

SILICON GOLD RUSH

*THE NEXT GENERATION
OF HIGH-TECH STARS
REWRITES THE RULES OF BUSINESS*

KAREN SOUTHWICK, *Upside Magazine*



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Foreword

By Geoffrey Moore

Surging beneath the chorus of voices that Karen Southwick has assembled on the following pages is the relentless undercurrent of breathlessness and urgency that lies at the very heart of the place and state of mind known as Silicon Valley. Pressing forward daily, hourly, this frenetic sense of speed and change permeates the entire technology industry, and it is the single most pervasive trait among all the companies profiled in this book. Once it gets into the bloodstream, it doesn't leave. The venture capitalists have it. The entrepreneurs have it. The engineers have it. The service providers have it.

But here's the rub: For the most part, the technology industry's customers do not have it. Oh, a few do—the early adopters, the ones who get courted over and over again—but the average person, be it a services client, a business customer, or a home-based consumer—simply is not in this kind of hurry. So there is a fundamental mismatch between the pacing of the technology industry and that of the people who must ultimately fund its concoctions.

This raises an overriding question about the Silicon Valley business model: If there is such a great mismatch, why and how has the model been so successful? More to the point, is it a temporary aberration or is it an abiding shift in management approach? This book provides the reader with insights about the model that may help answer those important questions. How the country as a whole responds to this, and how the technology industry itself steps up to its future, will have economic consequences for decades to come.

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Let's do away with some simplistic answers. Like, "the customer is always right." Wrong. The customer is a good guide when companies are making continuous improvements to existing technologies. But customers are *not* a good guide when the product is a discontinuous innovation, something which will require major systems reengineering to bring about, which will "change the world as we know it." When asked about such innovations, customers typically say "Great!" during focus groups—and then stay away in droves when it comes time to purchase. In both venues their feedback is simply not useful. As Silicon Valley spends the bulk of its time on just these kinds of products, it has abandoned the steady-as-you-go research and test-market approach to new-market development, and instead runs off spouting its "Ready, Fire, Aim!" philosophy to anyone who will listen. Using memorable anecdotes and profiles, *Silicon Gold Rush* ably demonstrates how this model functions.

But how right can "Ready, Fire, Aim!" really be? Well, surprisingly, pretty darn right—as long as we are dealing in the domain of truly discontinuous innovations. The challenge in this domain is that at the outset there are no known targets or guideposts. The only navigational aid is your own trajectory, and the sooner you start that trajectory—regardless of how inappropriately directed it is—the better off you are. Only after it is started can customers react in a meaningful way to what you have, after which you can begin to see how your trajectory must be altered to truly intersect with their wants and needs. It is a course in white-water rafting, not transoceanic navigation, that is being taught in Silicon Valley, Boston, Seattle, and other high-tech strongholds.

And that's just fine, until you reach the ocean—the broader domain of continuous improvement to established systems, the world of traditional business. It is here that Silicon Valley will be challenged during the coming decade. No other place on the planet has had more success in market formation and in the generation of market cap-

italization. But both these disciplines are forward-looking. Both imply that one can assign stock-market value today to competitive advantages that must be executed against tomorrow. Silicon Valley companies have been unmatched in their ability to generate extraordinary competitive advantages that, if market valuations are to be believed, will give them above average returns for six, eight, ten years to come. I for one believe those advantages are indeed sustainable over those periods—but only if the cultures that bred them can step up to the challenge of becoming enduring institutions.

Here I pause. For I myself do not like the breathlessness of Silicon Valley. I do not like its hyperconnected communications style. I do not like its insistence on being young and hip and hot and hyped. I have this vision of Thoreau and Emerson and Whitman and Dickinson, all calling out to us, all trying to wave us away from some collision course with—what? I do not know. But I am nervous about it.

Here is where I think the significance of *Silicon Gold Rush* comes in. We are indeed in the midst of a gold rush, with all the implications that phrase calls to mind. Such good fortune does limit one's options—you cannot go slowly on the way to Sutter's Mill and expect to find much when you get there. The pace is forced by the situation, as much now as it was 150 years ago. And that pace, in turn, has brought into existence new patterns of wealth formation, new ways to partner and compete, new modes of recruiting, managing, and retaining employees, new ways of conceiving the employment relationship. In the context of hypergrowth markets, I believe these new modes are right on the mark, so the world around the technology industry should take note and take notes.

And after? Well, there's still a lot of here-and-now to get through first, but one thing is sure: The strategy of standing back, of holding these new methods in disdain, of disassociating oneself and one's enterprise from them, causes failure. In business as in football, the West Coast of-

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fense is here to stay, and the East Coast establishment and other economies around the world must absorb it and respond to it, not reject it. Reading and reacting to the ideas in this book is a great way to start. But in so doing, each of these other economies needs to find its own expression of the insights accumulated here, one that integrates traditional strength with new learning. We do not need a Silicon Prairie or Silicon Forest or Silicon Alley—drop the silicon. We need some new element from the periodic table. As Silicon Valley pundits frequently like to note (attributing the notion to Picasso), “Great artists do not copy—they steal!”

Finally, for those of us who live and work in Silicon Valley, this book is a currency check. The ideas in it are what’s happening today. If they are unfamiliar to you, get with them. If you think you’ve “got” them, you’re getting jaded and you’d better look again. There are still a lot of miracles to come from Silicon Valley.

Geoffrey Moore is chairman of The Chasm Group, a consulting firm in San Mateo, California, and a venture partner in Mohr Davidow Ventures. He is author of *Crossing the Chasm*, *Inside the Tornado*, and *The Gorilla Game: An Investor’s Guide to Picking Winners in High Tech*.

Introduction

The New Gold Rush

In January 1848, gold nuggets were first discovered in the American River near the town of Coloma, California. The effects of that discovery were felt for decades after. It was not just a matter of the wealth generated by the mining of the precious metal itself (more than \$2 billion worth before it was depleted). The gold industry caused a whole infrastructure of other industries to spring up around it—employing suppliers and partners and advisers and distributors and assayers and many others. It even hastened statehood for California. Just as important, the gold rush helped to seed the idea that it is possible—through a combination of good luck, hard work, and technology—to get rich quickly. Tens of thousands of would-be millionaires poured into California from all over the world. But very few of these miners actually struck it rich: They found that the work was tougher than they had expected and that the chances of any individual hitting it big were very small.

In 1998, 150 years later, we are experiencing a similar frenzy of commercial activity that I call the “Silicon Gold Rush”—meaning the industries and companies and markets that have sprung up around the essential ingredient of the digital revolution, silicon. It, too, originated in Cali-

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ifornia, and centers now in the companies of Silicon Valley, south of San Francisco, although there are significant outposts in areas like Seattle, Boston, New York, and Austin, Texas. Just as the California Gold Rush opened a whole new market and created a whole new mindset, so the Silicon Gold Rush has changed the face of American (and global) industry, and spawned the creation of a set of industries and businesses that support and surround it. Equally as important, the companies involved in the Silicon Gold Rush structure themselves and conduct their business in substantially—even radically—different ways than companies that we think of as “traditional,” by which I mean the divisionalized hierarchies that have been the norm in this country for many decades.

The success of these silicon-based companies—from the tiniest start-up to the grandfather of them all, Hewlett-Packard—has deeply influenced traditional organizations and forced them to think about, and often adopt, the new ways of operating. Everywhere you look today, older companies and those in traditional industries are adopting the organizational structures, business strategies, and operational methods of the Silicon Valley gang. In other words, the technology companies are changing more than the markets in which they operate—they are transforming the way America does business.

In this book, I explore these new structures, strategies, and methods through the stories of 23 technology companies, most of them based in Silicon Valley itself. For a number of reasons I have chosen a start-up venture, Cross-Worlds Software, to take a starring role in the book. The story of this fledgling corporation contains many of the elements that make the technology industry so exciting and instructive to watch. They include the scramble for financing. The glitzy launch events. The feverish jamming to move the initial product from design to manufacture and into the hands of paying customers. The “spin cycle”—the combination of self-promotion and media hype that can create a perception of momentum—even before there

is actual movement. The colorful cast of characters. The nontraditional work environment. The high stakes and big money. The meteoric growth. The constant risk of failure, radical change, takeover, buyout, and burnout.

I have been following the silicon scene and the companies that compose it for more than a decade, first as a business writer for the *San Francisco Chronicle* and, over the past six years, with *Upside* magazine. It has been fascinating and thought-provoking to get to know these companies intimately, through repeated visits to their sites, interviews with key players both inside and outside the companies, and through my research into their pasts, their performance, and their prospects.

My goal for this book has been to synthesize what I have observed over the past decade and what I have learned in more than 100 in-depth interviews with executives of the 23 companies and with other knowledgeable observers of high technology. The result is 10 chapters and a conclusion, each of which focuses on a key issue that pertains to all of these companies, to a greater or lesser degree, and that also has relevance to businesses and organizations outside the world of technology. The book is organized as follows:

- Chapter 1 provides an overview of the silicon environment, its size, scope, potential, and values through the experience of launching a start-up company.
- In Chapter 2, I examine the changing role of the key leader, usually the CEO. In technology companies, the CEO tends to play a far different role than the chief executive of a big, traditional hierarchy.
- In Chapter 3, I talk about the special concerns of small companies that want to grow fast but without losing their entrepreneurial spark in the process.
- Chapter 4 explores the paradox of large technology companies that seek to leverage the power of their

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size while also maintaining the attitude of smallness and retaining the flexibility and speed that characterized them in their early days.

- Chapter 5 describes how technology companies must stake out markets early, and be prepared to re-define them on the turn of a dime.
- In Chapter 6, I talk about this strange and wonderful “spin cycle” that can create momentum for an unknown company virtually overnight. Today, it goes beyond the standard mix of press coverage, trade shows, special events, and advertising—it requires new ways to involve partners and customers and key influencers in creating an image and building a reputation.
- Chapter 7 shows how the customer has become deeply integrated into the development and marketing processes of technology companies. No longer is there a gap between supplier and customer. Indeed, today’s toughest skeptic can be tomorrow’s best customer.
- In Chapter 8, I look at the way technology companies organize themselves internally and go about getting work done. Company culture involves far more than the color scheme of headquarters or the dogs romping in the cubicles. It’s about how members of the company think of themselves and how they form, define, and manage relationships among themselves.
- Chapter 9 focuses on one of the most intriguing aspects of the technology industry: the mergers and alliances that are a constant feature. Why do these companies find it necessary to buy, merge, sell, and consume each other? What makes for a successful merger? What can lead to failure?
- In Chapter 10, I dispel the notion that success is guaranteed in the technology industry, by examin-

ing companies that made a wrong turn and are now trying to get back on track. More than half of technology start-ups ultimately fail. What are the most common catastrophes that befall technology companies? What can they do to improve their chances of survival?

- The conclusion revisits the start-up company that we introduced in Chapter 1.

I've written this book for executives, managers, and observers of technology and nontechnology industries alike because, increasingly, *all* global business is caught up in the rush generated by the high-technology ventures. It is a rush of activity that directly involves computers and all the associated software and services that surround it. It is a rush to move communications and customer interaction and sales to the Internet, the newest field of dreams. It is also a rush generated by the amazing and pervasive changes and innovations that the technology companies have brought to the world. And, finally, it is a rush simply because it is so fast-paced and so intellectually intoxicating that no businessperson can escape its power.

I hope that you sense—and benefit from—the excitement coursing through these pages.

1

Chapter

A Star Is Born

The best way to understand the power and potential of Silicon Valley technology companies today is to examine how they are conceived and born. It used to be that new companies were founded by scrappy entrepreneurs—often with little or no business experience—in a garage or warehouse, with little or no capital. Some new companies still emerge that way, but it is no longer the most common or desirable way to get started.

Consider the “launch” party of CrossWorlds Software, a technology start-up based in Burlingame, California, a community on the northern edge of Silicon Valley. The lavish party takes place in June 1997, and its cost probably exceeds the entire seed capital of many an earlier start-up. It is held not in a garage or a warehouse, but on the 15th floor of the Merchants Exchange Building in San Francisco’s financial district. The event has been planned and is being coordinated by a production firm hired by CrossWorlds. A four-piece jazz band plays. Scores of hostesses scurry about, greeting distinguished guests, pinning on name tags, and escorting people to the bar.

The party has succeeded in attracting an audience of industry heavyweights and influencers—the men and women

who have helped turn many a silicon dream into reality. The well-known executives from the high-profile technology companies arrive later than most of the other guests. The first of the executives to enter the room is Andy Ludwig, who has managed two major technology companies, Bay Networks and SynOptics. Others include Dave Stamm, John Luongo, and Joe Liemandt, all software company presidents; and financial mogul Frank Quattrone of DMG Technology Group, whose pronouncements can sink a company or raise it to new heights. The energy in the room is palpable. Casual conversations, both business and social, pulsate with the intensity of an industry whose wealth, power, and the potential for expansion and explosive growth are seemingly unlimited. The guests have come to listen and learn, to schmooze, and to size up CrossWorlds as a potential partner or investment.

CrossWorlds' tagline for the event is simple and prodigious: "We're entering the promised land." The promised land it refers to, of course, is the territory staked out by the likes of Microsoft, Netscape, and Cisco Systems—companies that have developed powerful technologies, opened up new markets, generated billions of dollars in market value and revenues, created thousands of jobs, turned hundreds of employees and investors into millionaires, and even changed the way business is conducted. Every day, in the technology capitals of Silicon Valley, Seattle, Boston, and Austin, entrepreneurs and investors get together to hatch the big idea that they hope will eventually become the next Microsoft or Intel.

At 5:00 p.m., the hostesses finish seating the hundreds of guests in a presentation room adjoining the reception area. The lights dim on the elaborate stage. The chatter dies and a video appears on the center screen. It features prominent technology leaders and opinion shapers, including Peter Kastner from Aberdeen Group, as well as executives like Dave Duffield and Heinz Roggen-Kemper from respected behemoths PeopleSoft and SAP AG, respectively. Their role is to describe and praise CrossWorlds' technology.

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Part of the video features an interview with CrossWorlds' founder and chief executive, Katrina Garnett, conducted by local TV host Brian Banmiller. Garnett is polished, attractive, and articulate, and exudes an air of confidence, experience, and knowledge. Garnett spent 10 years with Oracle and Sybase, two important players in the hotly competitive database industry. When she left Sybase to found CrossWorlds, she was a general manager/vice president. Garnett and her husband, Terry, have committed \$5.5 million of their own money to the development and founding of CrossWorlds. They have also raised funds from several prestigious investors, including Venrock Associates—the Rockefeller family's venture fund—and the accounting powerhouse Ernst & Young, along with companies such as Compaq, SAP, and Intel. In all, CrossWorlds has amassed more than \$46.6 million in capital, which puts it in the top tier of private financing. The average amount raised by a software start-up in 1997 was only \$4.9 million, according to VentureOne Corporation of San Francisco.

Garnett explains to Banmiller that she wants to build a major software company to serve what she believes is a new and important market niche, which she calls "processware." As Garnett describes it, Fortune 1000 corporations have been spending billions installing "front-end" systems that run solutions for customer support, payment, and sales. They also have invested heavily in "back-end" systems that handle human resources, manufacturing, and accounting applications. But the front end and back end don't always connect or communicate smoothly with each other, she says, and this can prove troublesome—even disastrous—for companies that need to operate as seamlessly as possible. CrossWorlds' products make communication between these systems not only possible, but relatively effortless.

Garnett outlines the potential market value of CrossWorlds' products by describing the success of the first processware release with test clients such as Hewlett-Packard and Bay Networks. These industry titans were so

pleased with the performance of early “beta” versions of CrossWorlds’ product that they helped the company further develop and prepare it for general release. Garnett closes the interview with the kind of hyperbole that flows in Silicon Valley like wine flows in the Napa Valley. “We’re going to go where no one has gone before,” she declares.

After Garnett’s appearance, DMG Technology Group analyst George Gilbert talks numbers. According to his estimate, the \$13 billion market for front-end and back-end application software will grow to the \$40 to \$50 billion range in the next five years. Processware, Gilbert predicts, could capture as much as 10 percent of that market. That’s \$4 billion!

The presentation ends to thunderous applause. The guests drift back to the bar to analyze, imagine, connive, and consider the promise of CrossWorlds.

■ DRIVING AT BREAKNECK SPEED

CrossWorlds’ initial product could, as predicted, achieve enormous sales. But as successful as the launch appeared to be, it provides no guarantee that the company will live a long and happy life. The founders might have guessed wrong about the importance of the envisioned niche, or about its size. Or the company may suffer problems with manufacturing or product performance. Or its technology could be copied by a rival or a partner, who will outmarket and outsell CrossWorlds and demolish it. But the birth and early childhood of the company reflect how the high-tech industry operates. Technological innovation drives explosive growth that fuels greater competition, thereby creating a need for more advanced technology. And so it goes. This pattern can be attributed to any global business operating in a competitive industry.

The continual emergence of new products as well as new companies accelerates the frantically spinning treadmill that the technology industry is on. Like the Red

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Queen in *Alice in Wonderland*, even mature, well-established companies such as Microsoft have to run ever faster just to maintain their position. The unbridled growth and fierce competitive nature of the high-tech industry demands that management respond immediately to every new turn and development with a variety of strategies, all the while assuring employees and investors that the company has a long-term goal. "High-tech companies operate like they're on a CNN floor, with breaking news every ten minutes," says Ann Winblad, a partner with Hummer Winblad Venture Partners of San Francisco, a leading investor in software start-ups. A former entrepreneur herself, Winblad is one of the most highly regarded venture capitalists in the high-tech industry and is widely known for her ability to pick winners, including Arbor Software and Wind River Systems.

In business, winners are largely recognized by strong leadership, flexible organizational structure, and egalitarian management style. Successful high-tech companies, like those profiled in this book, cultivate their own innovative spirit to create award-winning products, open new markets, advance innovation, and effectively manage the organization—and they do this in the midst of a frenetic, hypercompetitive environment. The technology industry is largely the result of innovations and approaches introduced only recently. Gary Hamel is chairman of Strategos, a consulting company in Woodside, California, and coauthor of *Competing for the Future*, which describes ways that companies and industries can reshape themselves to compete more effectively. "The future is not created by prophets, it's created by heretics, people who have a different industrial model," proclaims Hamel. "In the sense that a lot of the future is driven by what becomes possible technically, people who are able to reconfigure an industry in some new way will be successful." It is the heretics who are willing to tear down the status quo, to eliminate the hierarchical management and command-and-control mentality in favor of a new, still-emerging model.

TEN COMMANDMENTS FOR NEXT-GENERATION BUSINESSES

1. *Shape the company's culture and work ethic.* A shared vision and corporate culture must flow from the top. The CEO must inspire people to join in a greater cause, managing and nurturing the company's knowledge capital.
2. *Maintain a fresh perspective.* Look at your company's place in the world as something ephemeral and transitory rather than assured and permanent. That point of view enables you to embrace change itself as constant and to evolve the qualities required to become an agent of change rather than its victim.
3. *Cultivate knowledge.* Distribute the company's leadership throughout the organization so that each employee is entrusted with higher levels of responsibility and information management—thus satisfying not only monetary needs, but higher-level needs such as self-fulfillment as well.
4. *Develop mind share.* Mind share is a calculated campaign to influence the influencers. To capture mind share—and the most market visibility—complement the company's product innovation with brand marketing initiatives. Proclaim yourself the market leader by leading a paradigm shift, establishing a standard, or positioning yourself as an industry authority.
5. *Eschew formal structures and be a team!* Form teams to decide how to allocate resources, prioritize tasks, and determine a schedule to launch the product. Senior management acts much like a venture capital investor, assessing the merits of relative projects, assigning values, selecting the teams (or at least the team leader), and giving them budgets and

(continued)

TEN COMMANDMENTS FOR NEXT-GENERATION BUSINESSES (Continued)

deadlines. This team concept allows for the high level of flexibility that's essential in the fast-paced high-tech industry.

6. *The customer, not the technology, is #1.* Leading companies tailor their products to meet real customer needs. As soon as a blueprint is ready, customers are invited to give feedback and design advice.
7. *Find the right partners, mergers, and acquisitions.* Technology companies have become more outwardly focused on devising relationships with customers and with prospective alliance and merger partners. In an acquisition, core internal values must be unified among the business partners. Make your company an integral part of a web of relationships, enhancing internal and external growth.
8. *Embrace the unknown.* Even as you're mining your own claim, be ready for the next gold rush, which could occur in an entirely unexpected place. Maybe you can't forecast the location of a new strike, but you can create a company that can move anywhere.
9. *Be paranoid.* The competitive environment in the high-tech industry won't let anyone relax. Know that as soon as you innovate a successful product, you will face a horde of aspiring competitors and must be prepared to act (hence Commandment #10).
10. *Be a speed demon and don't be squeamish.* Technology itself, and the companies that create it, are combining to usher in a new era where management styles and structures are being remade on the fly. Ultimately, what keeps a company going is the vision to cope with speed of market change, technological advances, and emerging business opportunities.

"The future is not created by prophets, it's created by heretics, people who have a different industrial model."

—Gary Hamel, coauthor of *Competing for the Future*

■ LEVELING THE PLAYING FIELD

Technology has the unique ability to eliminate barriers to better business, whether they be related to costs, logistics, productivity, or the market. High-technology companies are particularly adept at tearing down the boundaries found in conventional businesses. "Traditionally, you built your company around some sustainable advantage—proximity to the market or a regulated monopoly or patents," says Joe K. Carter, office managing partner in technology for Andersen Consulting LLP in Palo Alto, California. "Technology is in the process of eliminating all of those." Powerful networking technology allows experts from all corners of the globe to collaborate on a specific project, obliterating proximity barriers. With technological innovation moving ahead at warp speed and savvy entrepreneurs creating new markets, the barriers to financial support have diminished. In fact, the industry is awash in money as never before. In 1996, venture capital firms invested \$5.4 billion in 962 information technology startups, double what they had invested just two years earlier, according to VentureOne. And 1997 saw \$7.1 billion flowing to 1,095 deals. Money from these sources is joined by largesse from the previous generation of technology entrepreneurs, people like Bill Gates and Steve Jobs who, as "angel" investors, push portions of their huge hoards of personal wealth back into the industry they know best.

High-tech companies are among the first to take advantage of technology solutions, enabling them to focus more intently on their products and how these products serve customers. With the playing field somewhat leveled

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given the availability of technology, what can a company do to reach the top of the pack? “You have to innovate faster than the other guys and you have to execute even more quickly,” says Carter. The primary sustainable advantage, then, is speed of execution, which technology companies have elevated to cult status in their efforts to run farther and faster than anyone else. Boasts Gideon Gartner, chairman and chief executive of Giga Information Group in Norwell, Massachusetts: “In our industry segment—information services—it’s possible to invent a new service, announce it, and start delivering it within 24 hours. We would like to be able to change something as quickly as you can put it on the Web.”

“Markets move so quickly that building any kind of bureaucracy is suicide. Anything that slows down product development has to be cast aside.”

—Geoffrey James, author of *Business Wisdom of the Electronic Elite*

■ READY, FIRE, AIM!

Speed and competitiveness are closely intertwined. Regis McKenna, legendary technology marketing strategist and founder of The McKenna Group in Palo Alto, refers to this interconnection as “the continual cauldron of competitive pressure.” This means that the companies that are fastest to market with viable products have the best chance of survival. One management model equates this cauldron-like environment to a living ecosystem where the competitive pressure acts as a Darwinian imperative, forcing companies to make evolutionary leaps at a much faster pace than would otherwise occur. For a technology company, this means that the business must not only keep pace with change, but find a way to anticipate it. “You have to understand trends, how enabling technologies are advancing, and what other complementary technologies might create customer value,” says

Jim Moore, chief executive of GeoPartners Research in Cambridge, Massachusetts, and author of *The Death of Competition*, which expands on the business-as-biology framework.

“Each time there’s an order-of-magnitude advance, the ways you can use technology change radically and your customer base changes, too.”

—Jim Moore, founder of GeoPartners and author
of *The Death of Competition*

To stand still in this new world is death. Digital Equipment is a perfect example of this axiom. A highly regarded innovator of minicomputers (think “mainframe light”) during the 1970s and 1980s, the company faltered when its management could not cope with the evolutionary leap to the personal computer. Today, Digital has become part of PC-maker Compaq Computer Corporation. Digital’s experience proves that moving forward is vital, even if, like the one-celled creature that first lifted itself out of the primordial soup, you don’t quite know where you’re moving. “Previously, you wanted to develop a detailed business plan or blueprint,” notes John Hagel III, a principal with consultant McKinsey & Company in Palo Alto and coauthor of *Net Gain*. “Now,” he adds, “you draw on outside disciplines, like complex adaptive systems or genetic algorithms. Instead of thinking about strategy as a detailed blueprint, you define a set of basic and limited rules that will drive your actions. Then you rapidly act upon those rules and discard the ones that don’t have a lot of success.” Instead of ready, aim, fire!, it’s ready, fire, aim!

As a result, the technology industry, like any frontier, has attracted a new type of executive and a new type of employee—indeed, the two are almost indistinguishable. The key attributes of both include a tolerance for chaos, disdain for hierarchy and politicking, willingness to fail, elevation of talent and brilliance, passion for technology, and naivete about limits. Thanks to a booming job market

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and the financial freedom created by equity participation and generous salaries and bonuses, the traditional managerial structure in high-tech companies has been turned upside down.

■ EMPLOYEES RULE THE ROOST

Consultant, writer, and high-tech philosopher Michael Rothschild is also an advocate of the business-as-biology model. He has pursued this approach through his work at the Bio-nomics Institute in San Francisco and is implementing the framework as president and chief executive of Maxager Technology in nearby San Rafael. Rothschild believes that economic power has always rested in the hands of those who control leverageable assets. It used to be rent, then it was machinery. Today it's information and knowledge—which are no longer the exclusive provinces of management. "People who have the brainpower and skills get to call their own shots," says Rothschild. "They can live where they want and with the lifestyle they want. It's damn close to full personal freedom. If I piss off my employees, within an hour they've got six job offers. If I tell them to stop playing computer games, they would say, 'f--- you,' and leave."

Realizing this, savvy managers engage these take-me-or-leave-me employees personally by binding them to the company's success through stock options and other incentives, which act as a means of sharing both the risk and reward. Technology companies founded in the 1970s and 1980s, like Intel, Microsoft, Oracle, and Cisco, have made millionaires of thousands of their employees—and not just the executives, but also receptionists, assistants, marketing managers, and human resource directors. "The secret of Microsoft is that everybody becomes a millionaire after a certain period of time," says Robert Reid, a principal at 21st Century Internet Venture Partners in San Francisco. Equity—participation in the company through

stock options—is now ground zero for hiring at technology companies. It's proven to be a curse for companies as well as a blessing. "As the bidding for talent goes up, everyone has to offer more," says Reid. "The alternative is to focus on the work environment to a greater extent."

Equity—participation in the company through stock options—is now ground zero for hiring at technology companies.

The concept of employee ownership has become the foundation of technology companies. It is the way in which companies compete for the knowledge worker, who is seeking not just the weekly paycheck, food-on-the-table job security of the past but the skill-expanding job security of the future. Famed psychologist Abraham Maslow would find proof of his theories within high-tech companies. Maslow's hierarchy of needs sets up humanity's requirements as a pyramid, starting with physiological needs at the base and proceeding to higher needs, such as esteem and self-actualization. In the high-technology arena, as well as other knowledge-based industries, the basic needs have been satisfied; only the higher ones remain to be fulfilled. These include involvement in satisfying work, influence over the end-product, and a sense that what you do has some impact on your company, your customers, and your industry.

Walk into almost any high-tech company and you typically will find employees in casual dress; foosball tables sharing space with the refrigerator (well-stocked with Cokes) in the kitchen; prominently placed containers of free candy (all that sugar gives you a short-term rush); knots of people engaged in seemingly random, animated discussions; walls bearing photos of pets, family members, and coworkers; cubicle workspaces marked with interchangeable nameplates; and cutely titled conference rooms, sometimes named after theme parks or biblical

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plagues, available on a first-come, first-serve basis. Employees and executives are indistinguishable: The 25-year-old pounding away at a computer is as likely to be the chief executive as the 40-year-old hunched over a spreadsheet. The guy who picks up the ringing phone that no one else answered could be the chief financial officer, the one carrying in pizza the vice president of human resources. What you will not see are executive suites, preferred parking spaces, personal secretaries, and fancy office furniture.

The fluidity of knowledge transfer has contributed to blurring the boundaries between executive and employee in other ways as well. In the past, the person who had access to the most information sat at the top of the heap. But now, in the age of the Internet, information has become so abundant and accessible that everyone swims in it. The hallmark of the successful high-tech executive is not withholding information, but making sense of it, and then ensuring that everyone in the company has the information that he or she needs to work at maximum productivity.

Such a business exemplifies the truly “flattened” organization, where the concept of employee ownership is taken seriously and given equal weight within the organization. But when companies attempt to apply the principles of employee ownership without fully understanding the sensibilities underlying the approach, that attempt falls short. In such a case, the end result may be a company where functional jobs have become so blurred that it is difficult for employees to understand their role and thereby take responsibility for it.

“The aligned organization achieves its purposes without hierarchy and with little micro-management. It has an ‘invisible hand of culture and systems that keeps everyone doing the right things right.’ ”

—George Labovitz and Victor Rosansky in
The Power of Alignment

■ LASER-LIKE INTENSITY

One of the many ironies that permeate the technology industry is that as your vision becomes ever more expansive, your company focus must become narrower and narrower, something like a laser beam. One formula for failure is to spread yourself too thin. Seemingly limitless market opportunities abound, particularly when you're led by a visionary whose very dreams are made up of ideas that multiply like sheep and may scatter as quickly. Pinpointing the unexploited opportunity that could develop into a large market is the first challenge for any executive, manager, or entrepreneur. Cisco, for example, parlayed a simple idea—so-called routers that act like traffic cops in directing electronic data to a desired point—into a multibillion-dollar business in less than a decade. CrossWorlds is trying to emulate that with its notion of processware.

"The most important thing, particularly for a start-up, is to become highly focused," says Jim Breyer, managing partner at Accel Partners, a San Francisco-based venture capital firm. "There's a danger to thinking too big and not getting the first product right. Get the first product right and it serves as a platform for the rest of your growth."

Focus extends to processes as well. Many technology companies outsource public relations, human resources, sales and marketing, even financial management in order to concentrate on developing a product. This approach allows the company to stick to its "core competencies," a strategy popularized by authors Hamel and Prahalad in their book *Competing for the Future*. This strategy extends to larger, more established companies, too. In fact, the outsourcing of manufacturing, recruiting, marketing, and communications functions has become so pervasive in the technology industry that these services have become huge growth segments themselves.

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“A core competence is a bundle of skills and technologies that enables a company to provide a particular benefit to customers.”

—Gary Hamel and C.K. Prahalad in *Competing for the Future*

A company today is augmented by the extended web it has spun around itself, consisting of suppliers, resellers, technology partners, customers, and even competitors. Customers contribute to financing product development, work with engineers on-site, suggest design changes, and help promote the finished item. One large company, VeriFone, headquartered in Redwood City, California, describes itself as a “virtual” company in which location is immaterial and executives, employees, and divisions are scattered across the country and the world. Anything that would tie the company to a specific site, like manufacturing, is handled by external partners. VeriFone has realized that every competitor in one sphere of technology is a collaborator in another; the universe of technology applications is expanding so fast and so unpredictably that no one company can possibly keep up by itself. It’s clear that a company must be singularly focused on its own mission, even while its outer bounds are growing increasingly fuzzy.

■ TELLING A HIGH-TECH SUCCESS STORY

In the technology industry as in life, perception can shape reality. Your company launches a product, identifies a new market for it, invites the gurus such as the Meta Group, Forrester Group, Yankee Group, or other leading industry analysts to pronounce their blessing, and quicker than you can say “amen,” you’re the market leader. It doesn’t matter if no one else is in the market yet, or if the market has yet to clearly materialize—you’re the leader and

you've got mind share. Being the market leader, no matter how elusive or undefined the market, gives you clout when you talk to potential buyers and seek out partners to repackaging your product and distributors to sell it.

Geoffrey Moore, a Palo Alto-based consultant and the author of the best-selling books *Crossing the Chasm* and *Inside the Tornado*, credits Regis McKenna with masterminding one of the earliest and best campaigns for capturing mind share. Back in the 1980s, "the Regis Touch" transformed what was then a relatively small and unknown company, Apple Computer, into a big-time publicity machine. McKenna wove the combination of trade show appearances, startling TV ads, pronouncements by industry gurus, and press releases presaging even the smallest advance or alliance into the buzz that surrounds high tech today. This strategy continues to work today, as *Time* anoints Microsoft's Bill Gates as the second-most-powerful man in the world (after the president of the United States) and picks Intel's Andy Grove as its 1997 Man of the Year, and as the values of high-tech companies and products skyrocket.

Unfortunately, high tech has been too successful at its own game. There's so much noise surrounding so many products that even McKenna decries it now. "Apple has the greatest mind share in the industry," he notes, "and where has it gotten them?" Too many technology companies are trying to build mind share before they have infrastructure to support it. "Young companies think mind share comes first and that's a mistake," he says. "You build the infrastructure first. If you do the mind-share thing and you don't have the infrastructure, you go out of business."

Another important tactic for becoming a known market leader is to partner with companies that already have mind share. "You move for ubiquity before you worry about revenues," says venture capitalist Reid. To that end, "partnerships are very important. Identify the king-maker in your area and become their first and greatest friend." The catch-22 of having partners to codevelop or comarket

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your technology is that they could become competitors or unwelcome acquirers. Everyone in the industry likes to hook up with Microsoft. You link yourself to the big kahuna and you get a few minutes in the spotlight. Later, though, the big kahuna may swallow you up.

■ THE FATHER TO US ALL

The goal of this book is to unveil the management approaches and business strategies of successful companies operating in what is arguably the most competitive business environment to date. To do this, it makes sense to look at those who have laid the foundation for today's high-tech titans.

Perhaps the earliest and greatest precursor of today's emerging technology management style is Hewlett-Packard. HP has been well chronicled in numerous books, including *The HP Way: How Bill Hewlett and I Built Our Company* by the late cofounder David Packard. While this book will not attempt to tread across old ground, it would be unfair not to acknowledge the looming influence of Hewlett and Packard's notions of "management by walking around"—decentralization, informality, creativity, and trust for employees, principles now carried on by successor generations of management.

HP has withstood the test of time by remaking itself from an engineering-driven company into a marketing-driven one, and by moving into new markets like printers and personal computers (where it recently served notice it wants to be number one by 2001), all the while retaining a set of core values that animate everything it does. "The high-tech industry genuflects at the feet of HP," says Howard Anderson, founder and president of The Yankee Group and founder of Battery Ventures, both in Boston. "With industrial America, General Electric Company was the template. In high tech we're all children or grandchildren of the HP management school. No one in the long

haul has been able to finesse high tech as well as HP. It's the West Coast offense," he says, referring to the finesse passing game perfected by the San Francisco 49ers under former coach Bill Walsh.

Another example of lasting influence comes from the "Fairchild Eight"—Robert Noyce and seven other scientists who left Bell Labs in 1957 to found Fairchild Semiconductor and who in doing so planted the seeds of what would become Silicon Valley. The man who headed the Bell Labs outpost in California, physicist William Shockley, intended to build on his knowledge of transistor electronics. But Shockley, for all his technological brilliance, was a traditional manager who distrusted his employees. "Shockley wanted to run everything as a hierarchy," recalls Regis McKenna. "It was an us-versus-them environment. Noyce and the others left that strict environment to start Fairchild. They selected Noyce as their leader and got venture capital. That became the model." In 1968, Noyce teamed up with Gordon Moore to found Intel Corporation, developer of the microprocessor, which kicked off the digital revolution.

Intel and Microsoft, who together form the feared and respected "Wintel" alliance that overwhelmingly dominates the personal computer industry, honed a more paranoid approach to management than HP. Wintel emphasized extreme competition internally and externally, even pitting employees' ideas against each other in acerbic verbal jousts. Going to the other extreme, there is much-maligned Apple, which has frittered away its advantages but, in the mid-1980s, represented the epitome of high-tech creativity and fanatic devotion to a cause greater than oneself. "The only true revolutionaries in Silicon Valley were Steve Jobs and Noyce," says Don Valentine, who was with Noyce at Fairchild and later founded Sequoia Capital in Menlo Park, California, one of the first venture capital firms and an early investor in Apple. "Everything else is evolutionary." In more than a quarter-century of investing in Silicon Valley, Valentine has seen most of the industry's evolution.

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Wintel, HP, and Apple represent the various extremes that constitute the boundaries of today's high-tech management style. Each has a dark side. From Wintel come the notions of hypercompetitiveness and reliance upon the best and the brightest to fuel an insatiable appetite for dominance. But in running roughshod over competitors and arm-twisting customers to use their products, Microsoft and Intel have both drawn scrutiny from U.S. antitrust enforcers. From HP comes the more gentlemanly school of loyalty, empowerment, and decentralized decision-making. However, HP's consensus-driven model is not known for swiftness of execution, and it usually enters new markets after they're already established by someone smaller and more nimble. From Apple comes the passion and the vision—*this is the right thing to do regardless of what all the idiots think*—that led to breakthroughs like the Macintosh personal computer. Such arrogance, taken too far by a succession of CEOs, resulted in precisely the situation Apple faces now: declining market share and a desperate fight for survival. Ideally, a technology company today should be able to mix-and-match these management styles, perhaps exercising Apple-like fanaticism to win converts to a new product, Microsoft muscle to build market dominance, and HP ethics to polish its image.

■ ADVENT OF THE NET

To bring the story fully up to date, we must stir into this mix of disparate influences the proliferation of the Internet as tool and culture, and the entrance of the first generation who grew up with computers: Generation-Xers. Not coincidentally, Gen-Xers are often the ones who start Internet companies, which make tools or content designed to exploit the new medium. The Internet, and e-mail, facilitate the instant communication with anyone anytime

EXPERT OPINION

Geoffrey James, Executive Director of the Institute for Business Wisdom, Hollis, New Hampshire, and author of *Business Wisdom of the Electronic Elite*

On Structure:

“Markets move so quickly that building any kind of bureaucracy is suicide. Hierarchal structures become overly concerned with chains of command. Anything that slows down product development has to be cast aside.”

On Management Styles:

“There are two management styles developing in high tech in the United States. One is the *encounter group* style where the manager sees himself as a cultural leader who tries to bring out the best in people, e.g., Silicon Graphics. People work hard and tend to be exceedingly loyal. The other style is a *commando* style where everything is very dictatorial; Cabletron is a prime example. You have to be able to scream back at the boss.”

On Sustaining Growth:

“The absolutely key thing to sustaining growth and profitability is mind share—establishing yourself as a player. Otherwise you get lost in the noise. You want to be in a new market niche when it becomes news. You want to be Amazon.com. In an established niche it’s market differentiation—creating a case for your product. For instance, when the market becomes standardized you can differentiate on customer support and brand name.”

(continued)

EXPERT OPINION (Continued)**On Innovation:**

“The trick isn’t so much innovation but turning the idea into a product that can be commoditized. The question to ask is, does the infrastructure exist for this technology to become wildly popular? Innovation was the browser; infrastructure was the desktop PC. The quickest way for a start-up to go out of business is to miss the point of commoditization, come in too soon and run out of cash, or come in too late to be a major player.”

On Mind Share:

“Good PR needs to be built into an organization. WebTV sold a nonsaleable product to Microsoft for half a billion dollars. That’s a classic case of mind share.”

On Customers:

“Listen to what people are saying, and not just people who are into what you’re doing. When you bring something to market for beta or alpha test, listen to the feedback and learn whether you have a product or not. You need different viewpoints and personalities to figure out if you have a product.”

On Corporate Culture:

“The most important thing is to create a culture that’s not bound by fear, where people feel they can make a difference. You want the kind of culture that visualizes change as growth even though sometimes that’s painful. Don’t fill the whole company with homogeneous personalities.”

that further undermines old-fashioned hierarchy and authority. "Gen-Xers grew up in a world in which even industrial systems were run by information technologies," notes Walker Smith, managing partner at Yankelovich Partners in Norwalk, Connecticut, and coauthor of *Rocking the Ages*, a book about different generations. "When Xers look at technologies as business, they see an environment in which there are a lot of individual people pursuing their own things in support of a common objective."

It's no surprise, then, that Internet companies represent the fringe of the fringe. While technology companies in general are pushing the envelope, Internet companies may be tearing it up and throwing it away. The newest incarnation of the high-tech dream, companies that provide online content, can get started on a whim—setting up a Web site is just about costless—and go under the same way. These are the true virtual companies—collections of individuals working on "cool stuff," throwing it out and getting almost instantaneous feedback, then refining it on the fly. Making money is almost an afterthought; indeed, the Internet revenue model has yet to be determined, as we will see in examining several Internet-based companies.

This book spans the gamut of emerging technology management styles, from proven successes to the new kids on the block. The processes and techniques these companies are experimenting with will at some point find their way into mainstream corporate culture and become a part of every businessperson's lexicon. When the world is changing so rapidly, doesn't it make sense to learn from those who are moving the fastest? Venture capitalist Ann Winblad draws on a baby boomer memory to make the point about what it's like to run a high-tech company today: "It's like the guy spinning the plates on Ed Sullivan—it takes enormous energy to keep all those plates up in the air." *Silicon Gold Rush* provides insights into how the leading jugglers are keeping all of those plates up in the air.