

# CONTENTS

<b>Introduction</b>	1
<b>Subtitles</b>	5
<b>1. Wikinomics</b>	7
<b>2. The Perfect Storm</b>	34
<b>3. The Peer Pioneers</b>	65
<b>4. Ideagoras</b>	97
<b>5. The Prosumers</b>	124
<b>6. The New Alexandrians</b>	151
<b>7. Platforms for Participation</b>	183
<b>8. The Global Plant Floor</b>	213
<b>9. The Wiki Workplace</b>	239
<b>10. Collaborative Minds</b>	268
<b>11. The Wikinomics Playbook</b>	291
<b>Acknowledgments</b>	293
<b>Notes</b>	297
<b>Index</b>	000

## INTRODUCTION

Throughout history corporations have organized themselves according to strict hierarchical lines of authority. Everyone was a subordinate to someone else—employees versus managers, marketers versus customers, producers versus supply chain subcontractors, companies versus the community. There was always someone or some company in charge, controlling things, at the “top” of the food chain. While hierarchies are not vanishing, profound changes in the nature of technology, demographics, and the global economy are giving rise to powerful new models of production based on community, collaboration, and self-organization rather than on hierarchy and control.

Millions of media buffs now use blogs, wikis, chat rooms, and personal broadcasting to add their voices to a vociferous stream of dialogue and debate called the “blogosphere.” Employees drive performance by collaborating with peers across organizational boundaries, creating what we call a “wiki workplace.” Customers become “prosumers” by cocreating goods and services rather than simply consuming the end product. So-called supply chains work more effectively when the risk, reward, and capability to complete major projects—including massively complex products like cars, motorcycles, and airplanes—are distributed across planetary networks of partners who work as peers.

Smart companies are encouraging, rather than fighting, the heaving growth of massive online communities—many of which emerged from the fringes of the Web to attract tens of millions of participants overnight. Even ardent competitors are collaborating on path-breaking science initiatives that accelerate discovery in their industries. Indeed, as a growing number of firms see the benefits of mass collaboration, this new of way

## 2 ❁ WIKINOMICS

organizing will eventually displace the traditional corporate structures as the economy's primary engine of wealth creation.

Already this new economic model extends beyond software, music, publishing, pharmaceuticals, and other bellwethers to virtually every part of the global economy. But as this process unravels, many managers have concluded that the new mass collaboration is far from benign. Some critics look at successful "open source" projects such as Linux and Wikipedia, for example, and assume they are an attack on the legitimate right and need of companies to make a profit. Others see this new cornucopia of participation in the economy as a threat to their very existence (has anyone bought a music CD lately?).

We paint a very different picture with the evidence we have accumulated in this book. Yes, there are examples of pain and suffering in industries and firms that have so far failed to grasp the new economic logic. But the forthcoming pages are filled with many tales of how ordinary people and firms are linking up in imaginative new ways to drive innovation and success. A number of these stories revolve around the explosive growth of phenomena such as MySpace, InnoCentive, flickr, Second Life, YouTube, and the Human Genome Project. These organizations are harnessing mass collaboration to create real value for participants and have enjoyed phenomenal successes as a result.

Many mature firms are benefiting from this new business paradigm, and we share their stories too. Companies such as Boeing, BMW, and Procter & Gamble have been around for the better part of a century. And yet these organization and their leaders have seized on collaboration and self-organization as powerful new levers to cut costs, innovate faster, cocreate with customers and partners, and generally do whatever it takes to usher their organizations into the twenty-first century business environment.

This book, too, is the product of several long-running collaborations. In the last few years the New Paradigm team has conducted several large multiclient investigations to understand how the new Web (sometimes called the Web 2.0) changes the corporation and how companies innovate, build relationships, market, and compete.

A \$3 million study in 2000–2001 examined the rise of an increasingly mobile and pervasive Web and its impact on business models.<sup>1</sup> In 2003 we raised \$2 million to study Web-enabled transparency as a new force to

foster powerful networked businesses and trust.<sup>2</sup> In 2005–2006 a \$4 million program explored how new technology and collaborative models change business designs and competitive dynamics.<sup>3</sup>

The conclusion from all of this work is striking and enormously positive. Billions of connected individuals can now actively participate in innovation, wealth creation, and social development in ways we once only dreamed of. And when these masses of people collaborate they collectively can advance the arts, culture, science, education, government, and the economy in surprising but ultimately profitable ways. Companies that engage with these exploding Web-enabled communities are already discovering the true dividends of collective capability and genius.

To succeed, it will not be sufficient to simply intensify existing management strategies. Leaders must think differently about how to compete and be profitable, and embrace a new art and science of collaboration we call *wikinomics*. This is more than open source, social networking, so-called crowdsourcing, smart mobs, crowd wisdom, or other ideas that touch upon the subject. Rather, we are talking about deep changes in the structure and modus operandi of the corporation and our economy, based on new competitive principles such as openness, peering, sharing, and acting globally.

The results of this foundational research are proprietary to the members that funded it, including over one hundred in-depth reports and countless executive briefings, seminars, and workshops. However, our work with these companies inspired us to devote weekends and evenings to write a book that would take this work to the next level and inspire a broad audience to apply its ideas, frameworks, and guidelines.

In the process, we, as authors, learned something about collaboration too. We authored these pages on separate continents, with Don working primarily from Toronto, Canada, and Anthony based in London, England. When we were both working on the manuscript at the same time we hooked up with a Skype connection, talking, exchanging material, or being silent as appropriate. At times it felt like we were in the same room.

We have also collaborated intensely with over a hundred leading thinkers and practitioners. Their roles in bringing this book to life is graciously acknowledged below. In one interesting twist we decided that the best way to come up a great subtitle was to hold an open discussion

#### 4 ❁ WIKINOMICS

on the Web. Within twenty-four hours we had dozens of great subtitle suggestions—the best of which are listed on the Subtitles page.

Most notably, with *Wikinomics* we're making a modest attempt to reinvent the concept of a book. You'll note that the final chapter, The Wikinomics Playbook, has only fifteen words: "Join us in peer producing the definitive guide to the twenty-first-century corporation on [www.wikinomics.com](http://www.wikinomics.com)." It is our hope that this book will transcend its physical form to become a living, real-time, collaborative document, cocreated by leading thinkers. As such, we view the book as a call to arms to create a wikinomics community. And we hope that the book and community will be uniquely helpful to corporate practitioners and anyone who wants to participate in the economy in new ways.

## SUBTITLES

**B**ooks have a title page. In what we believe to be a first, we're listing a few of our favorite suggestion for subtitles gleaned from a public on-line discussion held the week of June 2, 2006. We received over a hundred great suggestions in the first forty-eight hours. To our collaborators—you know who you are—we extend our most sincere thanks.

Edit this Book!

The Dividends of Collective Genius

We the People

Business (the Remix)

The New World of Collaborative Production

Peer Innovation in the Age of MySpace, Linux, and Wikipedia

Profiting from Collaborative Anarchy

Please Register to Participate

The Power of Us

Creating a New Page in Business History

Unleashing Our Collective Genius

This Book Is a Stub

Harnessing the Power of Your Peers

(Your Input Needed Here)\*

Peer-Powered Profit in Life, Business, and Individual Choice

The Peer Advantage, Myth or Magic?

Peer Producing the Future

# 1. WIKINOMICS

## *The Art and Science of Peer Production*

It was late in the afternoon, on a typically harsh Canadian winter day, as Rob McEwen, the CEO of Goldcorp Inc., stood at the head of the boardroom table confronting a room full of senior geologists. The news he was about to deliver was not good. In fact it was disastrous, and McEwen was having a hard time shielding his frustration.

The small Toronto-based gold-mining firm was struggling, besieged by strikes, lingering debts, and an exceedingly high cost of production which had caused them to cease mining operations. Conditions in the marketplace were hardly favorable. The gold market was contracting, and most analysts assumed that the company's fifty-year old mine in Red Lake, Ontario, was dying. Without evidence of substantial new gold deposits, the mine seemed destined for closure, and Goldcorp was likely to go down with it.

Tensions were running at a fever pitch. McEwen had no real experience in the extractive industries, let alone in gold mining. Nevertheless, as an adventurous young mutual fund manager he had gotten involved in a takeover battle and emerged as Goldcorp Inc.'s majority owner. Few people in the room had much confidence that McEwen was the right person to rescue the company. But McEwen just shrugged off his critics.

He turned to his geologists and said, "We're going to find more gold on this property, and we won't leave this room tonight until we have a plan to find it." At the conclusion of the meeting he handed his geologists \$10 million for further exploration and sent them packing for northern Ontario.

Most of his staff thought he was crazy but they carried out his instructions, drilling in the deepest and most remote parts of the mine. Amazingly, a few weeks later they arrived back at Goldcorp headquarters beaming with pride and bearing a remarkable discovery: Test drilling suggested rich

## 8 ❁ WIKINOMICS

deposits of new gold, as much as thirty times the amount Goldcorp was currently mining!

The discovery was surprising, and could hardly have been better timed. But after years of further exploration, and to McEwen's deep frustration, the company's geologists struggled to provide an accurate estimate of the gold's value and exact location. He desperately needed to inject the urgency of the market into the glacial processes of an old-economy industry.

In 1999, with the future still uncertain, McEwen took some time out for personal development. He wound up at an MIT conference for young presidents when coincidentally the subject of Linux came up. Perched in the lecture hall, McEwen listened intently to the remarkable story of how Linus Torvalds and a loose volunteer brigade of software developers had assembled the world-class computer operating system over the Internet. The lecturer explained how Torvalds revealed his code to the world, allowing thousands of anonymous programmers to vet it and make contributions of their own.

McEwen had an epiphany and sat back in his chair to contemplate. If Goldcorp employees couldn't find the Red Lake gold, maybe someone else could. And maybe the key to finding those people was to open up the exploration process in the same way Torvalds "open sourced" Linux.

McEwen raced back to Toronto to present the idea to his head geologist. "I'd like to take all of our geology, all the data we have that goes back to 1948, and put it into a file and share it with the world," he said. "Then we'll ask the world to tell us where we're going to find the next six million ounces of gold." McEwen saw this as an opportunity to harness some of the best minds in the industry. Perhaps understandably, the in-house geologists were just a little skeptical.

Mining is an intensely secretive industry, and apart from the minerals themselves, geological data is the most precious and carefully guarded resource. It's like the Cadbury secret—it's just not something companies go around sharing. Goldcorp employees wondered whether the global community of geologists would respond to Goldcorp's call in the same way that software developers rallied around Linus Torvalds. Moreover, they worried about how the contest would reflect on them and their inability to find the illusive gold deposits.

McEwen acknowledges in retrospect that the strategy was controversial and risky. "We were attacking a fundamental assumption; you simply don't



give away proprietary data,” he said. “It’s so fundamental,” he adds, “that no one had ever questioned it.” Once again, McEwen was determined to soldier on.

In March 2000, the “Goldcorp Challenge” was launched with a total of \$575,000 in prize money available to participants with the best methods and estimates. Every scrap of information (some four hundred megabytes worth) about the 55,000-acre property was revealed on Goldcorp’s Web site. News of the contest spread quickly around the Internet, as over one thousand virtual prospectors from fifty countries got busy crunching the data.

Within weeks, submissions from around the world came flooding in to Goldcorp headquarters. As expected, geologists from around the world got involved. But entries came from surprising sources including graduate students, consultants, mathematicians, and military officers, all seeking a piece of the action. “We had applied math, advanced physics, intelligent systems, computer graphics and organic solutions to inorganic problems. There were capabilities I had never seen before in the industry,” says McEwen. “When I saw the computer graphics I almost fell out of my chair.” The contestants had identified 110 targets on the Red Lake property, 50 percent of which had not been previously identified by the company. Over 80 percent of the new targets yielded substantial quantities of gold. In fact, since the challenge was initiated an astounding eight million ounces of gold have been found. McEwen estimates the collaborative process shaved two to three years off their exploration time.

Today Goldcorp is reaping the fruits of its open-source approach to exploration. Not only did the contest yield copious quantities of gold, it catapulted his underperforming \$100 million company into a \$9 billion juggernaut while transforming a backward mining site in northern Ontario into one of the most innovative and profitable properties in the industry. Needless to say McEwen is one happy camper. As are his shareholders. One hundred dollars invested in the company in 1993 is worth over \$3,000 today.

Perhaps the most lasting legacy of the Goldcorp Challenge is the validation of an ingenious approach to exploration in what remains a conservative and highly secretive industry. Rob McEwen bucked an industry trend by sharing the company’s proprietary data and simultaneously transformed a lumbering exploration process into a modern distributed gold discovery engine that harnessed some of the most talented minds in the field.

## 10 ❖ WIKINOMICS

The Goldcorp story flies in the face of much conventional wisdom about how to run a business. Companies seek to protect their intellectual property, and through hiring and retaining the best people they generate new ideas, make new discoveries, compete, and grow their business lines. McEwen saw things differently. He realized the uniquely qualified minds to make new discoveries were probably outside the boundaries of his organization, and by sharing some intellectual property he could harness a powerful new force—mass collaboration. In doing so he stumbled successfully into the future of innovation, business, and how wealth and just about everything else will be created.

## THE NEW WORLD OF WIKINOMICS

Due to deep changes in technology, demographics, business, the economy, and the world, we are entering a new age where people participate in the economy like never before. This new participation has reached a tipping point where new forms of mass collaboration are changing how goods and services are invented, produced, marketed, and distributed on a global basis. This change presents far-reaching opportunities for every company and for every person who gets connected.

In the past, collaboration was mostly small scale. It was something that took place among relatives, friends, and associates in households, communities, and workplaces. In relatively rare instances, collaboration approached mass scale, but this was mainly in short bursts of political action. Think of the Vietnam-era war protests or, more recently, about the raucous antiglobalization rallies in Seattle, Turin, and Washington. Never before, however, have individuals had the power or opportunity to link up in loose networks of peers to produce goods and services in a very tangible and ongoing way.

Most people were confined to relatively limited economic roles, whether as passive consumers of mass-produced products or employees trapped deep within organizational bureaucracies where the boss told them what to do. Even their elected representatives barely concealed their contempt for bottom-up participation in decision making. In all, too many people were bypassed in the circulation of knowledge, power, and capital, and thus participated at the economy's margins.

Today the tables are turning. The growing accessibility of information technologies puts the tools required to collaborate, create value, and compete at everybody's fingertips. This liberates people to participate in innovation and wealth creation within every sector of the economy. Millions of people already join forces in self-organized collaborations that produce dynamic new goods and services that rival those of the world's largest and best-financed enterprises. This new mode of innovation and value creation is called "peer production," or peering—which describes what happens when masses of people and firms collaborate openly to drive innovation and growth in their industries.<sup>1</sup>

Some examples of peer production have recently become household names. As of August 2006, the online networking extravaganza MySpace had one hundred million users whose personal musings, connections, and profiles are the primary engines of value creation on the site. MySpace, YouTube Linux, and Wikipedia—today's pinnacles of mass collaboration—are just the beginning, a few familiar characters in the opening pages of the first chapter in a long-running saga that will change everything about how the economy operates. In the forthcoming pages of this book we describe seven unique forms of peer production that are making the economy more dynamic and productive. Along the way we offer engaging stories for the casual reader and great insights for the businessperson seeking to harness this new force in their business.

## The Weapons of Mass Collaboration

Call them the "weapons of mass collaboration." New low-cost collaborative infrastructures—from free Internet telephony to open-source software to global outsourcing platforms—allow thousands upon thousands of individuals and small producers to cocreate products, access markets, and delight customers in ways that only large corporations could manage in the past. This is giving rise to new collaborative capabilities and business models that will empower the prepared firm and destroy those that fail to adjust.

The upheaval occurring right now in media and entertainment provides an early example of how mass collaboration is turning the economy upside down. Once a bastion of "professionalism," credentialed knowledge producers share the stage with "amateur" creators who are disrupting

## 12 ❁ WIKINOMICS

every activity they touch. Tens of millions of people share their news, information, and views in the blogosphere, a self-organized network of over 50 million personal commentary sites that are updated every second of the day.<sup>2</sup> Some of the largest weblogs (or blogs for short) receive a quarter of a million daily visitors,<sup>3</sup> rivaling some daily newspapers. Now audioblogs, podcasts, and mobile photo blogs are adding to a dynamic, up-to-the-minute stream of person-to-person news and information delivered free over the Web.

Individuals now share knowledge, computing power, bandwidth, and other resources to create a wide array of free and open-source goods and services that anyone can use or modify. What's more, people can contribute to the "digital commons" at very little cost to themselves, which makes collective action much more attractive. Indeed, peer production is a very social activity. All one needs is a computer, a network connection, and a bright spark of initiative and creativity to join in the economy.

These new collaborations will not only serve commercial interests, they will help people do public-spirited things like cure genetic diseases, predict global climate change, and find new planets and stars. Researchers at Olson Laboratory, for example, use a massive supercomputer to evaluate drug candidates that might one day cure AIDS. This is no ordinary supercomputer, however. Their FightAIDS@home initiative is part of the World Community Grid, a global network where millions of individual computer users donate their spare computing power via the Internet to form one of the world's most powerful computing platforms.

These changes, among others, are ushering us toward a world where knowledge, power, and productive capability will be more dispersed than at any time in our history—a world where value creation will be fast, fluid, and persistently disruptive. A world where only the connected will survive. A power shift is underway, and a tough new business rule is emerging: Harness the new collaboration or perish. Those who fail to grasp this will find themselves ever more isolated—cut off from the networks that are sharing, adapting, and updating knowledge to create value.

This might sound like hyperbole, but it's not. Consider some additional ways ordinary citizens can now participate in the global body économique.

Rather than just read a book you can write one. Just log on to Wikipedia—a collaboratively created encyclopedia, owned by no one and

authored by tens of thousands of enthusiasts. With five full-time employees, it is ten times bigger than Encyclopedia Britannica and roughly the same in accuracy.<sup>4</sup> It runs on a wiki, software that enables users to edit the content of Web pages. Despite the risks inherent in an open encyclopedia in which everyone can add their views, and constant battles with detractors and saboteurs, Wikipedia continues to grow rapidly in scope, quality, and traffic. The English-language version has more than a million entries, and there are ninety-two sister sites in languages ranging from Polish and Japanese to Hebrew and Catalan.

Or perhaps your thing is chemistry. Indeed, if you're a retired, unemployed, or aspiring chemist, Procter & Gamble needs your help. The pace of innovation has doubled in its industry in the past five years alone, and now its army of 7,500 researchers is no longer enough to sustain its lead. Rather than hire more researchers, CEO A. G. Lafley instructed business unit leaders to source 50 percent of their new product and service ideas from outside the company. Now you can work for P&G without being on their payroll. Just register on the InnoCentive network where you and ninety thousand other scientists around the world can help solve tough R&D problems for a cash reward. InnoCentive is only one of many revolutionary marketplaces matching scientists to R&D challenges presented by companies in search of innovation. P&G and thousands of other companies look to these marketplaces for ideas, inventions, and uniquely qualified minds that can unlock new value in their markets.

Media buffs are similarly empowered. Rather than consume the TV news, you can now create it, along with thousands of independent citizen journalists that are turning the profession upside down. Tired of the familiar old faces and blather on network news? Turn off your TV, pick up a video camera and some cheap editing software, and create a news feature for Current TV, a new national cable and satellite network created almost entirely by amateur contributors. Though the contributors are unpaid volunteers, the content is surprisingly good. Current TV provides online tutorials for camera operation and storytelling techniques, and their guidelines for creating stories help get participants started. Viewers vote on which stories go to air, so only the most engaging material makes prime time.

Finally, a young person in India, China, Brazil, or any one of a number of emerging Eastern European countries can now do what their parents

## 14 ❁ WIKINOMICS

only dreamed of by joining the global economy on an equal footing. You might be in a call center in Bangalore that takes food orders for a drive-through restaurant in Los Angeles. Or you could find yourself working in Foxconn's new corporate city in the Schenzen province of China, where a decade ago farmers tilled the land with oxen. Today 180,000 people work, live, learn, and play on Foxconn's massive high-tech campus, designing and building consumer electronics for teenagers around the globe.

For incumbents in every industry this new cornucopia of participation and collaboration is both exhilarating and alarming. As New Paradigm executive David Ticoll argues, "Not all examples of self-organization are benign, or exploitable. Within a single industry the development of opportunities for self-organized collaboration can be beneficial, neutral, or highly competitive to individual firms, or some combination of at least two of these." Publishers found this out the hard way. Blogs, wikis, chat rooms, search engines, advertising auctions, peer-to-peer downloading, and personal broadcasting represent new ways to entertain, communicate, and transact. In each instance the traditionally passive buyers of editorial and advertising take active, participatory roles in value creation. Some of these grassroots innovations pose dire threats to existing business models.

Publishers of music, literature, movies, software, and television are like canaries in a coal mine—the first casualties of a revolution that is sweeping across all industries. Many enfeebled titans of the industrial economy feel threatened. Despite heroic efforts to change, they remain shackled by command-and-control legacies. Companies have spent the last three decades remodeling their operations to compete in a hypercompetitive economy—ripping costs out of their businesses at every opportunity; trying to become more "customer-friendly"; assembling global production networks; and scattering their bricks-and-mortar R&D organizations around the world.

Now, to great chagrin, industrial-era titans are learning that the real revolution is just getting started. Except this time the competition is no longer their arch industry rivals; it's the uberconnected, amorphous mass of self-organized individuals that is gripping their economic needs firmly in one hand, and their economic destinies in the other. "We the People" is no longer just a political expression—a hopeful ode to the power of "the masses"; it's also an apt description of how ordinary people, as employees,

consumers, community members, and taxpayers now have the power to innovate and to create value on the global stage.

For smart companies, the rising tide of mass collaboration offers vast opportunity. As the Goldcorp story denotes, even the oldest of old economy industries can harness this revolution to create value in unconventional ways. Companies can reach beyond their walls to sow the seeds of innovation and harvest a bountiful crop. Indeed, firms that cultivate nimble, trust-based relationships with external collaborators are positioned to form vibrant business ecosystems that create value more effectively than hierarchically organized businesses.

For individuals and small producers, this may be the birth of a new era, perhaps even a golden one, on par with the Italian renaissance or the rise of Athenian democracy. Mass collaboration across borders, disciplines, and cultures is at once economical and enjoyable. We can peer produce an operating system, an encyclopedia, the media, a mutual fund, and even physical things like a motorcycle. We are becoming an economy unto ourselves—a vast global network of specialized producers that swap and exchange services for entertainment, sustenance, and learning. A new economic democracy is emerging in which we all have a lead role.

### **Promise and Peril**

Experience shows that the first wave of Internet-enabled change was tainted by irrational exuberance. A sober analysis of today's trends reveals that this new participation is both a blessing and a curse. Mass collaboration can empower a growing cohort of connected individuals and organizations to create extraordinary wealth and reach unprecedented heights in learning and scientific discovery. If we are wise, we will harness this capability to create opportunities for everyone and to carefully steward the planet's natural resources. But the new participation will also cause great upheaval, dislocation, and danger for societies, corporations, and individuals that fail to keep up with relentless change.

As with all previous economic revolutions, the demands on individuals, organizations, and nations will be intense, and at times traumatic, as old industries and ways of life give way to new processes, technologies, and business models. The playing field has been ripped wide open, and the

## 16 ❁ WIKINOMICS

recurrent need to reconfigure people and capabilities to serve an ever-changing market will require individuals to embrace constant change and renewal in their careers.

As recent events foretell, a smaller, more open and interdependent world has the potential to be dynamic and vibrant, but also more vulnerable to terrorism and criminal networks. Just as the masses of scientists and software coders can collaborate on socially beneficial projects, criminals and terrorists can conspire over the Internet to wreak havoc on our daily existence.

Even with good intentions, mass collaboration is certainly no panacea. When people organize en masse to create goods, services, and entertainment they create new challenges as well as opportunities. Renowned computer scientist, composer, and author Jaron Lanier worries that collaborative communities such as flickr, MySpace, and Wikipedia represent a new form of “online collectivism” that is suffocating authentic voices in a muddled and anonymous tide of mass mediocrity. Lanier laments the idea that “the collective is all-wise,” or as he put it, “that it is desirable to have influence concentrated in a bottleneck that can channel the collective with the most verity and force.” He rightly points out that such ideas have had terrible consequences when imposed by ruthless dictators like Stalin or Pol Pot. But his argument runs afoul when he attributes the same kind of “collective stupidity” to the emerging forms of mass collaboration on the Web.

Other wise and thoughtful people such as Microsoft’s Bill Gates, meanwhile, complain that the incentives for knowledge producers are disappearing in a world where individuals can pool their talents to create free goods that compete with proprietary marketplace offerings. Gates cites the movement to assemble a global “creative commons” that contains large bodies of scientific and cultural content as a potential threat to the ability to make profits in knowledge-based industries such as software. Many top executives are lining up along side Gates to harpoon what they see as new-fangled “communists” in various guises.

Reactionary sentiments are hardly surprising given the circumstances. The production of knowledge, goods, and services is becoming a collaborative activity in which growing numbers of people can participate. This threatens to displace entrenched interests that have prospered under the protection of various barriers to entry, including the high costs of obtaining



the financial, physical, and human capital necessary to compete. Companies accustomed to comfortably directing marketplace activities must contend with new and unfamiliar sources of competition, including the self-organized masses, just as people in elite positions (whether journalists, professors, pundits, or politicians) must now work harder to justify their exalted status. As the global division of labor becomes ever more complex, variegated, and dynamic, the economy is spinning out of the control of the usual suspects. There will be casualties, but the winners will outnumber the losers. Indeed, we believe the new era heralds more economic opportunity for individuals and businesses, and greater efficiency, creativity, and innovation throughout the economy as a whole.

Though we disagree with Lanier and Gates, they do raise important issues that we will address throughout this book. For now it must be said that mass collaboration and peer production are really the polar opposites of the communism that Gates and Lanier despise. Digital pioneer Howard Rheingold points out, "Collectivism involves coercion and centralized control; collective action involves freely chosen self-selection and distributed coordination." Whereas communism stifled individualism, mass collaboration is based on individuals and companies employing widely distributed computation and communication technologies to achieve shared outcomes through loose voluntary associations.

What's more, the participation revolution now underway opens up new possibilities for billions of people to play active roles in their workplaces, communities, national democracies, and the global economy at large. This has profound social benefits, including the opportunity to make governments more accountable and lift millions of people out of poverty.

Moreover, it is wrong to assume that the new collective action represents only a threat to established businesses. While some fear mass collaboration will reduce the proportion of our economy that is available for profitable activity and wealth creation, we will show the opposite. New models of peer production can bring the prepared manager rich new possibilities to unlock innovative potential in a wide range of resources that thrive inside and outside the firm. With the right approach, companies can obtain higher rates of growth and innovation by learning how to engage and co-create with a dynamic and increasingly global network of peers. Rather than conceding defeat to the most powerful economic force of our

times, established companies can harness the new collaboration for unparalleled success.

A new art and science of collaboration is emerging—we call it “wikinomics.” We’re not just talking about creating online encyclopedias and other documents. A wiki is more than just software for enabling multiple people to edit Web sites. It is a metaphor for a new era of collaboration and participation, one that, as Dylan sings, “will soon shake your windows and rattle your walls.” The times are, in fact, a changin’.

## THE NEW PROMISE OF COLLABORATION

Word association test: What’s the first thing that comes to mind when you hear the word “collaboration”? If you’re like most people, you conjure up images of people working together happily and productively. In everyday life, we collaborate with fellow parents at a PTA meeting, with other students on a class project, or with neighbors to protect and enhance our communities. In business we collaborate with coworkers at the office, with partners in the supply chain, and within teams that traverse departmental and organizational silos. We collaborate on research projects, work together to make a big sale, or plan a new marketing campaign.

Google CEO Eric Schmidt, says, “When you say ‘collaboration,’ the average forty-five-year-old thinks they know what you’re talking about—teams sitting down, having a nice conversation with nice objectives and a nice attitude. That’s what collaboration means to most people.”

We’re talking about something dramatically different. The new promise of collaboration is that with peer production we will harness human skill, ingenuity, and intelligence more efficiently and effectively than anything we have witnessed previously. Sounds like a tall order. But the collective knowledge, capability, and resources embodied within broad horizontal networks of participants can be mobilized to accomplish much more than one firm acting alone. Whether designing an airplane, assembling a motorcycle, or analyzing the human genome, the ability to integrate the talents of dispersed individuals and organizations is becoming *the* defining competency for managers and firms. And in the years to come, this new mode of peer production will displace traditional corporation hierarchies as the key engine of wealth creation in the economy.

In Chapter 2, we discuss a variety of social, economic, and demographic forces that are fueling the rising tide of mass collaboration. More than anything, however, the evolution of the Internet is driving this new age. From the stunning increases in computing power, network capability, and reach, to the growing accessibility of the tools required to get organized, create value, and compete, this new Web has opened the floodgates to a worldwide explosion of participation.

There are many names for this new Web: the Web 2.0, the living Web, the Hypernet, the active Web, the read/write Web.<sup>5</sup> Call it what you like—the sentiment is the same. We're all participating in the rise of a global, ubiquitous platform for computation and collaboration that is reshaping nearly every aspect of human affairs. While the old Web was about Web sites, clicks, and “eyeballs,” the new Web is about the communities, participation and peering. As users and computing power multiply, and easy-to-use tools proliferate, the Internet is evolving into a global, living, networked computer that anyone can program. Even the simple act of participating in an online community makes a contribution to the new digital commons—whether one's building a business on Amazon or producing a video clip for YouTube, creating a community around his or her flickr photo collection or editing the astronomy entry on Wikipedia.

This new Web already links more than a billion people directly and (unlike Web 1.0) is reaching out to the physical world, connecting countless inert objects, from hotel doors to cars. It is beginning to deliver dynamic new services—from free long distance video telephony to remote brain surgery. And it covers the planet like a skin, linking a machine soldering chips onto circuit boards in Singapore with a chip warehouse in Denver, Colorado.

Twenty years from now we will look back at this period of the early twenty-first century as a critical turning point in economic and social history. We will understand that we entered a new age, one based on new principles, worldviews, and business models where the nature of the game was completely changed.

The pace of change and the evolving demands of customers are such that firms can no longer depend only on internal capabilities to meet external needs. Nor can they depend only on tightly coupled relationships with a handful of business partners to keep up with customer desires for speed, innovation, and control. Instead, firms must engage and co-create in

## 20 ❁ WIKINOMICS

a dynamic fashion with everyone—partners, competitors, educators, government, and most of all, customers.

To innovate and succeed, the new mass collaboration must become part of every leader's playbook and lexicon. Learning how to engage and cocreate with a shifting set of self-organized partners is becoming an essential skill, as important as budgeting, R&D, and planning.

## THE PRINCIPLES OF WIKINOMICS

The new mass collaboration is driving a historic change in how companies and societies harness knowledge and capability to innovate and create value. This affects just about every sector of society and every aspect of management. A new kind of business is emerging—one that opens its doors to the world, co-innovates with everyone (especially customers), shares resources that were previously closely guarded, harnesses the power of mass collaboration, and behaves not as a multinational but as something new: a truly global firm. These companies are driving important changes in their industries and rewriting the rules of competition.

Now compare this to traditional business thinking. Conventional wisdom says companies innovate, differentiate, and compete by doing certain things right: by having superior human capital; protecting their intellectually property fiercely; focusing on customers; thinking globally but acting locally; and by executing well (i.e., having good management and controls). But the new business world is rendering each of these principles insufficient, and in some cases, completely inappropriate.

The new art and science of wkinomics is based on four powerful new ideas: openness, peering, sharing, and acting globally. These new principles are replacing some of the old tenets of business. Our objective throughout this book is to provide vivid examples of how people and organizations are harnessing these principles to drive innovation in their workplaces, communities, and industries.

### Being Open

If you consider the vernacular, the term “open” is loaded—rich with meaning and positive connotations. Among other things, openness is associated

with candor, transparency, freedom, flexibility, expansiveness, engagement, and access. Open, however, is not an adjective often used to describe the traditional firm, and until recently, open would not have appropriately described the inner workings of the economy either. Recently, smart companies have been rethinking openness, and this is beginning to affect a number of important functions, including human resources, innovation, industry standards, and communications.

Companies were closed in their attitudes toward networking, sharing, and encouraging self-organization, in large part because conventional wisdom says that companies compete by holding their most coveted resources close to their chest. When it came to managing human resources, firms were exhorted to hire the best people, and to motivate, develop, and retain them, since human capital is the foundation of competitiveness. Today companies that make their boundaries porous to external ideas and human capital outperform companies that rely solely on their internal resources and capabilities.

Rapid scientific and technological advances are among the key reasons why this new openness is surfacing as a new imperative for managers. Most businesses can barely manage to research the fundamental disciplines that contribute to their products, let alone retain the field's most talented people within their boundaries. So to ensure they remain at the forefront of their industries, companies must increasingly open their doors to the global talent pool that thrives outside their walls.<sup>6</sup>

Standards are another area where openness is gaining momentum. In today's complex and fast-moving economy, the economic deficiencies and liabilities caused by the lack of standardization surface faster, and they are more jarring and consequential than in the past. For years the information technology (IT) industry fiercely fought concepts like open systems and open source. But in the last decade there has been a stampede toward open standards, in part because customers are demanding them. Customers were fed up with being locked into each vendor's architecture, where applications were islands and not portable to another vendor's hardware. Microsoft reaped huge revenues as the provider of a standard platform on which software companies could build their applications, regardless of the brand name on the computer. The shift to openness gained momentum as IT professionals began to collaborate on a wide range of open software platforms. The

## 22 ❁ WIKINOMICS

result was Apache for Web servers, Linux for operating systems, MySQL for databases, Firefox for browsers, and the World Wide Web itself.

Yet another kind of openness is exploding: the communication of previously secret corporate information to partners, employees, customers and shareholders, and other interested participants. Transparency—the disclosure of pertinent information—is a growing force in the networked economy. This goes far beyond the obligation to comply with laws regarding the disclosure of financial information. This is not about the Securities and Exchange Commission (SEC), Sarbanes-Oxley, Eliot Spitzer, or avoiding the “perp walk.” Rather, people and institutions that interact with firms are gaining unprecedented access to important information about corporate behavior, operations, and performance. Armed with new tools to find out, inform others, and self-organize, stakeholders are scrutinizing the firm like never before.

Customers can see the true value of products better. Employees have previously unthinkable knowledge about their firm’s strategy, management, and challenges. Partners must have intimate knowledge about each other’s operations to collaborate. Powerful institutional investors who now own or manage most wealth are developing x-ray vision. And in a world of instant communications, whistle-blowers, inquisitive media, and Googling, citizens and communities can easily put firms under the microscope.

Leading firms are opening up pertinent information to all these groups—because they reap significant benefits from doing so. Rather than something to be feared, transparency is a powerful new force for business success. Smart firms embrace transparency and are actively open. Our research shows that transparency is critical to business partnerships, lowering transaction costs between firms and speeding up the metabolism of business webs. Employees of open enterprises have higher trust among each other and with the firm, resulting in lower costs, better innovation, and loyalty. And when companies like Progressive Insurance are open with customers—honestly sharing both their prices and their competitors’, even when they are not as good—customers respond by giving their trust.<sup>7</sup>

Finally, it’s worth noting that the economy and society are open in new ways too. Falling trade barriers and information technologies are often cited as key reasons why dozens of highly competitive countries have entered the global economy for the first time, but take education as another

important example. Today an aspiring student in Mumbai who has always dreamed of going to MIT can now access the university's entire curriculum online without paying a penny in tuition fees. She can just log on to [ocw.mit.edu](http://ocw.mit.edu), and she will read "Welcome to MIT's OpenCourseWare: a free and open educational resource (OER) for educators, students, and self-learners around the world. MIT OpenCourseWare (MIT OCW) supports MIT's mission to advance knowledge and education, and serve the world in the 21st century." She can engage with the content and faculty of one of the world's leading universities, studying everything from aeronautics to zoology. Download the readings and assignments for courses. Share her experiences in one of the community forums. Become part of MIT, participating in lifelong learning for the global knowledge economy.

## Peering

Throughout most of human history, hierarchies of one form or another have served as the primary engines of wealth creation and provided a model for institutions such as the church, the military, and government. So pervasive and enduring has the hierarchical mode of organization been that most people assume that there are no viable alternatives. Whether the ancient slave empires of Greece, Rome, China, and the Americas, the feudal kingdoms that later covered the planet, or the capitalist corporation, hierarchies have organized people into layers of superiors and subordinates to fulfill both public and private objectives. Even the management literature today that advocates empowerment, teams and enlightened management techniques takes as a basic premise the command modus operandi inherent in the modern corporation. Though it is unlikely that hierarchies will disappear in the foreseeable future, a new form of horizontal organization is emerging that rivals the hierarchical firm in its capacity to create information-based products and services, and in some cases, physical things. As mentioned, this new form of organization is known as peering.

The quintessential example of peering is Linux, which we introduced briefly during the Goldcorp story. While the basic facts of Linux are well known in the technology community, they are not known by all, so allow us to briefly recap the story. In 1991, before the World Wide Web had even been invented, a young programmer from Helsinki named Linus

## 24 ❁ WIKINOMICS

Torvalds created a simple version of the Unix operating system. He called it Linux and shared it with other programmers via an online bulletin board. Of the first ten programmers who corresponded with him, five made substantive changes. Torvalds eventually decided to license the operating system under a general public license (GPL) so that anyone could use it for free, provided they made their changes to the program available to others. Over time an informal organization emerged to manage ongoing development of the software that continues to harness inputs from thousands of volunteer programmers. Because it was reliable and free, Linux became a useful operating system for computers hosting Web servers, and ultimately databases, and today many companies consider Linux an enterprise software keystone.

Today the growing ease with which people can collaborate opens up the economy to new Linuxlike projects everyday. People increasingly self-organize to design goods or services, create knowledge, or simply produce dynamic, shared experiences. A growing number of examples suggest that peer-to-peer models of organizing economic activity are making inroads into areas that go well beyond creating software. Take two examples for starters.

Researchers at the Australian biotech institute CAMBIA worry that patents owned by multinational firms such as Monsanto are compromising billions of people who can't afford the licensing fees to exploit genetically modified crops. So CAMBIA researchers who are working on solutions to the challenges of food security and agricultural productivity release their results publicly under BiOS (Biological Open Source Licenses). This way they engage a much wider pool of talented scientists in the process of getting solutions to farmers who need them.

Marketocracy employs a similar form of peering in a mutual fund that harnesses the collective intelligence of the investment community. It has recruited seventy thousand traders to manage virtual stock portfolios in a competition to become the best investors. Marketocracy indexes the top one hundred performers, and their trading strategies are emulated in a mutual fund that consistently outperforms the S&P 500. Though not strictly open source, it is an example of how meritocratic, peer-to-peer models are seeping into an industry where conventional wisdom favors the lone superstar stock adviser.



These cases are tangible examples of a new mode of production that is emerging in the heart of the most advanced economies in the world—producing a rich new economic landscape and challenging our basic assumption about human motivation and behavior. In some cases, self-organized “nonmarket” production is moving into arenas that used to be dominated by profit-making firms. Wikipedia, with its free online encyclopedia, is one example where a once vibrant publishing industry is suffering. At the same time, powerful new economic ecosystems are forming on top of shared infrastructures and resources like Linux. Though Linux is free to use or modify, it has been embedded in all kinds of profitable products and services developed by large companies like BMW, IBM, Motorola, Philips, and Sony.

Participants in peer production communities have many different motivations for jumping in, from fun and altruism to achieving something that is of direct value to them. Though egalitarianism is the general rule, most peer networks have an underlying structure, where some people have more authority and influence than others. But the basic rules of operation are about as different from a corporate command-and-control hierarchy as the latter was from the feudal craft shop of the preindustrial economy.

Peering succeeds because it leverages self-organization—a style of production that works more effectively than hierarchical management for certain tasks. Its greatest impact today is in the production of information goods—and its initial effects are most visible in the production of software, media, entertainment, and culture—but there are few reasons for peer production to stop there. Why not open source government? Surely we would make better decisions if we were to tap the insights of a broader and more representative body of participants. Or perhaps we could apply peer production to physical objects like cars, airplanes, and motorcycles. As we will discover in later chapters, these are not idle fantasies, but real opportunities that the new world of wikinomics makes possible.

## Sharing

Conventional wisdom says you should control and protect proprietary resources and innovations—especially intellectual property—through patents, copyright, and trademarks. If someone infringes your IP, get the

lawyers out to do battle. Many industries still think this way. Millions of technology-literate kids and teenagers use the Internet to freely create and share MP3 software tools and music. Digital music presents a huge opportunity to place artists and consumers at the center of a vast web of value creation. But rather than embrace MP3 and adopt new business models, the industry has adopted a defensive posture. Obsession with control, piracy, and proprietary standards on the part of large industry players has only served to further alienate and anger music listeners.

No doubt digitization introduces tough new appropriation problems for the creators of digital content. Digital inventions are easy to share, remix, and repurpose, and just as easy to replicate. On the plus side, this means industries with zero marginal cost (i.e., software and digital entertainment) can gain incredible economies of scale. But if your invention can be replicated at no cost, why should anyone pay? And if no one pays, how do you recoup your fixed-cost investment?

Hollywood's proposed solution is to expand the scope and vigor of IP protection. New digital rights management technologies make knowledge and content more excludable—information can be metered, consumer behavior can be controlled, and owners of intellectual property can extract a fee for access. Walled gardens of content, proprietary databases, closed-source software: They all promise healthy returns for knowledge producers. But at the same time, they all restrict access to the essential tools of a knowledge-based economy. And worse, they shut out the real opportunities for customer-driven innovation and creativity that could spawn new business models and industries.

Today, a new economics of intellectual property is prevailing. Increasingly, and to a degree paradoxically, firms in electronics, biotechnology, and other fields find that maintaining and defending a proprietary system of intellectual property often cripples their ability to create value. Smart firms are treating intellectual property like a mutual fund—they manage a balanced portfolio of IP assets, some protected and some shared.

For example, starting in 1999, more than a dozen pharmaceutical firms—hardly what one would call modern-day communists—abandoned their proprietary R&D projects to support open collaborations such as the SNP Consortium and the Alliance for Cellular Signaling (see chapter 6, *The New Alexandrians*). Both projects aggregate genetic information

culled from biomedical research in publicly accessible databases. They also use their shared infrastructures to harness resources and insights from the for-profit and not-for-profit research worlds. These efforts are speeding the industry toward fundamental breakthroughs in molecular biology—breakthroughs that promise an era of personalized medicine and treatments for intractable disorders. Nobody gives up their potential patent rights over new end products, and by sharing some basic intellectual property the companies bring products to market more quickly.

This logic of sharing applies in virtually every industry. “Just as it’s true that a rising tide lifts all boats,” says Tim Bray, director of Web technologies at Sun Microsystems, “we genuinely believe that radical sharing is a win-win for everyone. Expanding markets create new opportunities.” Under the right conditions, the same could be said of most industries, whether automobiles or other consumer products.

Of course companies need to protect critical intellectual property. They should always protect their crown jewels, for example. But companies can’t collaborate effectively if all of their IP is hidden. Contributing to the commons is not altruism; it’s the best way to build vibrant business ecosystems that harness a shared foundation of technology and knowledge to accelerate growth and innovation.

The power of sharing is not limited to intellectual property. It extends to other resources such as computing power, bandwidth, content, and scientific knowledge. Peer-to-peer sharing of computing power, for example, is bringing the telecommunications business to its knees. The cofounder and CEO of Skype, Niklas Zennstrom, says, “The idea of charging for telephone calls belongs to the last century.” His company’s software harnesses the collective computing power of peers, allowing them to speak with each other free of charge via the Internet. The result is a self-sustaining phone system that requires no central capital investment—just the willingness of its users to share.

The sky seems the limit for Skype. The Luxemburg-based company went from one hundred thousand to one hundred million registered users in two years, and was acquired by eBay for \$2.6 billion in September 2005. The first time Michael Powell, then chairman of the Federal Communications Commission, used Skype, he concluded: “It’s over. The world will change now inevitably.”

## Acting Globally

Consider life on the Galápagos Islands. Its separation from the rest of the world has resulted in a diverse collection of species, many found nowhere else on earth, yet each uniquely tailored to its environment. Now imagine what would happen if a teleportation device appeared on the Galápagos, thereby enabling resident animals to intermingle and roam freely among the islands. Surely the Galápagos would never be the same.

This thought experiment illustrates the consequences of the new era of globalization. The barriers between the Galápagos and the mainland are analogous to geographic and economic barriers that insulate firms and nations. When the insulation is removed, it cannot help but produce disruptive effects on business strategy, enterprise structures, the competitive landscape, and the global social and political order.

Thomas Friedman's book *The World Is Flat* brought the significance of the new globalization to many. But the quickening pace and deep consequences of globalization for innovation and wealth creation are not yet fully understood. In the last twenty years of globalization we have seen Chinese and Indian economic liberalization, the collapse of the Soviet Union, and the first stage of the worldwide information technology revolution. The next twenty years of globalization will help sustain world economic growth, raise world living standards, and substantially deepen global interdependence. At the same time, it will profoundly shake up the status quo almost everywhere—generating enormous economic, cultural, and political convulsions.

On the economic front, the ongoing integration of national economies into a borderless world and the surprisingly fast and furious rise of new titans such as China, India, and South Korea will continue to broaden and flatten the playing field. Two billion more people from Asia and Eastern Europe are already joining the global workforce. And while developed countries worry about growing dependency ratios, most of the increase in world population and consumer demand will take place in today's developing nations—especially in China, India, and Indonesia.

The new globalization is both causing and caused by changes in collaboration and the way firms orchestrate capability to innovate and produce things. Staying globally competitive means monitoring business

developments internationally and tapping a much larger global talent pool. Global alliances, human capital marketplaces, and peer production communities will provide access to new markets, ideas, and technologies. People and intellectual assets will need to be managed across cultures, disciplines, and organizational boundaries. Winning companies will need to know the world, including its markets, technologies, and peoples. Those that don't will find themselves handicapped, unable to compete in a business world that is unrecognizable by today's standards.

To do all this, it makes sense to not only *think* globally, as the mantra says, but to *act* globally as well. Managers in the trenches are finding out that acting globally is a tremendous operational challenge, especially when you're buried in legacy systems and processes. Ralph Szygenda, CIO of General Motors, says, "Most big companies are multinationals, not global, and increasingly that's a big problem for all of us."

Szygenda describes how GM grew up as a collection of separate companies. Each major brand, including Cadillac, Oldsmobile, and Buick, had separate staff, procedures, and agendas, and there was very little coordination among them. They might have found shelter under the same umbrella, but they were about as friendly as a group of strangers standing on a New York City sidewalk.

Like many multinationals, GM was also divided into geographically demarcated fiefdoms. Regional divisions had power and autonomy to develop, manufacture, and distribute cars according to local needs and by sourcing from local suppliers. For GM as a whole this federated structure came with immense and costly redundancies, as each division employed a full roster of local workers to take care of everything, from manufacturing to human resources. Bob Lutz, GM's vice chairman of global product development says that duplication of effort cost the company billions of dollars a year and prevented it from leveraging its size and scale.

In an increasingly global and competitive economy such redundancies are swiftly punished. So it pays to have global capabilities—including truly global workforces, unified global processes, and a global IT platform to enhance collaboration among all of the parts of the business as well as the company's web of external partners.

By definition, a truly global company has no physical or regional boundaries. It builds planetary ecosystems for designing, sourcing,

## 30 ❁ WIKINOMICS

assembling, and distributing products on a global basis. The emergence of open IT standards makes it considerably easier to build a global business by integrating best-of-breed components from various geographies.<sup>8</sup> Szygenda envisions how such unity might play out for GM. Or as Bob Lutz says, “My vision would be a corporation operating on a truly global basis—no U.S. dominance. We will have global budgets that will be administered optimally, be it the allocation of capital, the allocation of design resources, engineering resources, purchasing, manufacturing. We will treat the whole world as if it were one country.” “Whether we’re developing a product, manufacturing, sourcing, or distributing,” he says, “we’ll be able to link up all of our activities in a seamless global operation.” GM has already taken large steps toward this vision, which may well be the company’s ticket to recovery.

If companies can go global, how about individuals? In fact, it turns out they can. When we went to see Steve Mills, who runs IBM’s software operation, he was immersed in twenty different instant messaging sessions with clients and colleagues around the world. He says, “When computers run fast enough, and the bandwidth is there, everything that is remote feels local—in fact, the whole world feels local to me. I don’t need to be present in the room to participate.” The new global platform for collaboration opens up myriad new possibilities for individuals like Mills to act globally. The world is teeming with possibilities for education, work, and entrepreneurship—one just needs the skills, motivation, the capacity for lifelong learning, and a basic income level to get connected.

## THRIVING IN A WORLD OF WIKINOMICS

These four principles—openness, peering, sharing, and acting globally—increasingly define how twenty-first-century corporations compete. This is very different from the hierarchical, closed, secretive, and insular multinational that dominated the previous century.

One thing that has not changed is that winning organizations (and societies) will be those that tap the torrent of human knowledge and translate it into new and useful applications. The difference today is that organizational values, skills, tools, processes, and architectures of the ebbing command-and-control economy are not simply outdated; they are handicaps on the

value creation process. In an age where mass collaboration can reshape an industry overnight, the old hierarchical ways of organizing work and innovation do not afford the level of agility, creativity, and connectivity that companies require to remain competitive in today's environment. Every individual now has a role to play in the economy, and every company has a choice—commoditize or get connected.

Changes of this magnitude have occurred before. In fact, human societies have always been punctuated by periods of great change that not only cause people to think and behave differently, but also give rise to new social orders and institutions. In many instances these changes are driven by disruptive technologies, such as the printing press, the automobile, and the telephone that penetrate societies to fundamentally change their culture and economy.

The new Web—which is really an internetworked constellation of disruptive technologies—is the most robust platform for facilitating and accelerating new creative disruptions yet. People, knowledge, objects, devices, and intelligent agents are converging in many-to-many networks where new innovations and social trends spread with viral intensity. Organizations that have scrambled to come up with responses to new phenomena like Napster or the blogosphere should expect much more of the same—at an increasing rate—in the future.

Previous technology-driven revolutions, like the electrification of industry, took the better part of a century to unfold.<sup>9</sup> Today the escalating scope and scale of the resources applied to innovation means that change will unfold more quickly. Though we are still just beginning a profound economic and institutional adjustment, incumbents should not expect a grace period. The old, hardwired “plan and push” mentality is rapidly giving way to a new, dynamic engage and co-create economy. A hypercompetitive global economy is reshaping enterprises, and political and legal shifts loom.

As organizations, and indeed societies, confront this changing reality, they must ensure that they can continue to be innovative. The “who, where, what, how, and why” of innovation are in flux, across geography and economic sectors. The speed and scope of change is intensifying.

In Chapter 2, we explain how a perfect storm is gathering force and shipwrecking the old corporation in wave after wave of change. We begin by

## 32 ❁ WIKINOMICS

explaining how the “publish and browse,” read-only Internet of yesterday is becoming a place where the knowledge, resources, and computing power of billions of people are coming together into a massive collective force. Energized through blogs, wikis, chat rooms, personal broadcasting, and other forms of peer-to-peer creation and communication, this utterly decentralized and amorphous force increasingly self-organizes to provide its own news, entertainment, and services. As these effects permeate out through the economy and intersect with deep structural changes like globalization, we will witness the rise of an entirely new kind of economy where firms coexist with millions of autonomous producers who connect and cocreate value in loosely coupled networks. We call this the collaboration economy.

Next, we take you on a tour of the collaboration economy, including seven new models of mass collaboration that are successfully challenging traditional business designs.

1. The journey begins with the “peer pioneers”—the people who brought you open-source software and Wikipedia while demonstrating that thousands of dispersed volunteers can create fast, fluid, and innovative projects that outperform those of the largest and best-financed enterprises.
2. “Ideagoras” explains how an emerging marketplace for ideas, inventions, and uniquely qualified minds enables companies like P&G to tap global pools of highly skilled talent more than ten times the size of its own workforce.
3. The “prosumers” takes you through the increasingly dynamic world of customer innovation, where a new generation of producer consumers considers the “right to hack” its birthright.
4. The “new Alexandrians” will bring you up to speed with a new science of sharing that will rapidly accelerate human health, turn the tide on environmental damage, advance human culture, develop breakthrough technologies, and even discover the universe—all the while helping companies grow wealth for their shareholders.
5. “Platforms for participation” explains how smart companies are opening up their products and technology infrastructures to create an open



stage where large communities of partners can create value, and in many cases, create new businesses.

6. The “global plant floor” shows how even manufacturing-intensive industries are giving rise to planetary ecosystems for designing and building physical goods, marking a new phase in the evolution of mass collaboration.
7. The “wiki workplace” wraps up the journey with a look at how mass collaboration is taking root in the workplace and creating a new corporate meritocracy that is sweeping away the hierarchical silos in its path and connecting internal teams to a wealth of external networks.

For individuals and small businesses this is an exciting new era—an era where they can participate in production and add value to large-scale economic systems in ways that were previously impossible. For large companies, the seven models of mass collaboration provide myriad ways to harness external knowledge, resources, and talent for greater competitiveness and growth. For society as a whole, we can harness the explosion of knowledge, collaboration, and business innovation to lead richer, fuller lives and spur economic development for all.

Take heed. Whenever such a shift occurs, there are always realignments of competitive advantage and new measures of success and value. To succeed in this new world, it will not be enough—indeed, it will be counterproductive—simply to intensify current stimuli, policies, management strategies, and curricular approaches. Remaining innovative requires us to understand both the shifts and the new strategy agenda that follows. We must collaborate or perish—across borders, cultures, disciplines, and firms, and increasingly with masses of people at one time.