

Foreword

When Satish and Mohan asked me to write the foreword to this book, I could hardly contain my enthusiasm. Not only was I already immersed in the subject matter by virtue of my job, but I saw an opportunity to summarize some four years of acute observation and learning on a topic that is driving a new level of global, socio-economic transformation. We are in the midst of one of those rare inflection points that will forever change the way work is conducted, the way new opportunity is created, and how value is extracted from our endeavors. Of course, we are talking about the uniquely 21st century phenomena of collaborative innovation.

Certainly it is on everyone's minds. CEOs, government officials, academic and community leaders around the world are all counting on "innovation" to be the fundamental driver of economic opportunity, job creation, business competitiveness and advances in education, health care, and a vast range of other disciplines. Investing in innovation, they say, is the surest way to survive and thrive in today's complex, connected world.

But what do they really mean when they talk about innovation? Inside the information technology industry, innovation has been defined historically by the process of invention and discovery, and driven by investments in Research and Development. Bell Labs, Xerox PARC and IBM Research, along with basic research programs at the world's leading universities, epitomized the innovation engines of the 20th century.

They also operated in classic "ivory tower" mode—highly secretive and proprietary in their approaches, sharing little with others and, as a result, sometimes suffering from pain-stakingly slow paths to market for their best ideas.

But the world has changed dramatically over the past decade—and even more so, the basic nature of innovation itself. This shift first became evident earlier this decade.

Early in 2004, I had the great privilege of participating in two major initiatives to study how and why the nature of innovation is changing and the impact on business, governments, and our global society. The first was the National Innovation Initiative (NII), a special study group sponsored by the Council on Competitiveness. The NII comprised some 200 CEOs, university presidents and labor leaders whose collective mission was to help restart America's innovation engine.

Around the same time, IBM launched a unique project called the Global Innovation Outlook (GIO)—a vastly different way of identifying and acting on emerging trends, policy matters, and market opportunities, driven by input from hundreds of big thinkers in a diverse range of disciplines around the world.

We all learned a great deal from those exercises. It seems obvious now, but perhaps the most valuable finding was deep new insight into the sweeping shift in the way innovation is created, managed and delivered.

So why has the nature of innovation changed so dramatically? There are many factors, including: the dynamics of a flattening world, the march of commoditization, the rapid and global adoption of new technologies, and particularly, the open movement.

Innovation happens much faster today, and it diffuses much more rapidly into our everyday lives. It no longer is the domain of a solitary genius seeking to take the world by storm. Instead, innovation is increasingly:

Global. The widespread adoptions of networked technologies and open standards have removed barriers of geography and accessibility. Billions of people, even in the most remote regions of the world, have ready, affordable access to advanced wireless technologies and the Internet. Hitching high-speed rides on these platforms, ideas now circumnavigate the globe in a matter of minutes, if not seconds. As a result, almost anyone with a good idea can now participate in the innovation economy.

Multidisciplinary. Because the global challenges we face today are far more complex, innovation now requires a diverse mix of talent and expertise.

Consider the mapping of the human genome. Until recently, that type of research could only be conducted in wet labs, in the physical realm.

But now, incredible advances in information technology make it practical to model and process genetic information in ways never before possible.

Life Sciences just may very well be the defining science of the 21st century. At its core is the application of silicon chips, database software and powerful, lightning quick computers. To be a leader in this emerging field, you need to be as knowledgeable and facile in these domains as you are in biology and related sciences. That's a daunting and unprecedented challenge, but also a fruitful approach to unlocking new ideas and approaches to discovery that might not have otherwise emerged.

Collaborative and Open. Just about every study on innovation identifies the power of collaboration and communities as one of the major forces driving innovation in today's environment. Our first GIO exercise, for example, identified the "power of networks" as one of its top findings. Participants told us that, increasingly, their power comes largely from their ability to tap into—and sometimes transform—a larger network of people and ideas.

Similarly, more and more businesses recognize that there are a lot more capabilities for innovation in the marketplace than they could try to create on their own, no matter how big and powerful the company.

One of the key themes that emerged from a 2006 CEO study we conducted was that external collaboration is indispensable for innovation. We interviewed nearly 800 CEOs, representing a wide swath of geographic areas, a range of annual revenues, and everything from small and medium businesses to large, global enterprises. When asked which sources their companies relied on for their innovative ideas, "business partners" were right near the top of the list, just behind the general employee population.

"Customers" rounded out the top of the list, meaning that the top three significant sources of innovative ideas are predicated on open, collaborative approaches, including reaching outside the organization. In fact, CEOs said they are getting about twice as many innovation insights from customers as they are from their own sales and service organizations.

Perhaps most surprising was that "Internal R&D" was second-to-last on the list. As a career engineer and scientist-turned businessman, I would

argue that those who do not see value returning from their R&D investments are not managing their portfolios to reflect the changes underway in the marketplace. In other words, they still are not collaborating externally and working directly with their customers. IBM Research is in the midst of a renaissance as a result of embracing market input. But that's probably fodder for another book entirely.

The CEOs also told us that partnering—whether crossing internal or external boundaries—is easy in principle, but very difficult in practice. This is not at all surprising. Working with different groups to achieve common objectives usually requires a change in the culture of most organizations, and cultural transformations may be the hardest of all. I am convinced that to truly embrace a culture of collaboration you must accept limitations in your ability to get things done without help.

This is particularly important for those companies, like IBM, who are addressing problems in business, government, health care, technology, and science that are very sophisticated in nature and pushing the limits of what is possible. We have learned that we cannot work on problems such as information-based medicine, integrated supply chains or advanced engineering design unless we have established a very close relationship with clients, business partners, and even other vendors who might very well be competitors.

In such an environment, to boast about being “the best” would frankly be considered crass, a sign of corporate insecurity rather than the strength of a confident leader. Instead, you want to be known as a company that helps all the various members of the team succeed in whatever problems are being addressed. Rather than claiming that you are the most innovative of companies, you want to be known as a company that helps those with whom you work become more innovative themselves.

The open movement makes all of that possible. It holds the potential to spark remarkable innovation—and also turn historical cost structures and investment models on their ears. The Linux operating system, for example, is owned by no one, yet owned by everyone at the same time.

Thousands upon thousands of programmers around the world contribute to it and make it better, creating a checks and balances system that would be impossible with proprietary, closed systems.

Historically, we know it takes about \$1 billion to bring an enterprise-ready operating system to the marketplace for one computing platform. By working with the open community, we at IBM were able to get Linux across our entire product line with about one-fifth the investment we would normally make for just one platform. We did it through a combination of Linux code developed by the community, Linux code we contributed to the open community, and Linux code we developed uniquely to better support it on our products. As a result, our offerings are better tested, more robust and are market-ready more immediately.

The open movement creates a common base for infrastructure, so that the wheel never has to be re-invented. The basics are already there and agreed-upon by the global community. That enables creators to leapfrog over the mundane, and jump right to the innovative—being assured that the infrastructure is sound and secure because it has been refined and tempered by great thinkers around the world.

When more people have access to the building blocks of innovation, rich new perspectives and diverse influences are injected into the creative process. People begin to think in an interdependent, collaborative way—across disciplines, and collaborating at the intersections between them.

True innovation, then, is driven by the ecosystem; by listening to and learning from the various constituents with whom you exchange dialog and who may add value to the discussion. By embracing your ecosystem, you tear down the boundaries of culture, geography and organization to rapidly generate ideas and act on changes.

The first step is modeling your organization's own ecosystem—all the major constituency groups that are vital to your business success. I offer one approach here (see the following Figure) simply as a framework. There really is no right or wrong model, unless you choose to go it alone.

Second, you need to commit to a two-way dialogue with each of these constituencies—and also foster interaction between them, both with you and without you. You cannot control them anymore, or simply pump one-way messages and demands out to them. They will go elsewhere and collaborate with more receptive partners.



Networks are not a new idea, of course. The business world has always comprised constellations of people working together to create value. But in the past, those relationships have generally been more limited and exclusionary in nature, bound by strictly defined legal agreements and financial understandings.

Over the past decade, however, the proliferation of communication networks has not only connected people, places and ideas in unprecedented ways, but also catalyzed the evolution of social structures. With the freedom to transcend physical and geographic borders more easily, we are more willing to partner inside and outside our traditional boundaries of organizations and countries.

Because of that shift, the 20th-century business enterprise as we know it could be history. Increasingly, the motivating force that brings people together for work is less “a business organization” and more the collective enterprise—activities driven by a common set of interests, goals or values.

The trend is accelerating, and it will have profound implications on how companies think about everything from leadership to managing and motivating global talent. It will change the way companies approach innovation itself.

As boundaries dissolve, as more fluid relationships form, as ecosystems expand, and as networks get larger, the very nature of decision-making for individuals, businesses, and the world takes on a new shape. Local actions now have global consequences, and the reverse is true as well.

To pursue open, collaborative innovation, enterprises simply must find ways to tap into the potential of the skill, talent, and creativity of people from different teams in different organizations across the globe. A company can only be as innovative as the collective capacity of the people who make up its ecosystem. And to attract and retain talented people, a company must enable those people to feel respected, as individuals, as professionals and as members of a team. The company must trust those people and encourage them to collaborate and innovate with colleagues inside and outside the business, driven as much by pride of contribution as by loyalty to the company.

These new models for collaboration offer a financial payoff as well. Studies show that companies that outperform their peer groups are much more likely to have adopted business models that focus on core expertise and collaboration with partners, rather than by strengthening their command and control posture.

Consider Bharti Tele-Ventures, the largest private telephone company in India. It recently outsourced and integrated its core functions—such as network and program management, help desk support, disaster recovery, IT, and billing—which freed it to focus exclusively on marketing and customer service strategies. As a result, Bharti tripled its subscriber base—from 6 million to 18 million subscribers—in just 20 months.

But success stories like that do not come easy. As fewer companies directly control all aspects of their operations, it becomes harder to ensure that brand experience consistently lives up to brand promise. How can a company ensure that the individuals and business partners who power its network fully understand its brand and are motivated to protect and uphold it?

During the Global Innovation Outlook sessions, several participants advanced a concept built around the term “Reputation Capital.” It describes a kind of currency for building trust in a prospective worker’s personal and professional qualifications. They cited examples such as Wikipedia and eBay, both of which built successful brands based on the contributions of hundreds of thousands of non-affiliated individuals.

In each case, there are standards in place enabling people to see and rate the integrity and credibility of contributors. The more a contributor consistently demonstrates a high level of accountability and quality, the more value the contributor garners. Even for businesses not built around the contributions of individuals, reputation capital has intriguing possibilities—especially for emerging global players who have only a virtual presence and no visible brand of their own.

I am convinced that the art of collaboration will be the most distinguishing leadership characteristic of the 21st century. Universities need to teach it. Government policies and regulations need to facilitate it.

For collaborative innovation to become part of our collective DNA, we must accept the notion that the surest way to make progress and solve problems is to tap into the collective knowledge of the team. Networked enterprises are the future. No individual enterprise, no matter how large and talented, can afford to go it alone in today's highly competitive, globally integrated marketplace.

Success in tapping into such a global marketplace of innovators and experts—the “Global Brain” as Satish and Mohan call it—requires companies to first develop a sound understanding of the collaborative landscape and then decide on an approach that suits them the best. One size does not fit all in this regard.

In this book, Satish and Mohan provide a rich description of the different models of networked innovation and offer a set of guidelines for companies to identify and prepare for the most promising collaborative innovation opportunities. As they emphasize, success also requires us to rethink the very nature of our relationships with innovation partners – what we need to control and what we need to let go.

I think we will find that the sacrifices, and the benefits, are well worth the journey.

Nick Donofrio

Executive Vice President for Innovation and Technology at IBM Corporation