100 years of foresight

The importance of long-term thinking at IBM

> *"Of the recent crises that have shaken companies, markets, and even entire economies, many can be traced to decisions made for immediate gain—often for the shameless benefit of individuals—and at the expense of future prosperity."*
>
> —Samuel J. Palmisano, IBM Chairman and Chief Executive Officer

A passion for making the world work better

In the span of a century, IBM has evolved from a small business that made scales, time clocks and tabulating machines to a globally integrated enterprise with more than 400,000 employees driven by a strong vision for the future.

Chief among the reasons for this sustained success is IBM's deeply embedded culture of foresight and innovation. A company has to successfully read and interpret the environment in which it operates, staying ahead of changes in society, economics, technology, competition and customers. By developing a robust corporate foresight capability, and developing an innovation process that capitalizes on that capability, a company can be truly successful in the long term.

Corporate foresight can be defined as *the structured capability of an enterprise to sense, envision, explore and prepare for how the future may emerge and to use that insight in formulating strategy, plans and operations of the enterprise.*

The practice of corporate foresight helps the enterprise avoid strategic surprise and reduce uncertainty in decision making. It allows the enterprise to think through the consequences of unanticipated change, envisioning what might be possible and deciding what would be preferable.

In the words of Sam Palmisano, IBM Chairman and CEO, "Most companies anywhere in the world don't make it 100 years. We made it 100 years by always focusing on the future and driving IBM's capability to that state. We were always focused on having our capabilities support our clients where they needed to go."

IBMers believe in progress, embracing the notion that the application of *intelligence, reason and science* can improve not only business, but society and the human condition as well. Throughout history as we moved from time card machines to mainframes to PCs to software and consulting services, it has always been about trying to make the world work better.

Organizing for foresight

IBM CEO Sam Palmisano said recently that he believes IBM's capacity to adopt a longer perspective is a major asset and an enormous competitive advantage. When an organization embraces a culture of foresight, the value impacts the decision-making process at multiple points.

- It determines how and where you invest and allocate resources.
- It changes your view of talent development.
- It guides the ethics and behavior of both management and employees.
- It shapes the way you see your company's role in industry and in society.
- It tells you how and when to take decisive action.

It's important to note that there is no one right way to manage foresight within an organization. Just as IBM has created a unique, structured approach to thinking about the future—based on best practices and techniques we have developed through the years—so too have many other companies achieved their own success with their own approaches.

These corporate foresight approaches vary widely and depend on a number of variables, including the organization's industry, geography, and size. A consumer goods company, for instance, will naturally have different needs from a company that is focused on heavy industry, or an organization focused on education or healthcare. Looking across a broad array of enterprises, there are four general considerations for the way they organize their approach to studying the future (see Table 1): the structure of their approach, its function in the enterprise, its location within the enterprise, and overall maturity with respect to foresight practices.

Considerations	Characteristics
Structure of approach	• Formal vs. ad hoc programs • Permanent vs. part-time staff, and the use of external consultants • All employees involved in the process vs. just senior leadership
Function in the enterprise	• A listening post, observatory, think tank or emerging business incubator • Market focused vs. internally focused • Practical/strategic vs. creative in nature
Location within the organization	• Research and development, product design • New and emerging business development, strategic planning • Market and competitive intelligence, marketing and communications
Maturity of foresight practices	• Different time horizons: 1—3 years, 3—5 years, 5—10+ years • Industry needs—consumer products vs. capital goods, lead time for product development and investments • Focused on developing reports and content, or facilitating innovation and foresight processes

Table 1. There are four general considerations for the way enterprises organize their approach to studying the future. Characteristics within these considerations depend on a number of variables, including the organization's industry, geography and size.

"You can analyze the past, but you need to design the future. That is the difference between suffering the future and enjoying it."

—Edward de Bono, Author[1]

IBM best practices for innovation and foresight

Today, IBM has a diverse, evolving set of internal foresight capabilities focused on technology, society and business. Each of these capabilities involves different stakeholders, structures, purposes, locations within the business, and timeframes. Together they form a comprehensive system of looking toward the future that IBM can act upon. These capabilities include:

Global Technology Outlook (GTO). For more than 25 years, IBM Research has prepared an annual study of major technology trends for IBM's senior management team. The GTO analysis looks at the innovations that may significantly impact businesses worldwide, especially the information technology industry. The GTO helps drive IBM's US$6 billion investment in research and development each year.

Academy of Technology (AoT) focuses on the technical underpinnings of IBM's future. Elected membership consists of the top technical leaders from IBM locations around the world. Member-initiated activities include independent consultancies for executives, studies and workshops, and topical conferences.

Global Innovation Outlook™ (GIO). Annually from 2004 to 2009, IBM brought together people from all over the world to discuss their ideas about the major issues on the horizon in a variety of areas, including natural resources, security, emerging geographies and more. The GIO took a deep look at some of the most pressing issues facing the world and shared insights on providing solutions to those needs.

IBM Institute for Business Value (IBV). A global team of more than 50 IBV consultants conducts research and analysis across multiple industries and functional disciplines. The IBV also produces thought leadership papers, e.g., CxO studies, future agendas and value realization studies, as well as industry views on the future of market segments such as retail and healthcare.

InnovationJam®. InnovationJams are online forum discussions—typically run over a period of one to three days—that are tightly managed and enable senior executives to engage with participants on two or three questions or challenges. An InnovationJam in 2006 played a critical part in IBM's current Smarter Planet initiative.

Market Development and Insights, IBM's internal market research organization, explores and analyzes potential future landscapes, assists decision makers in developing and exploiting new market opportunities, and helps to identify future sources of value. Analysts use sophisticated techniques to develop a global perspective on high potential industries, emerging technologies, competition, new markets and geographies.

In 1964, IBM made what CEO Thomas Watson, Jr., called "the most important product announcement in company history." Few new products have had the massive impact of the IBM® System/360—on technology, on the way the world works, or on the organization that created it. The System/360 set IBM on a path to dominate the computer industry for several decades.

At the time, however, success was far from clear. IBM's decision to pursue this vast, US$5 billion investment in something that would cannibalize the company's existing product lines was an epic "bet the business" move. This new approach required IBM customers at the time to move to a new architecture and completely revamp their computing environments. When the S/360 was announced, it changed not only computing forever, but also IBM. The S/360 replaced all five of IBM's computer product lines with one strictly compatible family. Companies for the first time could buy a small system and add to it as they grew.

A quarter of a century after IBM System/360 debuted, products based on S/360 architecture and its extensions accounted for more than half of IBM's total revenues. So, the gamble paid off. But without the reliance on foresight and innovation, deeply embedded in the IBM culture, it's hard to imagine that the "$5 billion gamble" would ever have been made.

Smarter Planet: the dawning of the next 100 years

In November 2008, IBM Chairman, CEO and President Sam Palmisano, during a speech at the Council on Foreign Relations, outlined a new agenda for building a "Smarter Planet." The speech emphasized how the world's systems and industries are becoming more instrumented, interconnected and intelligent, and that leaders and citizens can take advantage of this state of affairs to improve these systems and industries.

The Smarter Planet concept can be seen as an extension of the IBM philosophy that has evolved over the last 100 years, in the sense that it links technological progress with the ability to solve society's problems to help make the world work better. It is also a study in the culture of foresight at IBM, evolving through some of the same processes that have launched other successful initiatives, strategic directions and even product lines. It was developed over a period of five to ten years, incorporating documented trends including the infusion of intelligence into our daily lives, into the systems and processes that make the world work—into things no one would recognize as computers: cars, appliances and clothes, even complex systems such as agriculture and waterways, roadways and power grids.

Smarter Planet as an exercise in foresight began precisely with one of the IBM processes outlined above. In 2006, a global InnovationJam brought together more than 150,000 people in 100 countries—IBM employees, their families, clients and others—in a virtual brainstorming session on emerging business opportunities. Several concepts developed during that session became the embryonic beginnings of technologies that today are helping the world become a smarter place. Since introducing the Smarter Planet concept, IBM has collaborated with more than 600 organizations worldwide that each does its part in making this vision a reality.

"When it comes to the future, there are three kinds of people: those who let it happen, those who make it happen, and those who wonder what happened."

—John M. Richardson, Jr., American academic and author[2]

Embracing the culture of foresight

Foresight—and the courage it takes to act on it—can make the difference between a good leader and a great leader. Studying the future by reading, listening, discussing, observing and—most important—*thinking* can provide the ability to not just observe the future, but to help shape it, to help solve society's problems and make the world work better.

Building and supporting a *culture of foresight* within an enterprise is not about tools and techniques or special programs. As IBM and other successful companies have proven, foresight means embracing the fact that uncertainty exists and that we can manage it and act to influence the future. IBM's first 100 years have given us a unique perspective on long-term thinking and the importance of foresight in our continued success.

"The hard part," according to David Jarvis, from the IBM Center for Applied Insights, "is turning prudent foresight into action. Having a culture of foresight in a corporation is useless unless you can act on the convictions of the organization. It's difficult in today's 'everything now, 24-hour cycle' culture to take the time and energy to mindfully think about the future. But it is absolutely critical to the enterprise with a 100-year outlook and a commitment to changing the world for the better.

"Continue to be curious. Scan the horizon. Be interested in big things. It will pay off."

During the Great Depression of the 1930s, IBM managed to grow while the rest of the U.S. economy floundered. While many businesses had shut down, and customers were reducing their orders for IBM equipment, Thomas J. Watson, Sr., kept his workers busy producing new machines even while demand was slack. At the time, Watson was widely criticized for his actions and was even reprimanded by his own Board of Directors. Watson, however, had the courage to hang on for something big that he knew was coming. And, in fact, when Franklin Delano Roosevelt signed the Social Security Act of 1935 into law, IBM was the only vendor ready with the needed large inventory of equipment. As a result, the Social Security Act brought IBM a landmark government contract to maintain employment records for 26 million people and created an enormous demand for data processing machines. It was called "the biggest accounting operation of all time," and it went so well that orders from other U.S. government departments quickly followed. Because IBM had the foresight to stockpile inventory while other companies closed their doors, the company was perfectly positioned to assume the market leadership it kept for the next 50 years.

For more information

For IBM insights and perspectives on the issues that matter most to the C-suite executives, visit the following website: **ibm.com**/csuite

Learn more about the IBM Centennial at: **ibm.com**/ibm100

Details on organizations that contribute to IBM's foresight capabilities are available at:

- **ibm.com**/iibv
- **ibm.com**/research
- **ibm.com**/gio

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[1] Edward de Bono, "New Thinking for the New Millennium," 1999.

[2] John M. Richardson, "Making it Happen: A Positive Guide for the Future," 1983.

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