Growth. I. Title.
HF5386.M564 2007
658.4—dc22 2006022341

1 2 3 4 5 6 7 8 9

Printed in the United States of America
on acid-free paper

To Olga

Acknowledgments

This book is the product of many helping hands. Three in particular deserve special thanks: Mark Anzani, whose steadfast friendship and knowledge of the computer industry lent early momentum to my efforts; Neil Willcocks, who has synthesized user-centered design with technology platforms in ways that few can match; and John Helferich, who has helped me think through the business processes needed for enterprise growth.

Others in industry and academia made important contributions to various chapters. These include Northeastern University colleagues John Friar, Fred Crane, Daniel McCarthy, Mario Maletta, and Dennis Shaughnessy; Al Lehnerd, for many years my mentor and dearest friend; and James Utterback of MIT.

Within industry, my deepest thanks go to George Walsh and Peter Tarrant of IBM; Art St. Cyr, Bill Easdale, and Sage Marie of Honda; The Math Works' Loren Dean, Peter Webb, and Eugene McGoldrick; Joseph Sawicki of Mentor Graphics; Harry Keegan of Braintree Laboratories. There are many associates at Mars, Incorporated that contributed time and thought to this project. I extend particular thanks to Ralph Jerome, Bob Boushell, Tom Collins, Michael Wilson, and Stewart Townsend. I also wish to thank Harry West of Design Continuum for teaching me much about user-centered design; Kristin Boyle for helping me develop methods for validating prototypes; and James Walter, who showed me how to view new services as modular platforms. Equally important to this effort were Terry Leahy, Martin McDonough, and Jeff Curran who all contributed to the chapters on business model innovation and development.

Special thanks go to my students in Northeastern University's High Tech MBA program who, throughout the years, have helped me refine my methods. For specific examples employed at various parts of this book, I owe special thanks to Chad Haering, Subhabrata Biswas, Nathan Butts, Ofer Michael, and Kevin Clarke. Teaching this cohort of student-managers has been one of the great honors of my life.

This book is also far better for the writing counsel of Richard Luecke. Appealing to my truest passion, Dick would often say, "Marc, if you can't wrap up that chapter in forty pages, just stop and go fishing." Since parts of

this book were written overlooking many fine waters here and abroad, I thank Dick for his sage advice.

I had the further good fortune to work with Oxford University Press editor John Rauschenberg. Truly interested in ideas and their application, John was a true partner—and OUP is an outstanding organization.

Perhaps most important have been the support and "encouragement" I received on the home front. I am sure that many authors have heard words akin to, "Husband, get back up there and finish that book. It's going to be great!" Or "Pops, c'mon, let's take a break and shoot some hoops." Or, "Daddy, you work on the neatest stuff. I love those new M&M's!" The bottom line is this: Olga, Max, and Rosa, your words are the gold of this venture I will remember most and forever cherish.

Contents

Introduction: The Fast Path to Corporate Growth

1 IBM Rises from the Ashes

2 A Framework for Action

3 Segmenting Markets for Growth

4 Understanding User Needs

5 Creating Design Concepts, Prototyping, and Validating Design Choices

6 How Honda Innovates

7 Product Line and Platform Development

8 Honda's Element Comes to Life

9 Business Model Innovation

10 New Brand and Product Line Development at Mars

11 Making the Business Case

12 Executive Decision Making

13 Leading Teams to Growth

Appendix: Underlying Technology Principles in IBM's Renewal

Index

The Fast Path to Corporate Growth

CHAPTER NINE

Business Model Innovation

A definition—Key business model decisions—Different types of business models—Examples of business model innovation—A template for planning the business model—Reader exercises.

In our journey toward new product line and service development, we have examined a number of concepts and methods:

—Segmenting markets for growth and creating new product or service strategies

—Performing user research

—Developing use case scenarios to formulate design drivers for new products and services

—Creating design concepts that meet user needs and focusing those concepts on major subsystems

—Defining architecture and subsystems that can be deployed across multiple products or service lines

This chapter explores business model innovation, which can be as essential to enterprise growth as anything discussed to this point. Within the context of the management framework shown in chapter 2 (FIGURE 2.2) business model innovation must occur early on in parallel with user-centered design and prototype development. After the market test is completed, a team may then find it necessary to fine tune or, in some cases, fundamentally revise its business model.

The importance of using new market applications to take a fresh look at a company's conventional business model can be seen in the successes of eBay, Dell, Amazon, and Southwest Airlines. Yes, they all provided improved products or services relative to established competitors, but they also figured out how to make money—often in new ways—through those products and services. An innovative business model can be a clear point of competitive differentiation, providing value to both customers and shareholders.

Changing an established business model is often necessary if one aims to capture the full benefits of a new market application. Yet business model innovation is something that many innovation teams fail to consider. And for executives, this can be particularly challenging, given the many years they have spent growing the established business. Seeing *the prototype* is one thing; visualizing *the business* behind that prototype is something else. An innovation team must help executives make that connection.

Defining Business Model Innovation

To understand business model innovation, we must first define it and understand some of the forms it can take. Simply put, a business *model* describes how a company plans to make money. It is not *what* you do, but how you *make money* doing what you do. Business model *innovation* is, then, an important change to a company's existing business model.

Andrew Hargadon and Robert Sutton have described how breakthroughs can occur when a company occupies a unique position within an industry network, combining existing technologies, processes, and people to form winning solutions.[1] Consider Apple's iPod/iTunes business, a wonderful example of business model innovation. It combines new channel development, third-party developers and suppliers, a premium price for the music player, and a recurring revenue model for the digital music. Apple isn't simply selling equipment; its selling an ongoing relationship with buyers and users of its equipment. The $300 iPod is simply a platform on top of which users can download 15,000 songs (at $1 per song) and other types of entertainment software. The iPod would not have reached its potential without of the treasure chest of downloadable music made available to users through iTunes and Apple's licensing agreements with music suppliers. The result is that Apple is making money not just on one-time sales of its music player (the hardware) but

also on those downloads (the software). This business model eclipses the traditional music paradigm, which includes portable music players like the Sony Walkman, traditional retail channels for CDs, and the old music pricing model. Five years after the iPod was launched in 2001, Apple's revenues had almost tripled, and its share price had increased tenfold!

The potential impact of business model innovation on a company's fortunes is demonstrated by Automated Data Processing (ADP), a leader in payroll processing, whose past president shared this story with me. During the 1980s, ADP undertook a major transition: from selling time-shared software to providing turnkey payroll services. As part of that transition, ADP's business model shifted from generating revenue on software usage to collecting and depositing payroll deductions on behalf of employers with federal, state, and local taxing agencies. From a strategic perspective, ADP was no longer competing against potential software entrants; it now had direct service relationships with customers. ADP's new business model changed its mechanism for generating revenue. Suddenly, ADP was making money on the "float" obtained in the transfer of money. Revenues grew tenfold, and the income statement and balance sheet of the company were radically transformed.

Web services technology architectures (such as IBM's Services Oriented Architecture) are enabling a transformation of the traditional business model of the software industry. Most companies still sell software licenses based on the number of servers upon which the software will operate. An emerging business model is to sell software as a service, whereby customers access software through the Web and pay a usage charge, as opposed to licensing the software on a per server basis. "Pay as you go" fits nicely with Web services architecture.[2] One example is salesforce.com, a contact and relationships management software company. Instead of charging a per server license, salesforce.com charges on a per user or per group basis, with variations either by month or by year. This yields a far lower initial charge relative to the traditional software licensing model for enterprise customer relationship management systems. That lower charge is not only good for customers but it also produces recurring revenue for salesforce.com. By the close of 2005, salesforce.com had more than 20,000 corporate customers and almost 400,000 subscribers, and it had surpassed $300 million in annual revenue. The company's integration of a software product rich in function withwith a new business model highly attractive to users put more traditional competitors on

notice and forced them to respond.[3] It seems just as clear that as Google and other Web-media companies introduce spreadsheets and word processors that are HTML-based and thus, software delivered as a service, Microsoft's traditional business model for its Office suite—its cash cow—will be similarly threatened and the company will be forced to respond.

My students typically come to class thinking that that financial statements and the business model are synonymous. This is incorrect. Financial statements are a reflection of a business model, but they are *not* the business model itself. Rather, they are the outcomes of a business model and the many decisions needed to create the business model.

Rushing to build a profit-and-loss statement too quickly might prevent a team from thinking behind the numbers. Teams that develop new market applications must not assume that the firm's traditional business model is the best one for the new product or service line. The price level may well be different. Channels might be different. Support services might also be different. In short, the new target customers might simply prefer to do business in an entirely different way relative to a firm's traditional customers: services versus products; on-line versus retail; a turnkey solution as opposed to bits and bites.

Where to Begin?

To build a business model, a team should think about the key economic components of every business: demand and supply. Start with the demand side of the equation:

—Who will be our customers? For consumers, do they represent a new use in the same demographic or an entirely different demographic? For business customers, do they work in a different area of the same type of company, at a different level in that company? Might they be working in an entirely different type of organization, a systems integrator, for example, as opposed to a traditional end-user corporation?

—How will our new product satisfy customer needs relative to competing products or services?

—How will our customers value the product? Putting aside for a moment

how they value our current products or services, if we make something possible that was never possible before, might not our customers see this as unique and therefore deserving of a high price?

—Are there new, unexploited opportunities to sell customers a stream of value-added enhancements, plug-ins, or complementary services, all of which can be priced separately and constitute a rich source of recurring revenue?

—What do we know about the cycle of customer learning, ordering, fulfillment, and payment?

Then the team must think about the supply side: Will we make the product ourselves or use contract manufacturers? Will we use internal or external R&D? How might these decisions affect our cost of goods or capital expense and our operating margins?

When, and only when, demand and supply questions have been satisfactorily answered can the team move on to projections of revenues, expenses, and capital requirements and to the development of pro forma financial statements. We will address these issues in greater detail in the next chapter.

Strategic Business Model Decisions

What are the major strategic decisions that drive the business models for new market applications that I observed in the companies studied for this book?

The transition from products to services is clearly one of these. Successful new products, for example, often have explosive revenue growth, as the introduction of Apple's iPod clearly demonstrated. Successful services, on the other hand, generally produce a more gradual ramp-up. (The rapid revenue growth of Google is a striking exception.) The product versus service decision also determines the nature and magnitude of R&D expenses, both before and after launch. Products typically require heavier R&D investments than services. As one goes through other aspects of business financials—the cost of production and delivery, capital asset and marketing investments—it is clear that services are a completely different animal in terms of conceiving and executing a business model.

There were others fundamental types of business model innovations that

accompanied new market applications:

— *Premiumization*. Another important type of business model innovation I observed was, to take liberties with a term, *premiumization*, or repositioning products or services on the price-performance spectrum. Teams that adopted this business model were motivated to escape the profit margin stranglehold of commoditization.

— *Plug-in modules*. The adopter of a *plug-in reseller strategy* creates modular interfaces in the product line architecture that readily accommodate the addition of other modules and accessories. The plug-in modules and accessories might be made by the company itself or sourced through business partners. Plug-ins provide new incremental streams of revenue on top of the base product or service.

— *New channel choice*. This important business model decision affects the amount of revenue and size of margins provided (or not provided) to intermediaries. Selecting or developing a new channel outside the company's traditional area of competence is an important form of business model innovation.

— *Manufacturing and supply*. Innovation in a firm's traditional *manufacturing and supply* strategy can have a dramatic effect on financial outcomes by affecting gross margins, asset intensity, and operational expenses. Some very large manufacturers in my sample wrestled with supply issues. They debated whether to process raw materials themselves or purchase them from suppliers. The first option would have enormous financial consequences from increased capital intensity and perhaps a higher cost structure for materials. Nevertheless, some companies felt that vertical integration provided distinct advantages in terms of proprietary know-how. Nonmanufacturing firms, particularly those in financial services, took a different position; they were aggressive in outsourcing key functions to reduce operational expense. (The quality implications of their choices have yet to be fully understood.)

Each of these strategies is a type of business model innovation that can be focused on a new product line or service development. At least half of the several dozen companies found themselves undertaking business model innovation in the context of new market applications. It is only by looking at a

few of these firms that we can fully appreciate the scope and impact of business model change.

Modular Pricing for IBM's e-Business Processors

The modularity of products, systems, and, increasingly, services has allowed many firms to offer plug-in capabilities for their base-level products and thereby revisit their pricing models.

For example, IBM has applied an important business model change to its "mainframe" servers for open systems computing—a new hybrid pricing model. IBM has one pricing structure for the use of a mainframe server for traditional online transactions processing and another pricing model when the same machine is used to process Linux and Java applications—the coins of the realm for e-business.

The traditional pricing model was based on "measured service units" (MSUs). The purchased capacity for a particular machine was listed as a certain number of MSUs. Each MSU corresponds to a set number of MIPS (millions of instructions per second) per processor and the number of processor configurations for each new mainframe model. Rather than have a single price list for its various mainframes, IBM worked with customers to determine their peak load requirements, which necessitated a certain number of MSUs (just like horsepower in an engine). Then, pricing was set based on that number.

The zSeries architecture (now called System z) offered the flexibility to keep the MSU pricing scheme but then to add something else. The zSeries still ran the transactions processing application, but it also ran Linux and Java applications—all on the same physical server. This technology made something possible that was never possible before: to combine the throughput power of a mainframe with open systems computing capability. For the Linux and Java programs, IBM developed special-purpose processing engines. This has led to a new "engine-based" pricing model.

Each new specialized processing engine is priced at $125,000 per unit (at the time of this writing), regardless of function. A Linux processing engine (for running open systems software) is priced at $125,000, as is a special Java processing engine (IBM's ZAAP processor). The typical customer today orders a large mainframe server with different combinations of all three

processing engines. This is a better deal for the customer because all three engines—OLTP, Linux, and Java—can then share data I/O and networking adapters. This makes the entire system very modular, scalable, and cost effective for high-volume users. A customer who wishes to upgrade can then purchase new engines or activate whichever engine type is needed. The new business model is in keeping with the inherent modularity and flexibility of IBM's thrust into open systems computing with its Services Oriented Architecture that spans both hardware and software.

From Selling Bricks and Mortar to Selling Ad Space

Street furniture is a small but rapidly growing segment of the $6 billion outdoor advertising industry.[4] Its products include bus shelters, subway and bus line map displays, and yes, even public toilets. Under the traditional business model, manufacturers design and assemble their furniture, install it, and invoice municipal customers at a reasonable markup over cost.

Wall USA has taken a different approach. It agrees to build, install, and maintain street furniture *at no cost* in return for the lion's share of advertising rights. FIGURE 9.1 shows one of the company's installations, which is located near my office in Boston. Revenue from advertising pays for the work and provides incremental revenue to the municipality—a win-win situation for the vendor and its customer. Wall USA even takes responsibility for finding willing advertisers. After five years, a bus stop is revenue positive and effectively becomes a money machine for Wall and the municipality.

In this case of business model innovation, building and selling bricks and mortar—a one-time event—has given way to creating a conduit for recurring revenue. This makes for a totally different business, however: selling partnerships with cities and towns on the front end and selling advertising and collecting fees thereafter.

FIGURE 9.1 Where Is the Money Being Made? Not from the Bricks and Mortar (Wall, USA. Reproduced with permission)

Business Model Innovation in Financial Services: The Invention of Quota Share

During the 1990s, a life reinsurer developed a particularly interesting example of business model innovation coupled with service design innovation.[5] This company (then called LincolnRe) was the largest life reinsurer in the United States. It had approximately $6 billion in annual revenues and more than $130 billion in assets under management. As a reinsurer, LincolnRe provided insurance to insurance companies. Here's how it works. A direct insurer such as Pacific Life sets a retention level on the face value of individual policies. When the dollar amount of an insurance policy exceeds that retention amount, the remainder is passed on to reinsurers, who, for a premium, bear that additional risk.

LincolnRe had great competence in assessing the risk of life insurance policy applications. It could develop accurate risk profiles and life expectancy predictions from applicants' medical conditions, family histories, and

information on vocations and hobbies. LincolnRe's dedicated multifunctional team of physicians, underwriters, actuaries, and expert system developers could also tell insurers which insurance applications not to accept or how much more those applicants should be charged to cover their additional risk.

During the 1990s, many large financial companies entered the life reinsurance market. These global corporations began to take market share by discounting anything that LincolnRe offered. They were turning reinsurance into a commodity business. As the largest domestic reinsurer, LincolnRe could survive this pressure, though its fate would be "profitless prosperity." To remedy the situation, senior management chartered its underwriting and actuarial experts to create a new reinsurance offering that would change the terms of competition.

LincolnRe decided to target an area where its customers were having trouble making money: inexpensive "term" life insurance. A number of banks were moving into the insurance arena, and they were having real profit difficulties in this part of the market. LincolnRe applied its best minds to develop an expert system that could analyze the demographics of an insurer's target population and design term insurance programs (pricing, durations, and conditions) that would make money for the insurers.

In this case, LincolnRe demonstrated the wisdom of reassessing one's business model in conjunction with new technology. It was designing successful products for its customers: the insurers. This was special, unique within the industry. Rather than the traditional fee of a certain cost per thousand dollars reinsured, LincolnRe successfully requested that insurers pay it a percentage (say, 25 percent) of actual premium revenue.

This new business model altered the industry and allowed LincolnRe to escape the commoditization trap. Not only did this change produce substantially more revenue but also it placed LincolnRe in a direct partnership with its customers. LincolnRe's innovation, called "quota share," soon became the envy of the industry, and all other major life reinsurers tried to emulate it. The largest of these, SwissRe, decided that the easiest and surest path to competing with LincolnRe was to acquire it, which it did at the turn of the millennium. In the larger perspective, LincolnRe had won by providing "design services" in addition to its traditional products; in doing so, it fundamentally changed its value proposition to customers.

A Pharmaceutical Supplies Company Moves beyond Rats and Mice

Charles River Laboratories (CRL) has become the largest global provider of outsourced drug discovery services. It got to this point through an aggressive strategy of internal development and strategic acquisitions—and through a fundamental change in its business model.

CRL was founded in Boston in 1948 as a breeder of rats used for medical research in hospitals, universities, and pharmaceutical companies, primarily along the Northeast corridor. For many years, the company was small and privately held. Its founder, Henry Foster, a veterinarian, correctly anticipated that research institutions would seek an alternative to breeding their own test animals owing to space, labor, and time constraints. The company grew by adding a new "product": mice. In medical research, rats are the heavy lifters of toxicology (drug safety) studies. Mice are more often used in earlier-stage discovery experiments that seek answers to specific biological questions.

For customers, CRL's mice and rats represented cost-efficient, consistent, and accurate components of medical research, and they contributed immeasurably to medical progress. If you have taken an antibiotic lately, there is a very good chance that the drug was first proven on a CRL "research model."

The product development history is fascinating; yet for decades, it was based on a single business model of charging a certain price for a research model/animal. CRL's initial products were "general purpose"—that is, the same mouse or rat could be used for any type of drug research. They were also "out-bred," meaning that any female mouse would be bred with any male mouse in the general population. The firm's ability to charge for these general-purpose mice, however, was limited; until the 1990s, the price was less than $20 per healthy mouse.

During the early 1970s, random breeding was replaced by breeding within familial lines. This yielded animals with more specific traits and characteristics, as well as consistency not found in random genetics. These "inbred" standardized animals improved the productivity of research customers by ensuring predictable, accurate, and repeatable outcomes. (CRL acquired inbreds from public sources, such as the National Institutes of Health, without restrictions or licensing.) The company's rats and mice were further

upgraded and differentiated by eliminating many of the contaminants (viruses and bacteria) that typically infect rodents. The research community recognized the absence of contaminants as a major advance in quality and reliability.

Thanks to its improved products, the company continued to grow. By 1984, CRL had annual revenues of $50 million, derived mostly from the sale of mice and rats. Foster continued to drive the company forward on a path of internal development.

"Mutants," the company's third-generation platform, were developed during the late 1970s and early 1980s. Mutants are animals carefully selected from inbred litters that demonstrate very specific genetic outcomes; they are even more targeted than inbred animals. By using mutant mice, researchers can be far more effective in studying analogous mutation in humans. A fourth-generation platform then appeared during the mid-1980s: induced mutations. These animals included the "nude" mouse, a rodent with a severely compromised immune system that was popular among customers studying infectious diseases and cancer. With induced mutations, the company's products had come a long way—from general-purpose mice and rats to highly specific research models that targeted specific human medical conditions. It was toward these specific conditions that academics and drug companies were increasingly focusing their research. As demand for outbred rats and mice declined during the 1990s, these ever-improving animal research models provided management with the ability to preserve revenue and charge higher prices.

All the while, the company's business model remained the same: per animal pricing. Development of fifth-generation products began in the late 1980s; that work focused on the genetic engineering of mice with certain diseases. An evolution of staged mutations, this application of genetic engineering was called "transgenics." The first and most notable transgenic model was the patented OncoMouse, a mouse with cancer that was genetically engineered by researchers at Harvard in the late 1980s. OncoMouse was a proprietary model owned by Harvard and its commercial sponsor, DuPont. CRL and laboratory researchers could use OncoMouse, but only under very restrictive licensing terms. Those terms made it difficult for CRL to grow a viable product line. Although some "open source" or unrestricted transgenic models were available, few reached a level of utilization adequate to support a CRL product line.

Rather than give up on the technology, CRL thought of a new way to leverage it through a different a new business model: it would offer genetic engineering services to research laboratories using "open source" transgenic mice. Genetic research in mice was expensive, labor intensive, space consuming, and highly specialized. CRL executives concluded that if they could provide this capability, researchers in hospitals and pharmaceutical companies would be eager to procure their services. CRL went to market with this new service in 1987, marking a watershed in the company's business.

CRL's shift from products to services accelerated during the mid-1990s. Instead of delivering rats and mice, it was delivering the results of experiments and studies. By the early 2000s, CRL was providing expertise in the areas of genomics and proteomics as applied to animal models, emerging fields of drug discovery. As service volumes grew, the company recruited more and more scientists with advanced degrees—veterinarians with postdoctoral training and laboratory science certification, molecular biologists, microbiologists, and medical doctors.

CRL's migration into more profitable areas of the value chain continued. From drug discovery services, it moved into preclinical drug testing in a variety of animal research models. That required expertise in toxicology, pharmacology, pathology, and other specialties. Each of these moves involved a substantial investment.

To support its move into services, CRL made a series of selective acquisitions, buying niche service providers in drug discovery and development areas. It also expanded its global reach through a deal with Scotland's Inveresk Research Group, a provider of preclinical and clinical services. This was the final step in the progression to human clinical trials management, from Phase I (a small number of healthy patients in a hospitallike facility) to Phases II and III (large numbers of health and sick patients). CRL could then claim to be a provider of all significant nonproprietary steps that a potential drug candidate must take toward to final federal Food and Drug Administration approval. Today, CRL has its own Phase I facility—a "mini-hospital" for human patient testing. It also designs and manages clinical trials conducted at hospitals, clinics, and doctors' offices on behalf of biotech and pharmaceutical clients.

By 2006, CRL's business model had truly changed. Annual revenues exceeded $1 billion, of which rat and mouse products—the old business—

represented only about 25 percent. Preclinical and clinical services dominated the revenue mix. Both areas were highly profitable, and these endeavors had a healthy effect on the company's stock price, which rose from $16 at CRL's initial public offering in 2000 to over $50 in 2005. Jim Foster, the founder's son, and chairman and CEO for the previous decade, was named CEO of the year by *Fortune* magazine. Clearly, for CRL business model innovation had proved a powerful engine for enterprise growth.

Moving from a Capital-Intensive Business Model to a Services Model

Commoditization is one of the most powerful motivators of business model change. We observed that in the case of LincolnRe, whose market was invaded by rivals eager to compete with standard products on price alone. Commoditization was also a rationale for Charles River Labs to move upstream from generic rodents to more specialized versions—and eventually into highly technical services. Commoditization inevitably leads to a pricing slugfest among traditional competitors. Thin margins, if not outright losses, are the usual result.

One way to escape this situation is to move elsewhere in the value chain. In some cases, that means moving into some service capacity. In the right circumstances, that move can improve profit margins and give a company an opportunity to step away from capital-intensive operations. A supply management company I studied, which we will call Synergtx, provides an example.

Synergtx was driven to change its business model by commoditization. Many readers may find their companies facing similar pressures in maturing markets. This company opted out of a fairly standard printing business in favor of a strategy for linking suppliers, manufacturers, and customers with a host of global supply chain management solutions.

The company started as a capital-intensive, high-volume printer of manuals for the computer and electronics industries. It owned printing and duplication plants in North America, Europe, and Asia. Companies such as Microsoft, Adobe, and Apple outsourced their printing and CD duplication activities to Synergtx. The launch of Microsoft Office in 1995, which came with many user manuals, created a huge volume of business.

Because companies like Microsoft sold their software through computer hardware manufacturers (OEMs), Synergtx not only kitted the manuals and CDs but also shipped the finished product directly to the OEMs. The OEM channel created additional needs. Microsoft, for example, had to know the exact number of copies of its software sold through these OEMs on a quarterly basis so that it could correctly invoice each one. This was hard to do well. Synergtx stepped in and developed a computer system that maintained a precise accounting of licenses sold through to various OEMs and reported the data back to customers such as Microsoft. This made Synergtx much more than a supplier and more like a business partner with its customers; its information was an important part of the revenue-generation process. In fact, this service was so successful that by the turn of the millennium Synergtx was doing about a billion dollars in annual revenue.

During the mid-1990s, however, offshore contract manufacturers surfaced in great numbers and heavily discounted their work in order to build volume. The result: Gross margins slumped to less than 20 percent of their high-water mark. Synergtx's management knew it had to do something different or live with the same type of profitless prosperity that LincolnRE had faced.

Management created a vision to become an outsourced supply chain management services provider. The vision was to be the "first to touch" to "last to touch" for "clients" such as Adobe or Microsoft and their own end-user or corporate customers. This meant developing capabilities in order taking, fulfillment, support, accounting, and even customer returns. This entire spectrum was branded as an e-fulfillment service. Synergtx changed its business model to one of transactions-based services. Management also sold off its existing printing, CD duplication, and kitting plants to low-cost suppliers, thereby dramatically changing its balance sheet and producing a much more attractive return on capital for equivalent amounts of revenue.

The transition did not come for free. Management invested heavily in the development of processes and computer systems for a suite of services such as program management for new product launches, Web design, online payment processing, inventory and sales reporting, demand planning, shipment and fulfillment, software license administration, and product returns handling. It was a dramatic value chain migration, as so aptly described by James Quinn in the *Intelligent Enterprise*.[6] Solution centers were established around the world. The company also provided telephone customer support for the end

users of its customers' software and electronics, and even began handling the messy business of customer purchase returns—all for a fee.

Thus, a highly capital-intensive, high-volume business model—one suffering margin erosion—was transitioned to a service model, with high levels of recurring revenue and a much more intimate relationship with key customers. The differences between the two business models can be seen in FIGURE 9.2, a summary P&L for the company during its transition from the old printing business to the new supply chain management business. The costs of materials for the new business were about half those of the printing business as a percentage of revenue, and gross margins (39 percent) were twice those of the old business—even after staffing customer service centers around the world. The new service business model required heavy administrative costs in labor and computer systems, but even then, profitability (EBITDA, earnings before income taxes, depreciation, and amortization) was twice that of the old model.

	Product	Service	Total
Revenue (in $millions)	450	110	560
Cost of Materials	250	32	281
Margin after Materials Purchases	200	78	279
% of Sales	**44%**	**71%**	**50%**
Cost of Production	121	36	157
Margin after Production	79	43	122
% of Sales	**18%**	**39%**	**22%**
SGA Expenses	59	30	88
% of Sales	**13%**	**27%**	**16%**
EBITDA	21	13	34
% of Sales	**5%**	**12%**	**6%**

FIGURE 9.2 A Business Model in Transition

A Template for Framing Business Model Conversations

The business model innovations described here are just a handful of the many I uncovered in my study of enterprise growth. Other companies pursued channel innovations, such as the Web or network marketing (home shopping parties). I once encountered a Web startup that searched through four very different business model transitions: from specialty online exchange, to superstore online exchange, to B2B software infrastructure provider, to software tools vendor. At one point, it had a market capitalization of over $8 billion; a few years later, it was gasping as part of the "living dead."[7]

If changing from one business model to another is difficult, so is selling the idea of business model change to senior management. Like most people, executives are less comfortable with the new and uncertain than with the old and familiar; they are inclined to view new ideas through lenses suited to older ways of doing business. In large, mature corporations, executives instinctively think of a new venture as already being a $100 million to $200 million business. They assess new opportunities with the same financial measures (internal rate of return, return on invested assets, and so forth) they apply to the company's established businesses. They forget that today's mighty oak trees were yesterday's puny saplings, whose growth required years of tender loving care. In these cases, one of the innovation team's challenges is to get its senior executives to look at their new business model with fresh eyes.

To help communicate business model change, I show the concepts in figures 9.3, 9.4, and 9.5, which can collectively be considered a business model planning template.

— FIGURE 9.3: The first figure positions the business model as the link between the business strategy and the projected financial outcomes of the venture. The key strategic decisions are enumerated. Business strategy: the target market, target users or positioning of the new product line or service, the types of products and services to be provided, and the best channel for reaching users. The desired financial outcomes are best expressed in conventional financial statements, such as a projected P&L, a cash flow statement leading to net present value, and a capital plan that, when linked with the P&L, provided measures of projected return on assets.

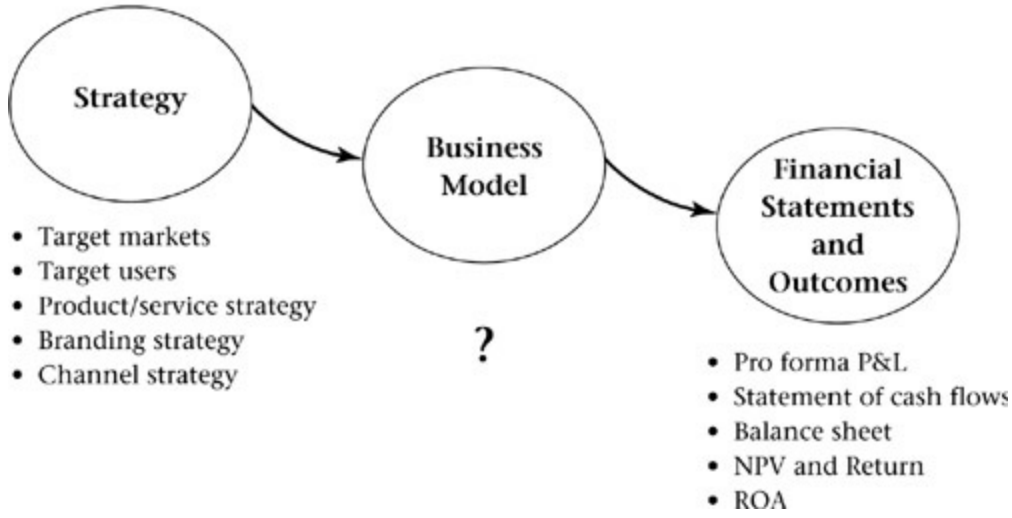

FIGURE 9.3 Thinking about Your Business Model as the Link between Strategy and Financial Outcomes

— FIGURE 9.4: This second figure lists key questions with respect to defining the business model. Many of these are straightforward; others are subtler. The answers to these questions might well show that you have defined a business strategy that is financially either unattractive or unfeasible. At the very least, most executives will want you to consider how to build recurring revenue into your business model and show a path to profitability that does not require a herculean investment in assets or other forms of infrastructure.

— FIGURE 9.5: This last figure simply recasts the prior two figures into a planning process. Project financial statements can easily a lead a team to reshape its business model, and changes to a business model can dramatically affect a firm's strategy, to whom it sells, what it sells, and its branding.

Business model decisions—the answers to the questions in FIGURE 9.4—can have an enormous impact on an innovation's need for capital and on the operating outcomes from commercializing the new product or service. These factors then lead to the basic profitability characteristics of the business: time to market, profit, how profits ramp with revenues, and whether the business is going to be a high-margin, low-volume business or a low-margin, high-volume business. These decisions cannot be made lightly or by defaulting to what the business has always done in the past. Rather, figures 9.3, 9.4, and 9.5 should

be the basis of intensive discussions between the innovation team and its executive sponsors and, perhaps just as important, run by key prospective customers and suppliers.

- Are we selling just products, services, or a combination of both?
- Can we get recurring revenue from the same users? How much is it?
- What are our streams of incremental or add-on revenue? Can we resell third-party products?
- Is there a production requirement, and what do we do in-house versus outside?
- What is the best channel to achieve market penetration and learning? What are the incentive structures needed to make that channel dynamic?
- How much is it going to cost to execute our brand strategy? Are we building a new brand?
- How many smart people do I need to engineer the product or systems? Do I need any?
- What is our time to first dollar? How quickly can we get to market?
- What is our path to profitability? How much do we have to invest (how large do we have to scale and how much variety does our product line have to offer) in order to achieve profitability?
- How does the business scale in terms of production and selling? Who will it take to scale it?
- At the end of the day, does this leave us as capital intensive, or nonintensive, business? Do we have reasonable access to the capital required?

FIGURE 9.4 Questions Driving Business Model Design

Reader Exercises

This set of reader exercises aims to help you become more facile in planning innovative business models.

Exercise 1 To get started, try your hand on Apple, Inc. Work the iPod example described early in the chapter through the FIGURE 9.4 template. What is the

target market and just how big is it? Describe the primary target users and their appetite for new and varied music. What are the products (manufactured), what are the services (the music), and how is each priced and distributed (channels)? Accessories sold by Apple and third parties are yet another important revenue stream associated with this business. Do a Google search on Apple's iPod sales, apply a traditional 40 percent manufacturing cost to the business and royalties of 5 percent to music supplier, and you will see the model unfold. Then compare it to the traditional norm of a music player manufacturer. A comparison of the two very different business models should be telling.

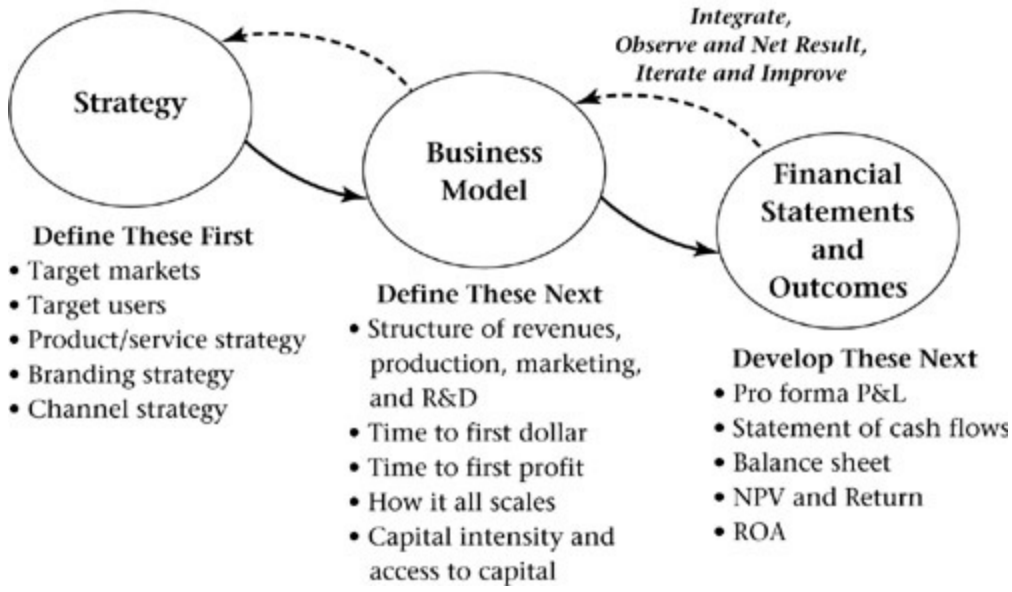

FIGURE 9.5 The Business Model Planning Process

Exercise 2 Take a successful product line or service innovation in your industry—one whose traditional business model was tweaked or transformed. Apply the template once again, first to the traditional business model and next to that of the successful innovation.

Exercise 3 The ultimate challenge, of course, is to apply the template (FIGURE 9.4) to your own new market application. Once again, take the business model template and apply it to the new product line or service that you are considering. What is the conventional product positioning for offerings in your company? How might your new idea be different? What are the traditional cost

structures within established businesses, and how might yours be different? Does it make sense to use an external manufacturer, and if so, what are the implications of that for the business model? How are other product lines or services marketed? What might you do that is different, and what are the implications of that for initial launch and subsequent scale? This applies not just to channels but also for promotion and communications.

As you tackle these tough questions, do not be too quick in projecting revenues or profits; instead, think broadly and try to integrate across the three columns of the template.

We will soon turn to more detailed methods of creating elements in the template's third column: projected financial statements and measures of financial performance. But first, let's turn to a number of new market applications launched by one of the world's largest snack and pet foods manufacturers: Mars. Each represents a departure from that company's tradition business model. As you read about these innovative new product lines, notice how attention to new users and new uses helped Mars create higher margin, premium-value businesses.

Notes

1. Andrew Hargadon and Robert Sutton, "Building an Innovation Factory," *Harvard Business Review*, 2000. 78(3): 157–66.

2. I consider the architecture of Web-centric software as the generation of dynamic HTML Web pages from diverse media sources. It provides a great, thin-client interaction between software vendor and user. The emerging Web architecture, referred to as Web 2.0, is a much more interactive, participatory framework in which software is a service, loosely coupled with many other software services, and constantly refreshed and enriched by those using these services. For me, Web 2.0 is an implementation of the thinking of Kevin Kelly's communities of software developers and users. See Kevin Kelly, *Out of Control* (Reading, MA: Addison-Wesley, 1994).

3. Siebel, the market leader in enterprise CRM and now part of Oracle, developed and launched its own "on demand" version. At the time of this writing, however, it remained behind the newer entrant, salesforce.com, in

terms of market penetration in the Web services space for CRM.

4. See www.oaaa.org/outdoor/facts/, accessed January 18, 2006.

5. Marc H. Meyer and Arthur DeTore, "Creating Platform-Based Approaches to New Services Development," *Journal of Product Innovation Management*, 2001, 18: 188–204.

6. James Brian Quinn, *The Intelligent Enterprise* (New York: Free Press, 1991).

7. Marc H. Meyer, Neil de Crescenzo, and Bruce Russell, "In Search of a Viable Business Model," *International Journal of Entrepreneurship Education*, 2004, 2(2): 31–43.