

THE
STRATEGY
MACHINE

*Building Your Business
One Idea at a Time*

LARRY DOWNES



 HarperBusiness
An Imprint of HarperCollinsPublishers

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The dictionary said that inertia was a property of matter, by which matter tends, when at rest, to remain so, and when in motion, to move on in a straight line. Finding that his mind refused to imagine itself at rest or in a straight line, he was forced, as usual, to let it imagine something else; and since the question concerned his mind, and not matter, he decided from personal experience that his mind was never at rest, but moved—when normal—about something it called a motive, and never moved without motives to move it.

—Henry Adams, “*Vis Inertiae*” (1903)

PREFACE

Strange Tales of the New Economy

In the three years since I completed *Unleashing the Killer App: Digital Strategies for Market Dominance*, the mania for digital technology spread far beyond the modest world of business strategists and into private investing and the public markets. At the same time, it has leapt from start-ups and technology companies to the executive suites of the most staid businesses in the most stable of industries. By the beginning of 2000, even my retired Aunt Dorothy was writing to ask whether I thought she could make money by changing her last name to Com and claiming to be the original “Dot Com.”

The festive mood changed abruptly in March 2000. That’s when Judge Thomas Penfield Jackson issued his opinion in the ill-conceived antitrust suit against Microsoft, which was in many ways an indictment of the way high-technology companies had operated for 25 years. Jackson sounded a particularly loud wake-up call for investors, who began to wonder if Washington’s efforts to help what was being called “the new economy” would instead kill the goose laying the silicon eggs. After two and a half years, boom turned to bust.

Ventures that had been launched with plans to reach profitability in five years were suddenly told to reach it in the next quarter. Strategies were scrapped, desperation set in, and companies failed. Day traders bailed out of public Internet companies and venture capitalists hunkered down with their existing portfolios to see which of their companies could be salvaged.

Like Captain Louis Renault, the character played by Claude Rains in *Casablanca*, investors were “shocked, shocked” to discover that they had sunk millions of dollars into companies that were little more than concepts hatched in first-year business school courses (more likely after class). They had given their money to kids who knew nothing about technology, let alone operating a business larger than a paper route.

Some ideas were just plain bad. Internet incubator E-Companies famously spent \$7 million simply for the rights to the Internet *address* for “business.com.”

The New York Times Magazine ran an admiring cover story in the fall of 1999 about the day-to-day activities of a group of entrepreneurs who had launched a company called “The Man,” a dot-com focused on teaching affluent young men the fine points of manipulating women. The-Man.com was to be a “lifestyle Website” that would sell everything needed by a first-rate Lothario. “This could be a really, really major public company,” the *Times* quoted twenty-something CEO Calvin Lui. The company ran through \$17 million and shuttered its Website less than a year later, without ever posting the valuable “content” it had promised would draw shoppers.

A more sinister story was that of Pixelon, a Silicon Valley company that was building specialized software to compress and transmit high-quality video from its customers’ Websites. The company received millions of dollars in venture funds from seasoned technology investors, based largely on the strength of patents held by the founder and CEO, Michael Fenne. The company, trying to establish its “brand” and build “buzz,” spent nearly all of the proceeds of a \$20 million round of financing on a “launch party” for Silicon Valley insiders which included live music from Kiss, Tony Bennett, the Dixie Chicks, and The Who.

The party was not their worst excess. It turned out there were no patents or even patentable ideas. The CEO, whose real name was David Stanley, was wanted in three states for various frauds, including bilking parishioners at the church where his father was the minister. Pixelon was run as a cult, with the CEO administering spankings to his senior executives. Only after the money was gone did the investors pay a visit, police in tow, to turn their entrepreneurial partner over to trial.

As the French say: “The more things change, the more they stay the same.”

Disasters like the Internet calamity have happened many times before in Silicon Valley, though never on quite the same scale. In the mid-1980s, fueled by the work of a few leading computer science professors at Stanford, MIT, and Carnegie-Mellon, a similar mania developed for companies exploiting artificial intelligence (AI), the ability of computer software to learn and exhibit sentient behavior. Investors began to outnumber attendees at meetings of the American Association of Artificial Intelligence, and

cover stories about “revolutions” appeared in *BusinessWeek*, *Forbes*, and *Fortune* magazines. Companies were founded and immediately began to jockey for position in establishing market dominance.

Few people remember Teknowledge, IntelliCorp, The Carnegie Group, Aion, Gold Hill, Symbolics, or Thinking Machines, Inc. They made the hardware and software, developed the “expert systems” and “black-board architectures,” and created the consulting firms to help traditional businesses learn how to transform themselves into early adopters. In their own more modest and less criminal way, they were TheMan.coms and Pixelons of their day. Venture-backed and run by eager young men and women with celebrity board members, most had inexperienced management, no business plan, and little sense of the difficulties of selling innovative new solutions to traditional companies.

And sure enough, all of them went bust. During the AI boom, I was working as a consultant at what was then Arthur Andersen & Co.’s consulting division, trying to help Fortune 500 clients find uses for the products of these companies. It became clear one day that this was a fool’s errand. My colleagues and I were meeting with the CEO of IntelliCorp, the leading developer of software for expert systems—applications that used databases of rules to mimic human experts and make intelligent decisions and recommendations.

Up until then, IntelliCorp had written its software exclusively for high-end, specialized AI computers and sophisticated applications such as credit scoring (American Express) and diagnosing problems with oil drills (Schlumberger). If you simplify your product, we told the IntelliCorp management team, and make it work in conjunction with existing applications and databases, the range of uses would explode, and so would your market.

“We won’t do that,” the CEO told us. “Our engineers are only interested in solving hard problems.”

Investors in Intellicorp and other AI companies must have been hearing a similar message, for just as quickly as the floodgates were opened, the money dried up. The AI companies closed their opulent palaces on El Camino Real in Palo Alto and Route 128 in Massachusetts, and the business press began to rail against the arrogance of the already-dying industry. The “AI Winter” had begun.

Aside from scale (no more than \$1 billion was sunk into artificial intelligence), the AI Winter differs from the Internet bubble in one key respect.

The funding for companies like IntelliCorp was almost entirely private. Most never sold stock to the public, so public markets were not affected by their rise or fall. Individual investors shared neither the risk nor the potential reward. In large part, the failure of the AI companies was absorbed by the venture capitalists who simply offset their losses against other ideas that played out better—home computers, perhaps, or advanced video games—exactly what venture investors are supposed to do.

Combatants in the Internet revolution appear to have learned nothing from the example of AI, for they have repeated all of the same mistakes, and done so on a much more ambitious and expensive scale, with one important difference. For better and for worse, the public financed a significant portion of the Internet craze. In that regard, it is unique; indeed, it represents the first time in the history of capitalism that the basic development of a new technology has been funded in large part by public investors.

In previous waves of information technology, whether software, hardware, or services, the early stage (and therefore high-risk) investing was done by a combination of government, universities, and private investors. Only after a company had established its products, its distribution channels, and its markets—and nearly always *after* it became sustainably profitable—did it offer its shares to the public.

With Internet companies, the public jumped right in. Why? Both investors and the media became mesmerized by the stock price of the first Internet IPO, that of now-defunct Netscape Corp. The company offered a modest number of shares to the public in 1995, and the price was quickly driven up in multiples. The feeding frenzy began. The public demanded the opportunity to become, in effect, venture investors themselves, and the companies, investment banks, and lawyers fed them hundreds of offerings over the 24 months that followed.

So much money was flooding the markets that companies like TheMan.com, Pixelon, and dozens of others, equally ill-conceived, received funding, went public, and saw their stocks balloon into the stratosphere, yielding temporary values in the billions of dollars. When the first dominos fell, the investing, business, and popular media, which had fueled the riot for Internet stocks, turned an abrupt about-face, performing a second disservice by calling the new economy a bubble that had burst, inspiring another kind of panic in the hearts of the inexperienced investor.

I focus on the financial aspects of the Internet to make an important point about the actual state of the Internet revolution. The rise and fall of

companies and their stock prices has largely dominated the public's understanding about what that revolution means. But it is only a part of the story and a part that has been misunderstood both on the way up and the way down. Even as each shuttering of a Website is reported with ghoulish fatalism, we should remember that in the same year that the Internet bubble "burst," worldwide Internet use tripled (from 6 to 18 million users) and U.S. Internet commerce grew to \$250 billion, \$45 billion in consumer purchases alone. America On-Line acquired Time-Warner (and not the other way around), and even at their 52-week lows Amazon was still worth over \$5 billion, eBay nearly \$20 billion. During the first three quarters of 2001, long after the bubble burst, venture capitalists invested over \$25 billion in startups, far more than they spent in 1997 or 1998, when the Internet was first taking off.

The rest of the story is every bit as dramatic, and much more valuable for those who run businesses rather than simply invest in them. The rest of story is the subject of *The Strategy Machine*.

The Internet and related technologies really are part of a revolution in business and beyond. The "real" revolution is transforming industries and putting traditional assets at risk as it creates new ones. It is doing so not just for the benefit of entrepreneurs and startups, but for oil companies, insurance companies, grocery stores—even government agencies—in North America and around the world.

It is not the revolution of a stock market with violent mood swings. It is not a revolution that pits old economy against new economy, in which only one will win. Above all, it is not a technology revolution but a business revolution, perhaps the most serious expansion of and challenge to capitalism since James Watt perfected the steam engine and launched the Industrial Revolution.

This is a book about the real revolution, an Information Revolution, that continues—indeed accelerates—beyond the meltdown of stock prices and the failure of foolish investments. It is a story of managers in a range of industries using information technology strategically—that is, to make their business more profitable, in ways that can be sustained for years to come—learning sometimes painful lessons about how to implement new approaches to operating their companies. It is a story about how to overcome surprising internal as well as external obstacles.

If you are one of these managers—or if you would like to be—this book will help you succeed in the long run with a winning portfolio in the *next*

economy. Regardless of the kind of business or the size of your company, whether you work in operations, sales, or finance, or whether you are the CEO or a manager in training, the tools in this book will teach you how to innovate on a daily basis, how to unlock value lost in your balance sheet, and how to profit from the transformation going on right now in your industry.

The artificial intelligence revolution ended, but much of the technology that it spawned lived on in new forms, and led to successful new products, services, and companies. It did change the world, though in far more subtle ways than its designers thought. The same will be said of the Internet revolution. It will not be the revolutionaries, but the students of their history, who will profit from the sacrifices.

CONTENTS

PREFACE:		XI
	<i>Strange Tales of the New Economy</i>	

INTRODUCTION		1
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PART I



THE INFORMATION REVOLUTION

Why a Strategy Machine?

1 A DISTANT MIRROR		7
	<i>Lessons of the Industrial Revolution</i>	
2 DISPOSABLE COMPUTING		20
	<i>Drivers of the Information Revolution</i>	
3 THE METAMORPHOSIS		32
	<i>The Stages of Transformation</i>	
4 THE INFORMATION SUPPLY CHAIN		55
	<i>Creating New Value from New Information</i>	



PART II

THE STRATEGY MACHINE

Putting the Pieces Together

5 THE STRATEGY PORTFOLIO	75
<i>Blueprint for a Strategy Machine</i>	
6 INVISIBLE CAPITAL	97
<i>Turning Products into Services</i>	
7 PERPETUAL MOTION	115
<i>Starting Up the Invisible Capital Engine</i>	



PART III

THE EXECUTIONER'S SONG

Reinventing Your Business Every Day

8 THE SOCIOLOGY OF STRATEGY	145
<i>Confronting Grief, Overcoming Inertia</i>	
9 INTERNAL CATALYSTS	163
<i>Overcoming the Inside Obstacles</i>	
10 EXTERNAL CATALYSTS	187
<i>Overcoming the Outside Obstacles</i>	

ACKNOWLEDGMENTS	215
CRITICAL READING	217
<i>A Brief Bibliography</i>	
INDEX	221

INTRODUCTION

When machines determine your strategy, turn strategy into a machine.

Forget the Internet and the World Wide Web. They are only harbingers of the Information Revolution, dominated not by computers doing more things but by more things becoming computers, embedded into whatever you can think of, from clothing to food to the seats on the airplane where you are reading this book (which will also be an addressable object), intelligent products that can send and receive data across a global network—from the factory, from the store, or from your suitcase. Welcome to the age of disposable computers.

Today, an MIT consortium led by Procter & Gamble is testing intelligent product labels that can do just that for about \$5 each. In 2002, the cost will fall to 5 cents. By the time you and I have retired—assuming that concept means anything by then—it will be cost-effective to turn each one of about a trillion items in commerce into computers, which will give us regular reports of their status from the moment they are made until they are finally consumed.

The Information Revolution won't be televised—it will beam its stories directly into our brains, where microchips the size of a molecule will live side-by-side with the rest of our gray matter, helping us see, move, and, if we're lucky, remember.

When machines determine your strategy, turn strategy into a machine.

The Strategy Machine describes a revolutionary approach to running a business, one that has been designed to work in the world of disposable computing. It is an approach being developed and used by companies in every industry. It is an approach that can work for you.

The book has three parts, each of which answers one important question:

Why do I need a strategy machine? How do I put it together? How do I keep it running?

WHY DO YOU NEED ONE?

To understand the future, we start with the past. The Industrial Revolution, which brought us factories, railroads, telephones and just about anything else you can think of, teaches us the folly of plans that assume the world will behave as you expect it to, even the plans of those who did the creating. The inventors of its greatest innovations often failed to find their markets or build companies that could continue to profit from their genius. The real winners were the machines, machines that made other machines, which in turn created and destroyed industries, and always in surprising ways.

The Information Revolution, dominated by disposable computers, is beginning that process anew. Now, however, the metamorphosis will be faster, fed by a tidal wave of new data. Its principal beneficiary and victim will be the supply chain, the integrated set of activities that produce, sell, and distribute products and services.

As companies piece together ever-clearer pictures of their markets, supply chains will be repeatedly dismantled and then put back together. The transformation happens in three distinct stages, just as it did 150 years ago, but with one important difference. All three stages are happening now. As Yogi Berra once said, "It's like *déjà vu* all over again."

In the course of industry transformation, the source of your profits will shift—sometimes subtly but more often in rude jolts—from products and services to information about products and services: Where they are, who is using them, how much they paid, and when they need more.

To answer these questions, a parallel structure, an *information supply chain*, will collect information about every sale, from producers to consumers and back again. The evolving information supply chain is the real source of productivity improvements today, but more important, it is the source of new value tomorrow—new products and services made up of information and sold as information.

HOW DO YOU PUT IT TOGETHER?

When the future is uncertain, as any good investment manager will tell you, hedge your bets. One strategy won't do it, even a good one. You need

a portfolio of strategies, and you need to test all of them at the same time, shifting your focus and your resources as the environment inside the information supply chain stabilizes.

A strategy machine looks for ways to improve your business today, even as it tests new ideas that may destroy that business tomorrow. It scours your balance sheet searching for assets your current plans don't use and probably can't see. Information assets like brand, expertise, and market intelligence are the fuel of the strategy machine, a kind of invisible capital that increases in value the more it is used.

Load up the strategy machine with invisible capital, and it reinvents your business, creating more assets, which can be fed back in for still more capital. The strategy machine is an invisible capital engine, a perpetual motion machine.

The idea of a strategy machine is simple, but its impact on your business is profound. It is nothing less than the merger of planning and execution. The strategy machine is not just how you plan, it is how you run your business—not just once a year or once a quarter, but every day.

HOW DO YOU KEEP IT GOING?

The strategy machine is easy to build, but difficult to operate. It is a machine that creates change, and change may be difficult for some inside and outside your organization to handle, especially when it happens every day. The operation of your strategy machine will be challenged by a host of obstacles that suddenly appear the minute you turn it on. The obstacles take many forms, but in some sense they are just different names for the same force: inertia, the resistance to change.

Companies that can overcome inertia, as we will see, have done so not by eliminating it (that is impossible) but by stealing its power. From high school physics, you may remember that inertia keeps bodies that are not moving from moving, but it also helps bodies in motion keep going. Turn the obstacles around, use them to your advantage, and they transform into catalysts that make the strategy machine run faster.

First and foremost, this is a book about getting things done—constantly testing ideas, developing the ones that work, and discarding those that don't. The tools and techniques I describe have been distilled from real-

world stories of managers at real companies—startups, incumbents, large and small, high tech and low, alone and in combinations.

There is one important word of warning about these examples. Over a hundred different companies appear in the pages that follow, some in leading roles and others in bit parts, some as examples of what to do and some as cautionary tales. None of them will have stopped moving. Even companies that build world-class strategy machines may abandon them later, fail to keep them running, or allow their invisible capital to degrade to the point of information bankruptcy. The stories in this book illustrate decisions that made sense (or didn't) at the time. Nothing more.

If you take one message from this book, understand that the strategy machine will change you along with your company. Reinventing your business is reinventing your career. As you build and maintain your company's machine, you fill the gaps in your own portfolio, find the hidden value of your private supply of invisible capital, and turn personal obstacles into personal strengths.

In the end, you won't recognize your business anymore; but then, your business won't recognize you either.

We start, as revolutionaries often do, with a walk through the desert.