Innovations in Corporate Responsibility 2004-2005
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On the cover
Danny Patterson, one of thousands of IBM’s On Demand Community volunteers, is IBM’s senior location executive for Mobile, Alabama, and Pensacola, Florida, and a leader for tape storage sales. He is pictured here working with some of the children at the Lighthouse Day Care Center in Grand Bay, Alabama, where he volunteers and provides administrative support. Among his other community interests, he has created a local foundation—the Lighthouse Community Development Corporation—to speed economic development in the region and serve as an appointee to the statewide Alabama Commission on Higher Education. Recently, Danny Patterson has been volunteering much of his personal time for people in Mobile displaced by Hurricane Katrina, in addition to the other initiatives he’s undertaken for the community following the hurricane.
It isn’t an exaggeration to say that innovating in ways that matter for the world is one of the leading reasons people at IBM come to work every day—because tens of thousands of IBM employees said essentially the same thing a couple of years ago in describing the values they hold in common as IBMers.

To understand what they mean, it’s important to understand the company they joined.

For IBM and IBMers, exercising our responsibilities extends far beyond a standard notion of “making a difference.” We certainly strive to do that—and we continue to contribute technology, services, money, and our own personal time to worthy causes.

Our more important work, however, falls more in line with our day-to-day work, wherein we take new technologies, establish new relationships, find new approaches, and create wholly new value, capabilities, and opportunity. We do this for business, and in doing so we change the way people and companies work. We do this for communities and the people in them, for nonprofit institutions and governments, and in doing so we can change the way people live, the possibilities open to them, and the way they understand themselves and the world.

In this update to our ongoing corporate responsibility reporting, you’ll see many examples of this kind of work and these kinds of innovations. Some rely on cutting-edge technology—such as the World Community Grid we pioneered in late 2004. Built on open standards, hundreds of thousands of individuals’ computers are linked into a “grid” to solve the mystery of human proteins—their structure and, ultimately, the diseases and conditions they cause or affect.

Other innovations have very little to do with technology and everything to do with honoring what makes us, as a company or as individuals, unique. Such a commitment led to our resolve in 2005 to place a person’s genetic information off limits in any of our employment decisions—even as our collaboration with the National Geographic Society is working to track the migratory history of the human race using thousands of individuals’ genetic histories.

As you’ll see in this update, we often draw on our global skills and assets to address local needs—as in our response to natural disasters—and we often look to implement local approaches to address crises of global proportions—as in our policies and programs in response to the HIV/AIDS epidemic.

Regardless of a particular innovation’s details or scope, the fact that it matters—to an underserved country, an untapped market, or an underprivileged child—matters greatly to us. In fact, it’s one of the reasons we come to work here every day.

**IBMers value:**

• Dedication to every client’s success.
• Innovation that matters— for our company and for the world.
• Trust and personal responsibility in all relationships.
MANY COMPANIES TODAY are seeking to be innovative. They recognize it as the key to surviving and thriving in an increasingly competitive, global, and dynamic world. This is a very heartening development, after years of focus on mere efficiency.

At IBM, this is nothing new. We have been an innovation company since our inception nearly a century ago. And IBMers today still work not only on inventing technology, but on applying our inventions and insights to solving meaningful business and societal problems.

The great news is that there is a vastly greater range of new capabilities available to enterprises and individuals today—new technologies, a new level of openness and empowerment, new kinds of collaboration, and a literally planetary array of skills, expertise, and imagination, all of which can be capitalized upon in innovative ways by leaders of businesses and institutions everywhere.

IBMers use these myriad resources to have a direct impact on how people, companies, and institutions work and grow. And we apply this same sense of purpose to our relationships with communities.

Taken together, the stories and the results presented in this document illustrate the broad scope of IBM’s own innovation and, even more important, the innovation we enable in others. This is not just about inventing new things or even new operating models. It also encompasses new approaches
to policy, process, and management. It requires a clear-eyed view of what works, what doesn’t, and what’s needed to produce real change—whether in a supply chain or in the prevention and treatment of disease. It has to be managed and sustained over time, and at societal scale.

This is innovation that matters. And more than anything, it requires both personal responsibility and partnership. When I see the response of IBMers in the wake of events like the 2004 tsunami in South Asia, the 2005 earthquake in Kashmir, and the recent hurricanes in the Gulf areas of the United States, I’m extremely proud—but I’m not a bit surprised. I see these people bring the same sense of creativity, urgency, and dogged commitment to the work they do with each other for our clients every day.

Innovation has become a priority for the world today because it creates systemic, sustainable, and meaningful value. At IBM, however, we think the work of innovation is even more than a priority. It is, and has always been, a responsibility. At IBM, in the end, delivering innovation—and turning our clients, partners, and communities into innovators themselves—is our reason for being.

Samuel J. Palmisano
Chairman, President, and Chief Executive Officer
The values by which IBM is managed were established as a result of a global, 72-hour discussion and rating event that involved tens of thousands of IBMers in every kind of job, at every level of the company.
IBM is a company managed by values.

Our values drive the decisions of our chairman and CEO and of our senior leadership, who are unabashed champions of IBM’s dedication to client success, innovation for IBM and the wider world, and trust and responsibility in all relationships.

Our ethics take shape and come alive through the direction of our executives, who are held accountable for implementing IBM’s values into core business strategy.

And ultimately, our values are the responsibility of each of the more than 300,000 IBM employees who create the experience clients, partners, suppliers, and communities have when they encounter this company and its people. We are responsible for carrying forward the traditions of a company that is nearly a century old—a company which has always staked its reputation not just on what it does, but in how it does it. This includes compliance with financial and legal rules in every country where we do business, but our commitment to our relationships extends far beyond the minimum requirements of laws and regulations.

In 2003, IBM held a worldwide employee “jam”—a large-scale combination of technology and workforce strategy that culminates in an online discussion and evaluation stage to develop actions out of a multiplicity of perspectives and expertise. Called “ValuesJam,” it provided a setting over the course of 72 hours for IBMers to establish several precepts that, for them, define this company and the people who come to work at it. This collaboration led to the first reformulation of IBM’s core values in nearly a century.

In 2004, in a 54-hour “WorldJam,” IBMers identified actionable ideas for making the company a living, breathing embodiment of our values. In the jam’s initial phase, participants developed tens of thousands of ideas, which were later analyzed and distilled to create 191 proposals. Employees were then invited to rate the ideas over a seven-day period. Senior management committed to action on 35 of the top-rated recommendations. Most of those recommendations to reshape this company according to its values will have been deployed or piloted before the end of 2005, with nearly all the remaining initiatives to be established in the company in 2006.
IBM has been in the information technology (IT) industry since that industry began, and we’ve seen it change many times. Often, we’ve led those changes. Today, we are again aligned around a single, focused model. We take our company’s breadth and the depth of IBMers’ insights on issues, processes, and operations across a variety of industries, and then we invent and apply technology to help solve our clients’ most important business and competitive problems.

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Our business model is based on innovation—the intersection of invention and insight, which unlocks new sources of value and thereby changes a business, an industry, or society in meaningful ways—with the goals of helping our clients transform their enterprises for competitive advantage and providing long-term value to our shareholders. In support of these objectives, our business model has been developed over time through strategic investments in services and technologies that have the best long-term growth and profitability prospects based on the value they deliver to clients.

To maintain our ability to remain at the forefront of innovation, this model is designed to allow for flexibility and periodic rebalancing of our portfolio. The company’s focus has been on decreasing its involvement in the areas of our industry which are prone to commodity pricing and competition and increasing our investment in the high-value market areas where the value offered by IBM’s technology and expertise can be sold or leased more profitably than commodity offerings allow.

For example, in recent years, IBM has sold its hard disk drive and personal computer manufacturing businesses, and we have continued to use our cash to make acquisitions in software and services businesses (for an aggregate cost of more than $2 billion in 2004).
The company's portfolio of capabilities ranges from services that include business performance transformation services to software, hardware, fundamental research, financing, and the component technologies used to build larger systems. These capabilities are combined to provide business insight and solutions for enterprises.

**OUR CLIENTS**

IBM's clients include many different kinds of enterprises, from sole proprietorships to the world's largest organizations, governments, and companies representing every major industry and endeavor. Over the last decade, we have exited or greatly de-emphasized our involvement in consumer market segments and divested the company of other noncore businesses to concentrate on the enterprise market segment. In IBM's view, opportunities in the enterprise area are superior — representing approximately two-thirds of the IT industry's revenue. As a result, we have made acquisitions and invested in emerging business opportunities important to our enterprise clients. Many of these investments have grown into multibillion dollar businesses in their own right, and are now contributing to IBM's growth.

The majority of the company's enterprise business—which excludes the company's original equipment manufacturer (OEM) technology business—occurs in industries that are broadly grouped into six sectors, around which the company's go-to-market strategies, and sales and distribution activities are organized:

- **Financial Services:** Banking, Financial Markets, Insurance
- **Public:** Education, Government, Health Care, Life Sciences
- **Industrial:** Aerospace, Automotive, Defense, Chemical and Petroleum, Electronics
- **Distribution:** Consumer Products, Retail, Travel, Transportation
- **Communications:** Telecommunications, Media and Entertainment, Energy and Utilities
- **Small and Medium Business:** Mainly companies with fewer than 1,000 employees

**STRATEGY**

IBM operates in the IT industry, which comprises three principal categories:

- **Business Value**
- **Infrastructure Value**
- **Component Value**

IBM continues to see a shift in revenue and profit growth from Component Value to Infrastructure Value and Business Value, where we think revenue and profit potential will be greatest in the years ahead.

**Business Value**

We help our clients transform their businesses and gain competitive advantage by applying our skills and experience to business performance challenges specific to the client's industry or across industries and processes. IBM enters into long-term relationships and creates solutions for clients, driving on demand business innovation, on its own or in partnership with other companies. We draw upon our broad product and services offerings, including Business Consulting Services, IBM Research, industry-leading middleware, and our deep experience in systems and technology design.

**Infrastructure Value**

Infrastructure Value includes systems, such as high-volume servers; middleware software that can interconnect disparate operating systems and applications with data; storage networks; and other devices. It also refers to such services as infrastructure management—whether on the client's premises or managed remotely at IBM's own facilities—and consulting on how to improve and strengthen the infrastructure and realize greater return on investment in it. Central to our

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**2004 RESULTS FROM CONTINUING OPERATIONS (restated*)**

- **Revenue:** $96.3 billion
- **Net Income:** $7.5 billion
- **Diluted Earnings Per Share:** $4.39
- **Total Assets:** $111.0 billion
- **Net Cash from Operating Activities:** $15.3 billion
- **Number of employees:** 329,001
- **Stockholders of record:** 662,305**

*Restated 2004 financial results to include the impact of share-based compensation expense.

**As of February 25, 2005. In addition to individual stockholders of record, IBM estimates that there are an additional 1,600,000 stockholders who hold IBM stock in the name of a bank, broker, or trust company.
approach for building value in the infrastructure category is our support of open standards and our active promotion of Linux and other open source platforms, which help our clients control costs and allow them to benefit from the latest advances created by development communities around the world. IBM’s strategic objectives are to deliver open and integrated offerings and to expand partnerships.

Component Value
Component Value includes advanced semiconductor development and manufacturing for IBM’s server and storage offerings, as well as services, technology, and licenses provided to OEMs that create and market products requiring advanced chips and other core technology elements. We leverage these components in our own products and services even while we participate in selected market segments, focusing on key industry partners.

Challenges and Priorities

CORPORATE

• Improving top-line revenue growth, particularly in Europe and parts of Asia.
• Building sustainable growth in emerging markets (such as Brazil, India, and China) and in emerging opportunities (such as information-based medicine, retail on demand, and sensor and actuator solutions).
• Continuing investment and resource allocations to meet clients’ greatest needs in areas where IBM can provide the highest value.

Comprehensive information about the company, its financial results, lines of business, and operations are available online in the IBM annual report (www.ibm.com/annualreport), in our SEC reports (Forms 10-K, 10-Q, and 8-K), and in the publication “Understanding Our Company: An IBM Prospectus” (www.ibm.com/annualreport/2004/prospectus).

CORPORATE GOVERNANCE

A new approach to business controls that reflect IBM values.

Starting more than a decade ago, IBM has been at the forefront on issues of Board oversight through the creation of a committee devoted exclusively to matters of corporate governance. Since then, our Directors and Corporate Governance Committee has been responsible for reviewing and articulating the Board’s governance practices and for performing functions such as periodically assessing the independence of directors and reviewing and considering IBM’s position and practices on significant issues of corporate responsibility.

* * *

A full year before Section 404 of the Sarbanes-Oxley Act went into effect in December 2004, IBM placed its system of controls under a microscope to assess whether it was ready to meet the demands of the new requirements. The short answer: We were.

But that’s not the end of the IBM story. Actually, it’s just the beginning. While the comprehensive review verified an effective control structure, it also revealed an opportunity to fundamentally change the way we approached the issue of controls and align it more closely with our values.

We wanted this examination of our controls to matter—to deliver greater efficiency for IBM, showcase our technical innovation, and demonstrate trust and accountability. In essence, we wanted to raise the bar.
The U.S. federal Sarbanes-Oxley Act—officially titled the “Public Company Accounting Reform and Investor Protection Act of 2002”—was created with the goal of improving the accuracy and reliability of corporate disclosures. The act covers issues such as auditors’ independence and their oversight, corporate responsibility, and enhanced financial disclosure.

It has been called the single most important piece of legislation affecting corporate governance, financial disclosure, and the practice of public accounting since the U.S. securities laws of the early 1930s. Section 404 of the law mandates that most publicly traded companies acknowledge management’s responsibility for establishing and maintaining a system of controls, report on the effectiveness of their internal controls, and disclose any material weaknesses in their control systems.

The requirements of the Sarbanes-Oxley Act served as a catalyst for IBM to leverage our global management system, centralizing and standardizing common processes and systems designed to optimize efficiency and internal controls. IBM has now standardized process flow documentation and quarterly testing of key control points for over 100 financial and operational processes in place in 24 countries. Enterprise-level controls are also monitored and tracked on corporate level scorecards for all IBM locations—even small and emerging market segments.

As a result, IBM created an on demand environment for its controls structure. The hub is an online database that not only stores documentation and data, but also serves as the medium in which test results and the current status of controls are reflected. On demand scorecards—by country, by process, and by organization executing the control—provide real-time monitoring of the effectiveness of IBM’s internal controls throughout our matrixed management system.

IBM is among a small number of companies to recognize early on that Section 404 of Sarbanes-Oxley and another section of that act, Section 302—which requires the quarterly certification of financial results and controls by a company’s CEO and CFO—would eventually make it necessary for companies to merge their annual effort under Section 404 with their quarterly effort under Section 302. In anticipation of this, IBM implemented testing of all key financial and operational controls on a quarterly basis, providing further assurance of our reported financial results.

As a result of the new on demand testing and reporting, IBM has simplified our long-standing semi-annual control assessment (SACA) by line management, eliminating detailed surveys previously sent to thousands of employees, and reducing assessment cycle time as much as 50 percent.

More information about IBM’s corporate governance can be found on our Investor Relations Web site at www.ibm.com/investor/corpgovernance.
In late 2003, IBM began the work of reshaping our programs and policies to align with how we understand our values today: dedication to every client's success; innovation that matters, for our company and for the world; and trust and personal responsibility in all relationships. In some instances, we have adapted or updated programs that already represented what it means to be an IBMer. In many other cases, we are streamlining processes and establishing initiatives that didn’t exist before, which will help us build a company that better reflects these values.

In 2004 and 2005, we have asked ourselves tough questions about how our values should help us make decisions in running our business. And we are redesigning our management system, based on those values, to support the very best this company has to offer.

* * *

since the 1960s, IBM has had a written code of business conduct. Today, that code is spelled out in an evolving document called the “IBM Business Conduct Guidelines.” And IBM employees know what is expected of them. They are asked to certify annually to the IBM Business Conduct Guidelines.

In addition to the annual certification process of reading and acknowledging their responsibilities under the IBM Business Conduct Guidelines, in 2005 approximately 250,000 IBM employees received new in-depth training on financial integrity issues designed to support the guidelines. Through the use of simulations, case studies of actual situations for our industry, and other learning activities, the training reminds employees of the issues involved in maintaining our high ethical standards and IBM’s financial integrity.

While not every employee will be (or needs to be) an expert in accounting or finance, each IBMer needs to understand the financial and compliance implications of their responsibilities and that they are required to ask questions or raise concerns to their managers, IBM’s legal counsel, or IBM’s senior management, if necessary.

**UPDATE TO THE IBM BUSINESS CONDUCT GUIDELINES**

The Business Conduct Guidelines are regularly reviewed to determine they reflect the current issues and situations that could arise in our business or have occurred for others in our industry or across industries.

For example, in recent years, IBM’s Business Conduct Guidelines have been expanded to include guidance on financial reporting and accounting, including references to inappropriate assistance to customers.

**Challenges and Priorities**

**MANAGEMENT SYSTEM**

- Accelerating global integration of the company with management systems to support IBM’s innovation business model.
Within our supply chain relationships, we know that our company’s sizable purchasing power is a unique resource that we must manage responsibly—and we do. IBM spends nearly $2 billion a year with diverse suppliers, for example, greater than any other technology company. Yet more than managing our spend, we have a responsibility to hold ourselves—and our suppliers—to high standards of behavior. This means complying with all applicable laws and regulations. But it goes beyond that. It entails a strong commitment to work with suppliers to encourage sound practices and develop sound global markets.

* * *

Managing a $45 billion global supply chain requires an extraordinary level of care and attention. Beyond our financial accountability is the belief that we have an unparalleled opportunity to work with suppliers throughout the world to leverage the benefits of a truly global, truly diverse source for the elements that become IBM products and services, and to drive improvements in suppliers’ practices where necessary. In this light, we view supply chain responsibility as an ongoing process with the following steps:

- Standards establishment and communication
- Supplier assessment
- Industry collaboration
- Compliance and sustainable improvements

The underpinnings of our program are deeply rooted in IBM tradition. We have always been motivated to be responsible stewards of our supply chain, particularly in such areas as quality, environmental matters, and on demand business. In 2004, we formalized our commitment to corporate responsibility requirements for suppliers with the release of IBM’s Supplier Conduct Principles. This document defined our expectations in the following areas:

- Forced Labor
- Child Labor
- Wages and Benefits
- Working Hours
- Nondiscrimination
- Respect and Dignity
- Freedom of Association
- Health and Safety
- Protection of the Environment
- Laws and Regulations
- Ethical Dealings
- Communications
- Record Keeping

Unique for its level of detail, our Supplier Conduct Principles include examples of compliance and non-compliance for suppliers to use in viewing and assessing their own operations. To make this information available to a wide audience, it is posted on IBM’s Global Procurement Web site at www.ibm.com/procurement and translated into a number of languages.

With suppliers in more than 80 countries, we narrowed our initial assessments to locations where we have a concentration of suppliers in emerging markets. To this end, we have conducted over 200 supplier facility audits in China, India, Mexico, Philippines, Taiwan, and Thailand, and will soon progress into Belarus, Brazil, the Czech Republic, Slovakia, Hungary, Latvia, Poland, Romania, and Russia.

We don’t want merely to buy things through our supply chain. We’re working to improve them.
We are very methodical about the assessments—and the outcomes. IBM has engaged the help of a firm that specializes in the field of corporate responsibility audits using trained local professionals to conduct audits at our suppliers’ factories, offices, and distribution hubs. Using a combination of face-to-face interviews with plant managers and employees, plus a review of timekeeping, payroll records, and policies, the audits are designed to reveal a comprehensive picture of how a facility operates and to help uncover problems if they exist.

We share the findings with our suppliers’ management and all noncompliance requires a supplier-generated corrective action plan. Rather than ending our business relationship with noncompliant suppliers—which tends to limit the incentive for a company to improve and may even lead to facility closures—IBM looks toward the goal of building success in supplier social responsibility with the experience that meaningful changes in one supplier can spread to others.

If issues of worker safety, undesirable employment practices, or substandard wages are found, we’ve demanded immediate action and correction. For other areas of noncompliance, we review the short- and long-term plans that address their specific challenges. The plans also pave the way for improved business practices that can lead to sustainable improvements, verified by future assessments.

The chart, opposite, provides a level of insight into the findings of our supplier assessments. It is important to look at this data in the context of the overall supply chain, since only a portion has been assessed and only in the countries where we anticipated there could be issues.

The audits have found compliance issues across most of the code provisions. By classifying the findings into “significant” and “minor,” we are able to direct our feedback accordingly and prioritize improvements with suppliers.

In some cases, promoting sustainable corrective action is a longer-term objective due to the complexity of a given situation. For example, working hours remain a challenge in developing countries, where the convergence of a younger workforce, personal motivation, competitive wages, cultural influences, expanding local economies, and rapid customer order fluctuations based on shifting demand all contribute to the audit findings.

However, we are greatly encouraged by the commitment suppliers are making to remediation and improvement. Similarly, we are pleased by the “best practices” found during the assessment program, including many suppliers who have instituted quality of life and work environment improvements that meet or exceed our code of conduct.
In the final analysis, the true essence of the program is encouraging and driving sustainable improvements in the global supplier network. It’s a goal we pursue with purpose.

Industry Collaboration To Support Global Change

During its first round of supplier assessments, IBM was contacted by a number of firms within the electronics sector to begin a discussion on supply chain corporate responsibility. The rationale was simple: IBM, HP, Dell, and a number of their contract manufacturing suppliers, including Celestica, Flextronics, Jabil, Sanmina-SCI, and Solectron, understood instinctively that supply chain responsibility would have a greater impact if our companies collaborated. Indeed, each of these companies believes strongly in the value of supply chain standards and had been working individually to create and execute guiding principles that reflect each organization’s values.

During 2004, the initial group of eight firms created what is known as the Electronic Industry Code of Conduct (EICC), which is an equivalent to IBM’s Supplier Conduct Principles and is the first collaboration of corporate responsibility among the electronics industry on a global scale. The EICC paves the way for a standards-based approach for monitoring suppliers’ performance across several areas of social responsibility, including labor practices, health and safety, environmental, management systems, and ethics.

Central to the collaboration of these firms is the reality of interwoven supply chains in the electronics sector. Rather than exposing firms to multiple audits each year, suppliers to companies participating in the EICC will be able to meet one set of standards. The immediate and sustainable result: suppliers can apply their resources toward instituting long-term improvements in their offices, factories, and among their employees, rather than on addressing costly and repeated audits.

During 2005, the firms participating in the EICC have invested considerable time and effort to create a platform of applications for the implementation of the code with the supply chain. This represents a significant effort to create a sustainable foundation from which to move ahead. In addition, a growing roster of firms have adopted or endorsed the EICC—including Sony, which notified its 4,000 suppliers that it would also follow the EICC and encouraged other Japanese companies to follow suit.

A current list of companies endorsing the EICC and working on its implementation can be found at www.eicc.info.

“It is Simply Good Business”

Sanmina-SCI is a leading electronics manufacturing services company headquartered in San Jose, California, with plants in 20 countries around the world. As a provider of complete end-to-end manufacturing solutions, Sanmina-SCI is a major player in IBM’s supply chain. In this interview, Phil Alarid, vice president of Human Resources at Sanmina-SCI, discusses the challenges and benefits of supply chain corporate responsibility.

Have IBM’s Supplier Conduct Principles had an impact on your organization?

Yes. IBM’s Supplier Conduct Principles were used in the development of Sanmina-SCI’s internal audit questionnaire. This questionnaire is a tool Sanmina-SCI now uses to conduct internal self-audits at our various plants.

Has Sanmina-SCI participated in any of the IBM supply chain audits?

IBM conducted supply chain audits at our plants in Mexico and China using an independent auditor. This approach was viewed favorably by our management team, since we could engage in a nondisclosure agreement with the auditor that preserved the confidentiality of labor rates. It also gave us an opportunity to really understand the findings and discuss issues before releasing the audit report to the customer.
IBM’s Corporate Citizenship Council is made up of representatives of major functions within our Corporate division. It is tasked with integrating corporate citizenship into all aspects of our business. This includes understanding the needs and interests of our clients, employees, investors, and communities; assessing IBM’s social, environmental, and business practices so they are in alignment with IBM’s values; and integrating the company’s corporate citizenship objectives throughout the business.

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Reporting on the social, economic, and environmental practices of a business is valuable work. It’s required in some parts of the world, and expected everywhere as a basic business practice. A small industry has formed around the issue, with interested parties from all quarters studying the companies’ reports and commenting on their performance.

Sanmina-SCI collaborated with IBM and other companies in the creation of the Electronics Industry Code of Conduct. Why was this initiative important to your company?

Because it is simply good business. Sanmina-SCI defines corporate responsibility as a concept in which we integrate social, environmental, and human rights concerns in our business operations and our interaction with stakeholders on a voluntary basis. We also know IBM works hard to maintain an excellent brand image and company reputation. As a supplier, we see this as our job, too. Maintaining excellent stakeholder relationships is very important to us.

IBM is leading a global effort to define excellence and improve performance in corporate citizenship.

Challenges and Priorities

**SUPPLY CHAIN**

- Maintaining industry momentum and increasing participation in the Electronic Industry Code of Conduct.

More information about IBM’s supply chain, our commitment to diversity among our suppliers, and our expectations for responsible conduct can be found on our Global Procurement Web site: www.ibm.com/procurement.
In 2003, IBM founded the Global Leadership Network for Corporate Citizenship with nine of the world’s top performing companies. The goal of the steering committee was to find ways to improve performance as corporate citizens, rather than just reporting their actions over the past year. Joining IBM in this significant collaboration were General Electric, FedEx, Cargill, Diageo, Omron, Manpower, CEMEX, 3M, and General Motors. Together, this group represents some $544 billion in annual revenues and employs over 1.4 million people. Directing the discussion is The Center for Corporate Citizenship at Boston College and AccountAbility in the United Kingdom.

Since then, the group—chaired by IBM Vice President Stanley S. Litow—has created a common framework around which they evaluate their companies’ achievements and assess their performance against similar organizations. This information will become the basis for an interactive tool to facilitate benchmarking and strategic planning at all levels of our organizations.

By the beginning of 2006, the Global Leadership Network will invite companies throughout the U.S., Europe, Asia, and Latin America to join the effort, apply the on demand solution, and start driving real improvements in economic, social, and environmental practices across a multitude of companies.

Corporate responsibility is part of the long-term economic value of a company, and must be managed as well as any other core element of the business. To be responsible corporate citizens, therefore, IBM and other companies are accepting responsibility for determining the issues and priorities that matter most.

Challenges and Priorities

ACCOUNTABILITY AND SUSTAINABILITY

• Furthering the integration of IBM’s social, environmental, and economic performance with our core business strategy, thereby maintaining our recognition as a global leader in corporate citizenship.

• Increasing corporate participation in the Global Leadership Network worldwide. Deploy on demand tool for benchmarking issues of corporate citizenship.
Starting as a pilot program in 2006, IBM’s Transition to Teaching initiative will reimburse tuition and provide stipends for participating U.S. employees to become accredited math and science teachers after they leave IBM.
Beyond competitive salaries, benefits, and working conditions, how does a company demonstrate the value it places in its employees?

At IBM, we seek their opinions and take seriously what they have to say. Using special Web technology that brings together a global workforce, we engage our employees in strategic discussions about the company, our values, and their concerns. Employee ideas shape significant developments in policy and innovation—and improve how we do business.

From the day employees join our organization, they have the opportunity for training and support to advance their careers and succeed. Yet as each generation matures, the workforce changes along with the issues they face. For the baby-boom generation, IBM is looking at its role in our world after retirement. How can we help IBMers transition to other careers—particularly to teach in schools in desperate need of their high-level business and technical skills?

IBM also demonstrates the value it places in its employees by a commitment to diversity that is literally second to none. IBM has succeeded in the global marketplace specifically because our earliest leaders instinctively understood that our employees were our key to new innovations for new kinds of customers. Our long tradition of diversity has positioned this company to compete and succeed throughout the world.

We establish innovative approaches to workforce issues because we want the future of IBM to be even stronger than its past—yet no one should be surprised that IBM would be the company to do such a thing. After all, our equal opportunity policy, which we amended this past year to include genetic information, was first published in 1953.

You could even say innovation by IBMers and for IBMers is something that’s just in our DNA.
Central to our holistic approach to employee well-being is IBM’s global health benefits strategy, which focuses on preventive care, healthy lifestyle choices, and good health care decision making. Requirements and standards are universal across all IBM geographies but allow maximum flexibility for efficient implementation in a variety of cultures, work settings, and regulatory environments.

* * *

IBM was among the first companies to offer “healthy living” incentives to employees in the U.S. and to use technology to deliver and support the program. Now in its second year, IBM’s rebate for physical activity has had high levels of participation even as it helps reduce health risks.

For example, more than 100,000 employees enrolled in the physical activity rebate program for 2005. Between January and October, almost 60,000 of them had taken part in the program, recorded their results online, and been awarded their rebates. These results represent 10,000 more employees than during the same period last year.

IBM’s healthy living rebates program is also putting a dent in health care inflation. Analyses of health care claims data show that costs for IBMers who participate in the program and engage in regular physical activity are $500 lower, on average, than for those who do not.

IBM is also tracking impressive results on the smoke-free rebate. Of the IBMers in the U.S. enrolled in a smoking cessation program, nearly one quarter quit smoking in the first year with 80 percent of those remaining smoke-free by year two. These results are much higher than for other programs of its type.

And in Europe, IBM has launched a major health promotion initiative—“Factor Fit/Focus on Fitness”—in order to raise employees’ awareness and provide incentives for engaging in physical activity and healthy lifestyles. Participants set their own goals and collect points as they make progress towards them. To enhance motivation, users who surpass a target score are entered into a lottery with attractive prizes associated with well-being or physical activity.

Local Perspectives on a Global Epidemic

HIV/AIDS IN SOUTH AFRICA

A 1998 IBM study estimated that 7.3 percent of our South African workforce would be infected with HIV/AIDS by 2006. Out of that alarming prediction came a comprehensive program of voluntary and confidential testing and counseling for all employees and contractors, plus an awareness campaign to increase enrollment in IBM-sponsored treatment programs, encourage safe behavior, and advance knowledge of HIV/AIDS.

After a successful pilot program that began in 1999, management approved IBM South Africa’s HIV/AIDS policy in October 2001, with revisions in 2003. Among the priorities has been ensuring that the policy was compliant with all relevant legislation.

While the disease remains at epidemic proportions in South Africa, not one IBM employee in that country has died as a result of or from complications involving HIV/AIDS since joining the treatment program. Indeed, only 0.7 percent of our employees in South Africa are currently enrolled in treatment—far fewer than the 1998 study predicted.
“IBMers can also afford good food and a healthy lifestyle, which helps enormously,” said IBMer, nurse, and director of IBM’s South Africa Medical Center, Sister Gwynneth Staples, who manages the HIV treatment program through an outside medical organization. She noted that the average absentee rate is down to two days per year among infected employees.

“Before the launch of this program, when test results came back positive, it felt like I was handing employees a death sentence,” Sister Staples said. “Now I can say ‘You have AIDS, but here’s what IBM will do to help you manage this.’”

In addition to annual events, condom distribution, and treatment for sexually transmitted infections, IBM South Africa’s awareness campaigns focus on providing self-service interactive software to raise employee knowledge and awareness.

Voluntary counseling and testing has been available through IBM South Africa’s Medical Center since the early 1980s. Today, through the center, HIV-positive employees gain access to IBM South Africa’s treatment program, including access to Highly Active Anti-Retroviral Treatment.

HIV/AIDS IN THE UNITED STATES

IBM developed its practice in the U.S. regarding people with AIDS in 1985 in response to the spread of the disease and the threat it posed to our employees and the communities in which they live and work. That practice provides that we treat employees with HIV/AIDS in the same manner that we treat employees with other chronic illnesses—giving guidance, support, and access to health services, including prevention and education for HIV/AIDS.

IBM does not test applicants or employees for HIV/AIDS.

- IBM protects the confidentiality of employees with HIV/AIDS.
- IBM provides information and education on HIV/AIDS.
- IBM, whenever possible, makes accommodations that enable employees with HIV/AIDS to remain on the job.
- IBM does not discriminate against employees with serious medical conditions, including HIV/AIDS, in its hiring, promotion, or general benefits practices.

Since the beginning of the HIV/AIDS epidemic, IBM has been actively involved in providing support through its policies, programs, and practices to help mitigate the impact of the disease on our communities. In 1988, we were a charter member of the National Community AIDS Partnership, later known as the National AIDS Fund, and in 1990, became a founding member of the National Leadership Coalition on AIDS. More recently, IBM has facilitated the re-engineering of operational processes for the National AIDS Fund and helped establish a new “scenario planning” process, which replaced the fund’s traditional strategic planning and has positioned it to be financially and operationally stable and agile enough to meet the challenges ahead.

IBM employees have also found effective ways to illustrate their compassion. In recognition of World AIDS Day in 2005, IBMers in Tucson, Arizona, hosted sections of the AIDS Memorial Quilt and assembled to share stories from those affected by the disease. IBMer Mike Linney of Austin, Texas, received the 2004 Volunteer of the Year Award for his work supporting housing programs for those with HIV/AIDS, while employees in Beaverton, Oregon, sponsored a walk to support the fight against AIDS.

Challenges and Priorities

EMPLOYEE WELL-BEING

- Helping employees take responsibility for healthy behavior and become more involved in treatment decisions.
- Enabling informed health care decision making by providing information that helps individuals choose health plans that offer optimal value and improve efficiency in the system.
Our business operations and employee base are global; so is our commitment to diversity. We recognize that as one of the world’s leading institutions, IBM sets an example. And through our commitment and leadership on diversity-related issues, we know we are making a difference.

Just as IBM was one of the first companies to make diversity a moral imperative, we were also a leader in making diversity a strategic imperative and a cornerstone of our business strategy.

* * *

IBM’s competitive advantage is our employees and the diversity of thought, culture, race, gender, and geography which leads to a diversity of ideas they bring to our company and to our clients. People who represent IBM in the workplace actually reflect the marketplace, from sales to product development to services offerings. Yet while IBM represents the highest standards of diversity, maintaining that standard remains our challenge.

Equal opportunity is no longer a U.S. issue, it’s a global imperative. IBM is competing in a global marketplace and we must continue to create opportunities for our company and our employees to win in that marketplace, no matter where we compete or where IBMers work. In an on demand world, individual differences, skills, and backgrounds aren’t just important, they’re invaluable.

Beyond leadership in a global marketplace, some of the tangible results of a tradition of diversity include the following:

- IBM took an early lead when we hired our first disabled employee in 1914. Our accessibility innovations have enabled IBM to continue hiring the best talent. The outcome: IBM is now ready to tap into the future accessibility needs of an aging global population with the potential of a multibillion dollar market segment.
- In 1935, the founder of IBM, Thomas J. Watson Sr., launched a program to recruit college-educated women and made what, in those days, was a startling statement: “Men and women will do the same kind of work for equal pay. They will have the same treatment, the same responsibilities, and the same opportunity for advancement.” We have more work to accomplish, but at the end of 2004, 18.7 percent of our executives worldwide were women, the highest percentage at any time in our history.
- IBM launched programs years ago to attract and retain premier Hispanic/Latino engineers and technical employees. In 1974, IBM was the founding sponsor of the Hispanic Scholarship Fund. Today, this ethnic group is the largest minority in the U.S., and IBM is positioned to capture its massive market segment opportunity and employment potential.
- IBM is the only IT company with a Gay-Lesbian-Bisexual-Transgender sales team, which generates millions in revenues a year. In 2002, IBM added the terms “gender identity and expression” to our Equal Opportunity letter. In 2005, IBM announced domestic partner benefits in Brazil, Mexico, and Spanish South America, which means 80 percent of employees worldwide now have access to equivalent health care for same-sex partners.

CORPORATE POLICIES LEAD TO INCREASED AWARENESS OF DIVERSITY WORLDWIDE

In addition to business advantages, diversity policies by IBM and other global companies are functioning as socially responsible change agents, particularly in developing nations. IBM works closely with local governments on our initiatives to improve workplace equality and productivity, with the results benefiting people in countries where we do business.
For example, IBM serves clients in more than 170 countries worldwide, with employees in 75 of them. Our records indicate that 69 of the countries with IBM employees have some form of a law, article or constitution that prohibits discrimination.

- This number has nearly doubled—up from 36—since IBM began tracking this information in 2000.
- Most of these laws cover women, ethnic minorities and persons with disabilities.

And 24 of the countries where we do business currently have certain compliance reporting requirements.

It is significant to note that each of the countries identified by IBM as an “emerging country” in terms of workforce and market potential has adopted some sort of reporting requirement for a protected group. These countries are learning the value of providing equal access and opportunity in the marketplace.

In 2004, IBM submitted a recommendation, along with 17 other companies, to the European Council on challenges employers face regarding workplace equity. Based on IBM’s proposal, the European Council will develop a policy that combats discrimination and promotes equality.

As the Muslim population continues to grow in Rochester, Minnesota, and Toronto, Canada, offices have been converted into prayer rooms and restrooms were redesigned to include cleansing stations tailor-made for employees’ prayer preparation.

Reversing the Trend

THE NUMBER OF WOMEN SEEKING COMPUTER SCIENCE DEGREES HAS DROPPED SHARPLY

In the summer of 2005, IBM announced a joint partnership with the Society of Women Engineers as part of its latest effort to advance the recruitment, retention, and advancement of women in technical careers. Long a champion of women employees and distinguished worldwide for policies and programs that enable women to succeed, IBM is nonetheless facing a critical industry challenge. Women, who make up more than half of the world’s workforce, are underrepresented in the IT industry by significant margins and the trend is increasing.

The numbers are alarming. The U.S. Bureau of Labor Statistics estimates that 1.5 million new technology jobs will be added to the nation’s workforce by 2012. By comparison, the National Center for Women & Information Technology reports a 42 percent decline in the number of women seeking computer science degrees between 2001 and 2005 in the U.S. Other countries are documenting similar trends. As the gap widens between technical jobs and the available pool of talent—particularly among women—some analysts predict a loss of innovation and competitive edge.

As a corporation, IBM has demonstrated a relentless commitment to recruiting, retaining and advancing women by providing them with the skills and programs inherent to success. Indeed, the advancement of women is one of our seven global diversity imperatives, and we have reported on the status of women at IBM to our Board of Directors for years. Our focus on this strategic challenge guides education and management training opportunities for women employees, as well as award-winning initiatives that include child and elder care programs, flexible work schedules, and other work-life balance programs that recognize and support employees’ obligations to both home and career.

But the challenge of increasing the number of technical women goes well beyond our own walls. Industry experts say that girls as young as 10 to 12 have already developed misperceptions about technical careers that steer them away from the advanced math and science courses necessary to earn a technical degree in college. To that end, IBM has developed a comprehensive list of programs targeted at the K-12 level and beyond, which highlight IBM women role models and provide a more accurate portrayal of the range of exciting and innovative careers available to those with technical degrees. The programs include:

- EXITE Camps: IBM is encouraging middle school age girls to take their place among future innovators through EXITE—EXploring Interests in Technology and Engineering—Camps. Between May and October 2005, more than 1,500 girls, aged 11-13, attended one of 48 IBM-sponsored EXITE Camps in the U.S., Canada, Latin America, Europe or the Asia Pacific region—in 25 countries overall. The campers attending the weeklong EXITE programs took part in a variety of engineering- and science-related projects that, among other things, underscored the impact technology is making on everyday life. The camps are designed to encourage the girls’ interest in mathematics and science and give them a firsthand look at the wealth of career opportunities technology can provide. Since its inception, more than 4,000 girls have participated.
in EXITE Camps around the world and, following their experience, approximately 85 percent said they would pursue an engineering or technical-related degree when they go to college.

- **Introduce a Girl to Engineering Day:** IBM was instrumental in launching this national initiative, which marks the first time an individual profession has set aside a specific day annually for young women. More than 1,500 IBM women mobilized in 2005, reaching over 91,000 girls during Introduce a Girl to Engineering Day.

- **Women in Technology Chapters:** IBM has established 102 Women in Technology (WIT) chapters at IBM locations around the world. Through these chapters, volunteers are provided turnkey materials and resources to offer two- to three-hour workshops at their local schools. The workshop provides female students with positive role models, gives them hands-on experience in science and math, demonstrates that engineering can be fun, and counsels them about promising career opportunities in technology. More than 31,000 young women have been reached through these workshops.

- **Women in Technology Campus Liaisons:** Technical IBM women serve as liaisons between IBM and women in science, engineering, and technology programs at colleges and universities. These linkages have fostered communications, mentoring, and mutual participation in activities related to the retention of women in technical fields of study.

- **Building Bridges to the Arab Region:** This comprehensive new IBM program—a partnership with Her Excellency Suzanne Mubarak, the First Lady of Egypt—is designed for women and children to support technical training and education and to encourage technical careers. IBM partnerships with the National Council for Women in Egypt and the Arab Women Organization provide opportunities to receive the technical training and skills vital for success in the workplace. IBM’s TryScience online science museum for children is being translated into Arabic. In addition, IBM’s KidSmart Early Learning computer workstations—with educational software from Riverdeep that has been translated into Arabic—have been donated to multiple public schools in Egypt, Jordan, the United Arab Emirates, and other Middle Eastern countries.

- **2005 International Women’s Day in India:** Marking a milestone in IBM India’s women’s initiatives, more than 1,800 women participated in this event at 12 IBM locations throughout the country. At each location, an IBM senior leader opened the event by announcing the launch of the Indian Women’s Leadership Council—a new initiative designed to support the advancement of Indian women at IBM.

### Percentage of women in the IBM workforce

<table>
<thead>
<tr>
<th></th>
<th>AMERICAS</th>
<th>ASIA PACIFIC</th>
<th>EUROPE, MIDDLE EAST AND AFRICA</th>
<th>TOTAL WORLDWIDE</th>
</tr>
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<tbody>
<tr>
<td><strong>Total</strong></td>
<td>31.0</td>
<td>24.9</td>
<td>25.4</td>
<td>28.0</td>
</tr>
<tr>
<td><strong>Managers</strong></td>
<td>28.2</td>
<td>18.2</td>
<td>18.5</td>
<td>23.5</td>
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### Percentage of women among global executive ranks

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<tr>
<th></th>
<th>YE95</th>
<th>YE96</th>
<th>YE97</th>
<th>YE98</th>
<th>YE99</th>
<th>YE00</th>
<th>YE01</th>
<th>YE02</th>
<th>YE03</th>
<th>YE04</th>
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<tr>
<td><strong>11.5</strong></td>
<td>14.0</td>
<td>15.4</td>
<td>16.7</td>
<td>17.8</td>
<td>18.0</td>
<td>18.0</td>
<td>18.5</td>
<td>17.1</td>
<td>18.7</td>
<td></td>
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### Challenges and Priorities

**WORKFORCE DIVERSITY**

- Leading business in addressing many of the complex issues of the 21st century, such as the continuing core issues of race and gender, the growing concern over child and elder care, and the emerging topics of multiculturalism, tolerance of religious practices, and the full inclusion of people with disabilities in the workplace.

More information about IBM’s global focus on workforce diversity and our heritage in breaking new ground is available from our Valuing Diversity Web site: [www.ibm.com/diversity](http://www.ibm.com/diversity)
LEARNING AND OPPORTUNITY

IBMers elect to give their managers
the tools to listen—and learn.

With a company investment of almost three-quarters of a billion dollars in training and development annually, IBMers have access to thousands of learning solutions, which provide just-in-time learning wherever they are, whenever they need it. Globally, employees spend an estimated 17 million hours each year engaged in formal training—either online, in a collaborative space, through experiential learning activities or in a traditional classroom. Many of our programs provide a blend of learning solutions, allowing employees to take training in the way that works best for them. IBM conducts half of its employee training via e-learning, which has helped the company save money and meet the needs of an increasingly mobile workforce at the same time.

* * *

At IBM, online “jams” function as companywide town meetings, with employees posting their opinions on a variety of strategic topics during marathon sessions over two or three days that typically engage nearly 60,000 employees. It’s one of the best ways we’ve found to capture the most pervasive opinions of our employees and then collaborate to establish plans of action.

During our 2003 ValuesJam, for example, IBMers pioneered the unprecedented exercise of redefining the core values of this company themselves. In WorldJam 2004, thousands of employees posted practical ideas on how best to instill those values into everyday life at IBM. Employees rated 191 ideas they themselves had developed in the jam; IBM’s chairman and other senior leaders committed to implementing the 35 highest-rated ideas for transforming our company.

Included among the many topics aired during the 2004 session was the issue of effective manager-employee relationships, with a specific concern that IBM had no process for employees to assess how effective their managers are in “people management” skills. Instituting such a program was the number one rated idea across every geography and business unit, except for IBM’s Sales and Distribution employees, for whom it was the second highest. That’s no surprise because, beyond interaction with our clients, there is no relationship more fundamental to the success of IBM than the one that exists between managers and employees. As the prime link between IBM and a workforce of 300,000 employees worldwide, managers have a profound influence on our ability to innovate, to win new business, and to enable our clients’ success in a brutally competitive business environment. They hold the key to employee retention, morale, well-being, pride in the work, and pride in IBM.

As a result of the jam and the subsequent work to bring IBMers’ ideas to life, employees will now provide feedback on their manager’s strengths, as well as areas for improvement. The focus will be on development to help all managers improve. For 2005, managers receive the results of their employees’ assessments with suggestions for development activities and programs tailored to their specific needs. Beginning with the 2006 survey, results will be considered by a manager’s own management as one of several factors in assessing the manager’s effectiveness.

As part of this program, IBM has also expanded training for its managers, with both classroom and online activities that together provide managers with five
times more learning resources than before. In addition to new approaches for developing our current managers and executives, we have also implemented new learning programs designed to develop leaders as early as two to three years prior to their first management position.

Executives, employees, and managers themselves recognize that being a first-line manager is one of the most challenging jobs at IBM—and one of the most important. Managers at IBM report the highest workload among all employees. And employees consistently say they want more time with their managers, but 29 percent of IBM managers have 15 or more direct reports, and 14 percent have 20 or more employees reporting to them. Despite these challenges, according to the aggregate responses from the 2005 Manager Feedback Program, a solid majority of IBMers rate their own manager favorably.

RESULTS OF THE 2005 SURVEY

Among the findings of the 2005 Manager Feedback Program, IBMers rated their own direct management strongly in several areas, particularly on questions of support and trust. Where IBM managers have the most room for improvement are in the areas of providing clear performance feedback and in helping their own employees with career and expertise development activities.

### 2005 Manager Feedback Report

<table>
<thead>
<tr>
<th>MANAGER FEEDBACK FORM QUESTIONS</th>
<th>IBM OVERALL</th>
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<tbody>
<tr>
<td></td>
<td>% Favorable</td>
</tr>
<tr>
<td>1. My manager helps me understand how my work contributes to IBM’s strategy and our organization’s goals.</td>
<td><img src="chart1.png" alt="Graph" /></td>
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<tr>
<td>2. My manager provides clear performance feedback that helps me do a better job.</td>
<td><img src="chart2.png" alt="Graph" /></td>
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<tr>
<td>3. My manager helps me address issues or concerns when I need support.</td>
<td><img src="chart3.png" alt="Graph" /></td>
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<tr>
<td>4. My manager shows appreciation for my contributions.</td>
<td><img src="chart4.png" alt="Graph" /></td>
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<tr>
<td>5. My manager behaves in a way that earns my trust (for example, by listening and considering other points of view, being fair, following through, keeping his or her word).</td>
<td><img src="chart5.png" alt="Graph" /></td>
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<tr>
<td>6. My manager helps me to collaborate as needed across organizations and geographies.</td>
<td><img src="chart6.png" alt="Graph" /></td>
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<tr>
<td>7. My manager encourages me to be innovative (for example, to seek better ways to do things, champion new ideas, take informed risks).</td>
<td><img src="chart7.png" alt="Graph" /></td>
</tr>
<tr>
<td>8. My manager works with me to develop my expertise and make progress toward my career goals.</td>
<td><img src="chart8.png" alt="Graph" /></td>
</tr>
<tr>
<td>9. There is effective two-way communication between my manager and me.</td>
<td><img src="chart9.png" alt="Graph" /></td>
</tr>
<tr>
<td>10. Overall, how good a job do you feel is being done by your immediate manager?</td>
<td><img src="chart10.png" alt="Graph" /></td>
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**Global cross-industry average benchmark = 71%**  
**Global cross-industry best benchmark (avg. top 2 companies) = 85%**

*Percentages are rounded to the nearest whole number.*
IBM Helps Teaching Become First Choice for Second Careers

The need has never been greater for skilled and experienced workers such as retiring IBM employees. U.S. schools are facing a critical shortage of teachers, particularly those with expertise in math and science. According to the U.S. Department of Labor, jobs requiring science, engineering, and technical training will increase 51 percent between 1998 and 2008. To prepare today’s young people for these careers, more than 260,000 new math and science teachers are needed by the 2008-2009 school year.

In September 2005, IBM announced it will help address the critical shortage of math and science teachers by leveraging the brains and backgrounds of some of its most experienced employees. Through IBM’s new Transition to Teaching program, we will help employees become fully accredited teachers in their local communities when they choose to leave the company.

Beginning as a pilot in January 2006 with as many as 100 U.S. employees in New York, North Carolina and other locations, the program is expected to expand significantly and, eventually, engage other companies, as well.

Employees involved in the program will participate in online course work and in more traditional courses and mentoring while remaining at IBM. They will also student-teach for up to three months to meet state certification requirements and to become prepared with the right experiences.

IBM will reimburse participants up to $15,000 for tuition and stipends while they student-teach, and will provide other support services in conjunction with partner colleges, universities and school districts.

Many of our experienced employees have math and science backgrounds and have made it clear that when they are ready to leave IBM, they aren’t ready to stop contributing. They want to continue working in positions that offer them the opportunity to give back to society in an extremely meaningful way. Transferring their skills from IBM to the classroom is a natural for many—especially in the areas of math and science.

And our company is well-positioned to help public schools. For the last 12 years, IBM’s breakthrough initiatives in K-12 public education worldwide have created a foundation of leadership, effective partnerships, successful programs, technology solutions, and a track record in raising student achievement that we can now leverage on behalf of our employees and their future.

Challenges and Priorities

LEARNING AND OPPORTUNITY

• Enabling development of the optimal global workforce—the right people, with the right capabilities, assigned to the right jobs and projects, in the right places.

• Developing the leaders and managers IBM needs to win in the marketplace.
The number of work-at-home IBMers has doubled from 2003 to 2004. In Europe, the Middle East and Africa, more than one-third of IBM employees are mobile workers today. These changes are dictated by the nature of our work: close partnerships with our clients, and the continuing need for ad hoc combinations of expertise from disparate disciplines in order to create complete, integrated solutions. The work of innovation today is more and more collaborative, and it must be performed by an increasingly mobile, independent, and expert workforce.

At IBM, we believe we have the largest professional workforce in the world. The vast majority are highly educated individuals with tremendous insight on how we live our core value of “innovation that matters—for our company and for the world.” Capturing that collective knowledge, targeting the most promising ideas, and bringing them to life for our employees and clients is the goal of a new IBM innovation called ThinkPlace.

Some think of it as our 21st century suggestion box. But instead of one manager retrieving the suggestions and discarding those that don’t immediately resonate, the ideas are posted online where anyone in the company can comment on them. Using collaborative innovation, employees can seize ideas, express support, target challenges, or refine them to make the ideas even stronger. So they’re not left in the discussion stage, the online postings are also reviewed by a talented team of idea “catalysts” who are recruited from all business units and, if the ideas seem ready, are charged with guiding them into implementation.

The goal of ThinkPlace is to enable every IBM employee to be an innovator—to identify changes, streamline processes, cut red tape, and even come up with the kind of ideas that will transform our business. Often, the postings reflect an urgent request from an employee somewhere in the world. “I have a client who needs software that doesn’t seem to exist,” reads one posting, suggesting a need to be addressed. One of the industry-focused ThinkPlace catalysts is on the case. He or she engages other experts from IBM for help, and out of a stream of highly interactive debate, the problem can be solved, a solution found or built.

Accessed through the employees’ intranet, ThinkPlace now functions in 13 languages and is actively harnessing the innovative ideas of IBMers, with more than 4,000 ideas in some stage of suggestion, refinement or implementation in the program’s first half year alone.

**Number of ThinkPlace ideas: 4,663**
(as of November 28, 2005)

Top five countries generating ideas:
1. United States
2. India
3. United Kingdom
4. Germany
5. Canada

**Collaboration and Communications**

*Seeking at least as many ideas as there are IBMers to have them.*
2004 Global Work and Life Issues Survey

IBM has conducted eight work/life surveys overall since 1986, with the first six conducted in the U.S., and the first global survey conducted in 2001. The 2004 results represent the viewpoints of approximately 42,000 IBM employees from 75 countries in 13 languages on over 100 questions. Respondents wrote 214,000 written comments among 10 write-in opportunities. The key findings from the 2004 survey include:

Positive trending of work/life indices
Compared to survey results from 2001, there is greater flexibility, an improved perception of telework, and improved work/life balance for employees.

Greater balance equals increased employee satisfaction
Compared to those with work/life balance difficulty, those who successfully manage work/life demands report greater job satisfaction, have a stronger sense of accomplishment, are much more likely to view IBM as a healthy workplace, and are more likely to agree they would not leave IBM.

Concerns regarding management support
A majority of employees agreed their commitment would not be questioned if they used work/life programs and an even greater number agreed their manager supports their efforts at balancing work/life.

Greater flexibility in where work gets done
By a large margin, most IBMers report that workplace mobility and work-at-home arrangements are a positive influence on most aspects of work and personal or family life, including productivity, morale/motivation, job satisfaction, commitment/loyalty, work/life balance, family life, and ability to do home chores.

Dramatic increase in work-at-home
Work-at-home arrangements have increased dramatically and are positively related to all work/life indices. The numbers of IBMers working primarily from home has more than doubled in the past three years, from 14,000 to about 31,000, an increase from 4 percent to 10 percent of the IBM population.

Increasing perception of unnecessary work
A major contributor to work/life difficulty is unnecessary work. It correlates to de-motivation on the job and less available time for personal/family life. A sizable minority of employees report an excess of unnecessary work.

Increasing elder care needs
Elder care needs are rapidly increasing around the globe. Thirty-eight percent of employees in the Asia Pacific (AP) region and 44 percent in Latin America (LA) have responsibility for elders. Ten percent of all employees care for elders in their own homes (versus 6 percent in 2001). An additional third of employees reported they are “very likely” or “likely” to assume responsibility for elders within the next five years.

Challenges and Priorities

COLLABORATION AND COMMUNICATIONS

• Accelerating and enabling a culture of innovation at IBM to provide new value for the company and for our clients.
IBM's next major arts initiative aims to bring the treasures of Chinese cultural heritage (such as those at the Palace Museum, once known as the Forbidden City) to a global audience.
— OUR WORLD —

*Each decade or so, IBMers have done the hard work of reshaping our company to re-establish IBM’s leadership position—in business and the wider world.*

This forces us to ask tough questions about the problems and needs we see and the value we can offer to address those needs and meet those challenges.

It was this kind of soul-searching that led to the “bet-the-company” decision to transition our entire computer product line to an integrated platform, the System/360. The idea revolutionized computing and its relationship to business—but just as importantly, five years later, humans walked on the moon with help from this same system and the dedication of IBMers working with NASA scientists.

Our embrace of open standards almost 40 years later is a similar such transition for this company. Yet the fluidity of information represented in open standards raises subsequent questions about how the data gets used and by whom. Similarly, the shift of the last several years in our portfolio to more services and consulting business means the value we can offer to growing businesses, emerging economies, and underserved communities changes, as well. It even changes the impact we’re able to have on the environment and the responsibilities we can shoulder in improving it.

Through it all, however, we receive constant reminders that this work of innovation is worth it—to us, to our clients who are breaking new ground, and, ultimately, to billions of people around the world. While we might not describe our mission statement exactly the same as it was described by an older gentleman in a village in India whose grandchildren were benefiting from IBM’s KidSmart Early Learning Program—“a great company that does good work for poor people”—we can be proud to be that for someone. And proud to be a great company that does good work for much of the rest of the world, as well.
CONTRIBUTING TO COMMUNITIES

Leveraging IBM technology—and IBMers—following the Asian tsunami and Hurricane Katrina.

Since its very beginning, IBM has mobilized the company’s best resources to help solve some of the world’s toughest social and education problems. Today, we continue to utilize our world-class technology, innovative consulting and research divisions, and especially the talent and commitment of our employees, to make a difference in the communities where our employees, partners, and clients live and work.

* * *

When the tsunami struck South Asian countries and claimed hundreds of thousands of victims, IBM employees in the affected regions—in collaboration with corporate leaders—immediately mobilized to bring the full weight of our company’s innovation to the relief effort.

Similarly, when Hurricane Katrina threatened to destroy the city of New Orleans and other areas of the Gulf region, taking more than a thousand lives, IBM again leveraged its technology, expertise, and employees.

In all, IBM has so far committed more than $6.4 million to both disasters. Beyond our corporate support, IBM employees have donated hundreds of thousands of dollars more to relief efforts, collected tons of food and supplies, and volunteered their time. Like people everywhere, we wanted to help.

IBM quickly offered technology and expertise in the area of crisis response to government leaders in each of the four countries most severely affected by the tsunami: India, Indonesia, Sri Lanka, and Thailand.

IBM country general managers and the IBM Crisis Response Team assembled work groups of highly skilled technicians and employees from all areas of the company to immediately begin designing the technology systems and applications that focused directly on victims.

Within days of the tsunami, systems were online and functioning to identify victims, the missing, and dead; manage, track, and disburse supplies; gather statistics on the affected villages to best direct needed services; capture requests for help; create I.D. cards for victims in need of services; and perform other needed tasks.

In Indonesia, the very challenging infrastructure and the needs of victims required a client-server approach with a special application and infrastructure design. To run the application, IBM donated 275 IBM ThinkPads with digital cameras that were deployed to various government departments and NGOs, including the United Nations.

After the 2005 earthquake in Pakistan and India, the IBM Crisis Response Team was deployed to Islamabad. The initial assessment made it clear the open source software IBM created after the tsunami to track refugees and their needs, as well as to monitor goods and material, would aid in this crisis and thus was the first priority for implementation. IBM is providing servers, hosting, project management, and support for the applications involved. IBM also provided ThinkPads to the International Federation of Red Cross/Red Crescent teams in the region, the Pakistan Red Crescent and the Indian Red Cross.
plus four IBM xSeries servers and two satellite communications systems to support high-speed voice and Internet data communication from various disaster locations.

In Thailand, IBM—working with Metro System Corporation and the ThaiWebmaster Association—provided the system infrastructure, administration, and application and management support to build a Web site (at www.thatstsunami.com) and its database to consolidate information on the missing, dead, and injured.

In the process, IBM donated hundreds of ThinkPads—some equipped with fingerprint readers and cameras—to facilitate communications and collect the needed data from remote villages to best direct the disbursement of food, supplies, and relief services. In addition, we donated IBM KidSmart Early Learning Centers to schools and refugee camps.

In the U.S., IBM again mobilized its best resources and people to help in the aftermath of Hurricane Katrina. Our first priority was the health and safety of those who were unable to evacuate before the storm and were sheltered in neighboring parishes and states. Our second priority has been the large number of people displaced from their homes and the long-term recovery of the region.

To support these priorities, we are engaged in a range of activities that are strategically important throughout the region. For example, IBM is hosting the Salvation Army Web site to help that organization handle contributions effectively. IBM also has provided approximately 600 ThinkPads to national, state and local organizations for a range of critical activities, including immediate testing of air and water safety, as well as registration of evacuees for food stamps, Medicaid, and other critical services. In addition, IBM has provided desktops and KidSmart Early Learning Centers to states that have accepted large numbers of student registrations.

Our additional support is focused in the following areas:

**People**

IBM hosted Web sites to help evacuees and the public locate missing family members, friends, and colleagues. In addition, we are working with the State of Louisiana to implement the Entity Analytics System, a new IBM solution to integrate these different databases and make it possible to search a single, unduplicated, up-to-date list of people to help reunite them with friends and loved ones.

**Jobs**

In partnership with the U.S. Chamber of Commerce, local chambers in the Gulf and nonprofit partners, we launched www.Jobs4Recovery.com, a new job post/job search Web site for the large numbers of individuals who have an immediate need for employment.

**Health**

IBM provided support to the Centers for Disease Control of the U.S. Department of Health and Human Services to respond to emergency health needs and to help evacuees with access to prescriptions and care for both chronic illnesses and trauma resulting from the disaster.

**Education**

IBM implemented an online curriculum management application to post the Louisiana state curriculum on a Web site for teachers in Baton Rouge and other parishes who are accepting thousands of new students, and to provide background information on new students for teachers in Texas, Kentucky, Tennessee and Georgia. We also worked with trauma specialists to help train teachers how to welcome evacuees into their classrooms, and recognize and respond to signs of serious trauma.

**Housing**

With the City of Houston, we developed an application to track and manage temporary housing and efficiently match and assign individuals to appropriate facilities.

**Volunteers**

We worked with the Points of Light Foundation to enhance their 1-800-volunteer.org Web site to help streamline volunteer recruitment prior to and during emergency situations. Enhancements will improve the ability of Volunteer Centers to recruit for specific needs through the addition of a volunteer skills taxonomy and specialized matching for disaster preparedness and response.

50,000 Protein Structures Down, 100,000 More to Go

**Dramatic Success in Advancing Scientific Understanding**

In August 2005, the mayor of Petrópolis—a thriving city outside Rio de Janeiro—called a press conference to announce he had committed his municipality’s network of computers to an IBM initiative that stands to change the world.
The unused computing time from the PCs in Mayor Rubens Bomtempo’s offices are now linked with the 150,000 more PCs that are part of IBM’s World Community Grid, creating a massive supercomputer that should eventually unravel mysteries surrounding disease, natural disasters, and the environment.

Already, the grid has fueled the mammoth computational power needed to predict 50,000 protein structures—and did so in less than a year.

“The project showcases the enormous power of collaborations,” said Dr. Richard Bonneau, senior scientist at the Institute for Systems Biology. “Through a partnership with IBM, we are utilizing World Community Grid, which is enabling us to complete a project in less than a year that would have taken us approximately 100,000 years to complete with the current computational power at ISB.”

Prior to the IBM project, scientists knew little about the shape of human proteins, which is key to understanding their function in the human body. World Community Grid is now providing research for the Human Proteome Folding Project, which is sponsored by the Institute for Systems Biology and is providing scientists with data that predict the shape of a large number of human proteins.

Predicting the shape of proteins will lead to an understanding of their function and could ultimately drive cures for such devastating diseases as cancer, HIV/AIDS, SARS, and malaria. Scientists at the Institute for Systems Biology have already predicted 50,000 protein structures through World Community Grid and are closing in on their goal of between 100,000 to 150,000 structures.

IBM donated the hardware, software, technical services, and expertise to build the infrastructure for World Community Grid and provides free hosting, maintenance, and support. This is the same innovative IBM grid technology that is providing high-performance computing for our business clients.

This project represents the model of IBM Corporate Community Relations initiatives combining value for innovation with community-building efforts and widespread volunteerism for projects of critical importance to people all over the world.

Mayor Bomtempo has promised to not only contribute the idle computing time of PCs in his own municipality, but to influence other institutions who do business with City Hall to volunteer their computers, as well. The mayor calls it his “Petrópolis/Tecnópolis” project.

Earlier in the year, Bankinter, the leading Internet bank and brokerage firm in Spain, did the same. So did United Way of New York City, the Center for Corporate Citizenship at Boston College, the Information Technology Association of Canada and thousands of ordinary citizens throughout the world. All told, these virtual volunteers have so far donated the equivalent of 15,773 years in computing time.

By the end of September 2005, over 17,000 “years” of computing time have been generated since the launch of the World Community Grid last year. Over 150,000 personal computers are now voluntarily connected to the grid, providing power equivalent to 70 years of computing time per day.

IBM’s World Community Grid will next focus its massive computational power on helping speed effective and inexpensive therapeutics for one of the most devastating epidemics of our time—AIDS.

FightAIDS@Home is a project sponsored by the Scripps Research Institute and funded by the National Institutes of Health with the goal of designing new treatments for AIDS. The pool of potential drug molecules—as well as possible mutant HIV proteins that may evolve—is enormous. The project requires enormous computational power to predict interactions between these two pools of molecules to design effective AIDS therapies.

Like the Human Proteome Folding project, FightAIDS@Home will capture the otherwise wasted cycles of unused computers and use them to model the evolution of drug resistance and to design drugs to fight AIDS.

Leading the project is Arthur J. Olson, Ph.D., the Anderson Research Chair Professor in the Department of Molecular Biology of the Scripps Research Institute.

To learn more about how the World Community Grid works and to download the free software that lets your own computer participate, please visit www.worldcommunitygrid.org.
Beyond the Human Proteome Folding project, more initiatives are planned for the World Community Grid, including therapies for HIV/AIDS and other catastrophic diseases; helping researchers and scientists better predict such natural disasters as earthquakes; improving crop yield; and evaluating the supply of critical resources like water.

Significant life-changing research is taking place all over the world. What traditionally attracts the headlines and dollars are projects on the brink of curing a specific disease or social problem. But leading to such breakthroughs is the enabling research—the mission of the World Community Grid—which in turn could significantly impact the life sciences and other fields in the 21st century.

**Grief Leads to a Program to Keep Children Safe**

**A FRAMEWORK TO HELP PREVENT CYBER-BULLYING**

The death of a child will change parents for the rest of their lives, and many resolve in their grief to take action to prevent similar tragedies. This was the route taken by IBM employee John Halligan and his wife Kelly, following the suicide of their 13-year-old son Ryan.

Engaged and loving parents, the Halligans discovered too late that their son was the victim of vicious bullying over the Internet, which increased the fear, anxiety, and isolation suffered by Ryan—and continues to do so for many adolescents. Taunted through instant messages from some of his peers at school, and encouraged by Web sites that advocate suicide, Ryan took his own life. A month later, John Halligan shared his grief and concerns with IBM Chairman and CEO Sam Palmisano. His ultimate hope was to find some way to address the growing threat of cyber-bullies and promote a safer environment for all children on the Internet.

During this same period, IBM’s On Demand Community was emerging as an important new initiative to encourage and sustain volunteerism by providing employees with IBM technology tools targeted for school and community volunteer efforts.

Accessed online, On Demand Community provides powerful tools for school volunteers—whether they want to focus their efforts in the classroom or with the school board—as well as invaluable resources for employees who wish to target their volunteer work in community agencies in need of technical or business skills.

Inspired by John Halligan’s mission, IBM’s Corporate Community Relations team created two versions of “Internet Safety for Kids” in collaboration with i-Safe America, Inc., which are now available for all IBM volunteers worldwide through our On Demand Community. These presentations join more than 150 other IBM technology assets and innovative resources, strategies, programs, and tutorials that employee volunteers can access online and share with the agencies where they volunteer.

A recent independent study by the Points of Light Foundation found that, among corporate giving programs, On Demand Community (ODC) stands out as a leading innovation that could serve as a model for other companies to emulate when structuring their own corporate giving and volunteering programs.

The study used a range of data collection and analysis tools, including more than eighty interviews with nonprofit and educational leaders, to determine whether On Demand Community had an impact on communities and community organizations, and, if so, determine why. Among its findings:

- ODC is having a significant impact both in the United States and internationally, and this success is directly related to the corporate culture that exists at IBM. In particular, the level of international success ODC has experienced, in areas of the world where volunteering is not common practice, suggests that the corporate culture within IBM is somehow able to override barriers to formal volunteering attributable to national culture.

- IBM’s long-term commitment is a central characteristic that makes the partnership with community agencies, and thus the program, so successful. IBM’s consistent presence is valued by many, even more so than financial donations.

- IBM’s corporate culture fosters a work ethic that cannot be separated from the volunteer role in the community. IBMers bring the best they have to offer to community organizations, and their unique skills and leadership capabilities enable them to participate in ways that far exceed the initial volunteer position description.

**A PROGRAM WITHOUT PEER**
The first presentation is designed for parents and the second for adult community members, such as teachers, who are positioned to raise awareness to the potential for real danger on the Internet.

And the dangers are real and growing. In a survey of young people and online communication, 42 percent of the children surveyed report they have been bullied online, yet 40 percent say they have never discussed Internet safety with their parents or any adult.

The “Internet Safety for Kids” technology solution contains factual information, examples of the difficulties that kids can encounter online, and tips to help keep children safe. Adults are also reassured that they do not need advanced computer skills to deal with these issues.

John Halligan’s efforts in memory of his son demonstrate the value of one employee working in a global organization. When an innovative framework exists to harness and scale an extraordinary idea, the impact can be felt worldwide—and, with hope, in other families’ homes.

China Beyond Space and Time
IBM’S NEXT MAJOR INITIATIVE TO BRING ART AND CULTURE TO THE WORLD

The Forbidden City in Beijing is at the center of Chinese culture—both geographically and as an icon of a history rich in accomplishment, artistry, and pageantry. Now called the Palace Museum, the Forbidden City is an architectural masterpiece containing a portion of its original collection of artifacts from 500 years of Ming and Qing dynasty imperial rule. But the story of Chinese culture transcends any one place just as the treasures that define it are today located in museums around the world. To tell this story requires an innovative approach and IBM is set to use the latest technology to bring the treasures of Chinese cultural heritage from within China and from around the world to a global audience.

Called “China Beyond Space and Time,” this multi-year project represents the merger of real space—the actual museums and sites with significant works of Chinese art and culture—and a virtual presence, allowing the integration of artifacts and environments with digital reproductions of their counterparts around the world. This new, augmented presentation of Chinese heritage—beyond space and time—will feature the stories of Chinese cultural history no matter where their subjects currently reside.

This is the next significant step in a series of major IBM initiatives to demonstrate the powerful role technology plays in bringing the arts to people all over the world and in advancing the understanding of art and culture. In 1998, IBM unveiled the results of its unprecedented partnership with the Hermitage State Museum in St. Petersburg, Russia, which, for the first time, captured some of the world’s most beautiful masterpieces online in striking detail to be enjoyed and studied by anyone, anywhere, with access to the Internet.

And in 2004, IBM announced the results of its Eternal Egypt project—a breakthrough collaboration with the Egyptian government to provide worldwide access to more than 5,000 years of Egyptian history. This partnership joins one of the world’s oldest civilizations with the latest innovations in IBM technology.

In this new initiative, using the Forbidden City as a conceptual centerpiece and the Ming and Qing eras as a starting point for the project, IBM and its partners will bring together the most significant material artifacts from the major collections in Beijing, Nanjing, Taipei, and elsewhere. This approach will provide a new layer of context to already-existing museum Web sites. Also, participating museums will benefit from “in-museum” technology aimed at augmenting the local visitor experience with the same content that is available to visitors on the Web and in other museums.
Where Did I Come From, and How Did I Get Here?

THE LARGEST DNA SAMPLE DATABASE EVER COLLECTED TO CHART THE MIGRATION OF HUMANITY

As humans we began on the African savanna more than 60,000 years ago. Yet in all of the centuries that followed, scientists and anthropologists never attempted to chart the journey of humanity that began in Africa and ends—so far—with people scattered in all corners of the earth.

The clues of humanity’s migration are hidden in our DNA, which includes genetic markers passed from one generation to the next, as well as other markers accumulated by indigenous populations that settled in certain areas of the world for hundreds of generations. Decoding the markers—and ultimately telling the story of how humans populated the earth—is the focus of an unprecedented five-year study by IBM and the National Geographic Foundation, with funding from the Waitt Family Foundation.

Called the Genographic Project, the initiative will ultimately accumulate the largest database of human genetic information ever assembled from over 100,000 members of indigenous populations, plus DNA samples contributed by the public. Announced in mid-2005, the project has already received nearly 70,000 DNA samples from the public.

“If you share a marker with someone else in the world, then you share an ancestor at some point in the past,” Wells said. “By connecting this ancestry through the markers, we can trace how people are related to each other and, therefore, how they’ve moved around the world.”

Breakthroughs in genome technology—which have enabled scientists to sequence DNA—and other advances in informational technology have paved the way for the landmark project.

“Even though we carried the information in our genes, we could not have undertaken this project before,” noted Ajay Royyuru, head of IBM’s Computational Biology Center. “As an IBMer, I’m thrilled that participation in this project actually allows us to reaffirm one of our core values, which is to pursue innovation that matters, not just to our business, but to the whole world.”

Challenges and Priorities

CONTRIBUTING TO COMMUNITIES

• Enhancing our status as a recognized leader in corporate community relations by continuing to find innovative ways to engage with communities.

More information about IBM’s commitment and contributions to these communities around the world is available from our Community Relations Web site: www.ibm.com/ibm/ibmgives.

Anyone can take part in the Genographic Project by purchasing a Participation Kit (U.S. $99.95) and submitting cheek swab samples, which will enable you to track the overall progress of the project as well as learn your own migratory history. These personal results will be stored anonymously and with strong security to help protect the privacy of participants. National Geographic and IBM will routinely update the public and scientific community on project findings. More information about the project—and how to participate—can be obtained at www.nationalgeographic.com/genographic.
ENVIROMENTAL PROTECTION

Initiatives and innovations for climate protection.

IBM’s operations can potentially have an effect on the environment in a number of ways. For example, chemicals needed for research, development and manufacturing must be properly managed from selection and purchase through storage, use and disposal. Some processes are energy- and/or water-intensive and IBM continually looks for ways to reduce resource consumption. We design products to be efficient in their use of energy, to use environmentally preferable materials, and to be capable of being reused, recycled or disposed of safely at the end of their useful lives.

As IBM’s business model has evolved and the company has outsourced more of its manufacturing, our greater use of an expanded supply chain has made the environmental responsibility of our suppliers and the environmental attributes of their products an important factor in meeting our product stewardship goals. Additionally, our services business provides a means for IBM’s consulting and services professionals to help our clients design business solutions that help the environment by leveraging IT and business processes to reduce energy and the use of resources and to increase the efficiency of their operations.

* * *

ONE OF THE MOST IMPORTANT issues facing the planet at this time is climate change. There is strong consensus among the majority of the world’s scientists that the earth’s atmosphere is warming, and that a significant cause of the warming is the increasing emissions of carbon dioxide (CO2) and other greenhouse gases from human activities. While there is still much to learn about climate science, we support the need to help address this critical environmental challenge.

We believe the most constructive approach IBM can take to address the complex issue of climate change is to apply our technological and engineering leadership to reduce emissions associated with our own operations and to create products that are increasingly energy efficient, extending this environmental benefit to our clients. In addition, we must advance the use of our technology in climate research and in helping the world develop efficient processes, products and solutions for more sustainable development.

REDUCING GREENHOUSE GAS EMISSIONS FROM OPERATIONS

IBM’s operations do not release significant quantities of greenhouse gases (GHG), so the company’s greatest potential impact is an indirect one, through the release of CO2 by utility companies providing the electricity used by IBM. This has helped drive the company’s long-standing focus on energy conservation.

IBM does directly release some perfluorocompounds (PFCs) from our semiconductor manufacturing operations, although these are in relatively small amounts, in carbon equivalents, when compared to indirect carbon dioxide emissions. We have been a leader in the development of semiconductor manufacturing processes to reduce PFC emissions, developing industry standard processes which use chemical substitutions or more efficient material usage to reduce PFC emissions.

We have committed to a number of voluntary goals and initiatives in addressing climate change. IBM was a charter member of the Climate Savers program, an initiative of the World Wildlife Fund and the Center for Energy & Climate Solutions. The voluntary goal we established when joining the program in 2000 was to achieve average annual CO2 emissions reductions...
equivalent to 4 percent of the emissions associated with our annual energy use through 2004 from a baseline of 1998. We significantly exceeded that goal. At year-end 2004, IBM had reduced the GHG emissions associated with our energy use by the equivalent of an annual average of 5.7 percent from the 1998 baseline. This achievement is the result of energy conservation efforts and the use of renewable energy sources alone. Savings from restructuring or divestitures did not count against the goal. These reductions avoided more than 1.28 million tons of CO₂ emissions since 1998 and saved IBM $115 million in reduced energy costs. This CO₂ emissions savings equates to taking 51,600 midsize cars that travel 10,000 miles per year off the road.

The World Wildlife Fund and the Center for Energy & Climate Solutions presented IBM with an award for our achievements in significantly exceeding our Climate Savers goal. IBM was the first company to meet its voluntary target under Climate Savers.

We continue voluntary efforts to address climate change. In 2002, IBM joined the U.S. EPA’s Climate Leaders program, which challenges businesses to set aggressive, companywide GHG emissions reduction goals that exceed business-as-usual performance in their industry sector. As part of our participation in Climate Leaders, IBM established two emissions reduction goals that cover virtually all our direct and indirect GHG emissions:

- Achieve average annual CO₂ emissions reductions equivalent to 4 percent of the emissions associated with IBM’s annual fuel and electricity use over the six-year period from 2000 through 2005. We intend to achieve these reductions through further energy conservation actions.
- Achieve an absolute 10 percent reduction in PFC emissions from IBM’s semiconductor manufacturing processes by the end of 2005, using 2000 as the base year.

We expect to achieve both of these goals. From 2000 through 2004, we achieved an average CO₂ emissions reduction of 6.4 percent, significantly exceeding the 4 percent goal. As of mid-year 2005, over 69,000 tons of CO₂ emissions have been avoided through energy conservation projects, representing 4.8 percent of total CO₂ emissions at mid-year. This excellent, long-term performance has been achieved through our ongoing focus on energy conservation projects and increased purchases of renewable energy. IBM increased its renewable energy purchases from 66,200 megawatt hours (MWh) in 2002 to 211,000 MWh (over 4 percent of our electrical energy consumption) in 2004.

Regarding PFC emissions, at the end of 2004, IBM had achieved a 57.6 percent reduction in the emissions of six greenhouse gases (NF₃, CF₄, C₂F₆, SF₆, C₃F₈, and CHF₃) associated with PFCs in semiconductor manufacturing from our worldwide facilities against the 2000 base year, significantly exceeding the 10 percent goal.

Between 1990 and 2004, IBM avoided more than 8.35 million metric tons of CO₂ emissions through conserving a cumulative 15.97 billion kilowatt hours of electricity through energy conservation actions. This equates to a 37.8 percent reduction in our total worldwide CO₂ emissions attributable solely to IBM’s energy conservation efforts since 1990.
IBM is focused on reducing the climate impact of transport, both from our employees' commuting to and from work and from the transportation of materials and products. IBM offers programs that enable employees to work from home depending on their job responsibilities. These programs contribute to employees' work-life balance while also reducing the emissions associated with their commute to an IBM office. In many countries, we also have programs for employee commute options which provide such alternatives as car- and vanpooling, incentives for the use of mass transit, and other alternatives for reducing commutation.

IBM was ranked 17th in the U.S. Environmental Protection Agency’s (EPA) Top 20 Best Workplaces for Commuters (BWC) from among Fortune 500 companies in 2005. The list recognizes Fortune 500 companies that provide superior commuter benefits to their employees, helping to reduce traffic and air pollution. More than 58,000 IBM employees work at the company’s 17 BWC registered locations or at home—the second highest number of any company in the United States. IBM’s extensive “e-commute” telework options were a significant contribution to our making the Top 20 list. Also contributing were the commuter benefits IBM may provide to employees at the 17 locations, including commuter information kiosks, transportation coordinators, mobility stations, full-service cafeterias, ATM machines, car rental services (pick-up/drop-off), credit union drop boxes, and a Guaranteed Ride Home program. IBM also made the first annual Top 20 Best Workplaces for Commuters list in 2004.

We estimate that 63,000 tons of CO₂ emissions were avoided last year by IBM employees who took advantage of our work from home programs or participated in carpooling, vanpooling, and other commuter programs in the U.S. We are now expanding this analysis worldwide, to calculate the environmental benefits of our e-commute and commutation programs in other countries.

In transporting goods, IBM seeks to optimize logistics. For example, we develop packaging designs that minimize the size of the packaging (while still providing the needed protection) and use bundling solutions in shipping, which minimizes the pallets and transportation required. IBM also looks at transportation mode shifting—shifting from air to truck or air to ocean, for example, which offer both environmental and cost benefits—when we can do so while still meeting business and client requirements.

**PRODUCT ENERGY EFFICIENCY**

IBM has earned a reputation for excellence in computer hardware and software innovations. Semiconductors, servers, and storage products are strategic offerings for the company. As the world looks to increase energy efficiency to reduce energy use and help address climate change, the relative and absolute energy consumption of IBM products becomes increasingly important.

IBM has led the campaign for greater energy efficiency in server products through innovations in processor technology, improvements in server energy management software, and enhanced processor/hardware/software interaction to optimize energy usages within server and storage systems and within a network infrastructure.

Microprocessor innovations in the PowerPC product line have driven significant reductions in the power consumed per unit of computation in various server
configurations. Implementation of these energy efficiency capabilities has allowed continued improvements in processor speed and capability while managing the heat generated by the processor. Innovations have included:

- **Copper/silicon on insulator**: A combination of a silicon insulating layer under copper interconnects and wires has improved current flow through the processor while reducing the current leakage from the increasingly fine interconnects. Implementation of these technologies can reduce processor energy consumption by 20 to 30 percent.

- **Voltage island methodology**: Voltage can be adjusted within the processor based on workload and computational demands, reducing processor energy consumption by up to 35 percent during periods of lower workload.

- **Multiple threshold device methodology**: The optimization of multiple device thresholds in the circuit design facilitates reduced electrical current leakage, reducing power consumption in existing technologies by 15 percent.

- **Pulsed clock latches and methodology**: The processor clock speed is adjusted based on processor workload demand, which reduces total clock power usage by as much as 40 percent during periods of lower workload.

- **Power down and “sleep” modes**: ASIC designs provide for a “sleep state” for circuits not in use, reducing overall processor power usage.

A few examples of enhanced energy efficiency in servers or server farms include:

- PowerExecutive energy management software manages power consumption on processors and components, optimizing power distribution and efficiency.

- Calibrated Vector Cooling optimizes air flow through the blade rack to increase the ratio of servers per rack and balance loading to the power supply.

- Power processors in the eServer iSeries, pSeries, and zSeries can be micropartitioned, allowing up to ten separate operating systems to be run on a single server. This increases server versatility and load factor and can provide for consolidation of multiple servers into a single unit.

**IBM’s product energy efficiency goals and performance**

IBM’s product stewardship goals include goals for product energy efficiency. The product energy efficiency goals vary by product type. With the exception of goals to meet ENERGY STAR criteria for applicable products, all are measured by their increase in energy efficiency over previous generation product or models.

<table>
<thead>
<tr>
<th>PRODUCT</th>
<th>2004 PERFORMANCE</th>
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<tbody>
<tr>
<td>Printers, monitors, and personal computers*</td>
<td>Of all the applicable new products first shipped in 2004, 100 percent met ENERGY STAR criteria, meeting our voluntary goal of 100 percent of personal computers and other applicable products.</td>
</tr>
</tbody>
</table>
| Servers |  • iSeries models reported a 39 percent to 75 percent reduction in operating power consumption per unit of relative performance against comparable previous-generation models.  
  • pSeries models reported a 16 percent to 49 percent reduction in operating power consumption per unit of relative performance against comparable previous-generation models.  
  • zSeries models reported a 46 percent to 90 percent reduction in operating power consumption per unit of relative performance against comparable previous-generation models.  
  • xSeries metrics vary by machine type and customer application. |
| Point-of-sale terminals | The SurePOS 500-4840 and the IBM Kiosk 4835 achieved a 13 percent and 30 percent reduction, respectively, in maximum power consumption in watts per composite theoretical performance. |
| Storage subsystems | One high-end DASD subsystem (DS8000) and one mid-range subsystem (DS6000) were released in 2004. Neither had a valid previous generation model/system for a percent improvement to be calculated. |
| Tape drives | Depending on the model, reductions in watts per gigabyte ranging from 27 percent to 47 percent were reported. |

*IBM no longer manufactures personal computers. In 2005, the company sold its personal computer division to Lenovo.
**IBM’s BladeCenter: Business and Environmental Innovation**

IBM’s award-winning BladeCenter has changed the way people understand and deploy computer servers, providing far more computing power in far less space, with far more advances in environmental benefits than similar “rack” server solutions.

<table>
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<tr>
<th>Benefits to Business</th>
<th>Benefits to the Environment</th>
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<tbody>
<tr>
<td><strong>Flexible</strong></td>
<td><strong>Semiconductor Module</strong></td>
</tr>
<tr>
<td>- The industry's broadest portfolio for customer choice.</td>
<td>- Lead-reduced or lead-free circuits.</td>
</tr>
<tr>
<td>- IBM clients can select the application, the operating system, the input/output interface, and the chassis that holds the blades.</td>
<td>- Special insulating and “stretching” of the semiconductor silicon matrix eases the flow of electrons and reduces their leakage in the module—increasing energy efficiency of the module by 20-40%.</td>
</tr>
<tr>
<td>- Compared to equivalent rack solutions, IBM BladeCenter can save 50% of floor space and reduce the weight (floor load) by 30%.</td>
<td>- Chip configuration and microcode allow portions of the processor to “sleep” while not in use.</td>
</tr>
<tr>
<td><strong>Manageable</strong></td>
<td><strong>Processor Card</strong></td>
</tr>
<tr>
<td>- BladeCenter architecture includes built-in hardware and software tools.</td>
<td>- Lead-reduced or lead-free connections.</td>
</tr>
<tr>
<td>- Servers, storage, networking, and applications are integrated to reduce the cost of managing the IT infrastructure.</td>
<td>- Multi-core processor modules allow smaller card size, reducing material and energy use.</td>
</tr>
<tr>
<td>- IBM Director hardware management suite manages all chassis components and virtual machines from a single, easy-to-use graphical user interface.</td>
<td>- Innovations in card design shorten distances between components, reducing energy loss and improving energy efficiency.</td>
</tr>
<tr>
<td><strong>Reliable</strong></td>
<td><strong>Blade Server</strong></td>
</tr>
<tr>
<td>- Built-in protection provides customers with business resiliency and minimizes unplanned downtime.</td>
<td>- Use of recycled content plastics for non-decorative parts where feasible.</td>
</tr>
<tr>
<td>- Predictive Failure Analysis on all major components to avoid unplanned downtime.</td>
<td>- Powder coatings for decorative metal finishes, which avoids the emissions of volatile organic compounds.</td>
</tr>
<tr>
<td>- High Availability Mid-plane provides multiple paths from each server to the I/O to protect from failed or failing components.</td>
<td>- New processor and board technologies reduce the size of the computer, thereby reducing material usage.</td>
</tr>
<tr>
<td>- Hot-swappable and redundant components prevent unplanned outages, reduce repair time.</td>
<td>- Cool Blue technology uses the existing chilled water supply for air conditioning systems located in customer datacenters to reduce server heat emissions by up to 55%. IBM is the first systems vendor to develop such a technology.</td>
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<tr>
<td>- Light Path Diagnostics make it easy to visually identify the failed or failing component.</td>
<td><strong>Blade Racks</strong></td>
</tr>
<tr>
<td><strong>Open</strong></td>
<td><strong>Blade Racks</strong></td>
</tr>
<tr>
<td>- BladeCenter is the most open blade platform in the industry with over 400 BladeCenter Alliance Program members.</td>
<td>- All of the units in a Blade rack run off a single, redundant power supply. This enables the power supply to run closer (92%) to peak efficiency.</td>
</tr>
<tr>
<td>- Almost 300 companies have downloaded the open BladeCenter specification to allow them to design and develop new offerings.</td>
<td>- Use of Calibrated Vector Cooling optimizes air flow and cooling through the rack, which reduces the energy requirements for air conditioning.</td>
</tr>
<tr>
<td>- This year, we announced our plan to create Blade.org, to help developers more quickly produce customized BladeCenter solutions—i.e., more choice—in support of the rapid customer adoption of blade servers.</td>
<td>- PowerExecutive Energy Management Software optimizes workload distribution and turns off unneeded servers, storage units and other peripherals.</td>
</tr>
</tbody>
</table>
Product Stewardship

IBM was an early leader in addressing the environmental design of its products. IBM established its Product Stewardship program in 1991 to bring additional focus on the development of products with improved energy efficiency, which can be upgraded to extend product life, which incorporate recycled content and environmentally preferable materials and finishes, and which can be recycled and disposed of safely.

PRODUCT DESIGN FOR THE ENVIRONMENT

As part of its Product Stewardship program, IBM established stringent standards for the environmental design of products. Included in these standards are prohibitions on the use of certain hazardous materials in products such as asbestos, polychlorinated biphenyls (PCBs), polybrominated biphenyls (PBBs), polybrominated diphenyl ethers (PBDEs), and ozone-depleting substances—prohibitions that were implemented many years before there were any regulatory restrictions on these materials. These standards also include restrictions on the use of potentially hazardous metals such as lead (Pb), hexavalent chromium, and mercury in noncritical applications, such as plastic housings, paints, and packaging. IBM also no longer specifies PVC plastic for product housings, mechanical parts, or product protective packaging.

IBM’s environmental requirements for its products may be found in its Engineering Specification: Baseline Environmental Requirements for Materials, Parts, and Products for IBM Logo Hardware Products. The specification was most recently updated in May 2005, and the updated version may be found at www.ibm.com/ibm/environment/products/especs.shtml.

The EU’s Restriction on Hazardous Substances (RoHS) Directive

In February 2003, the European Union (EU) passed the Directive on Restriction of the use of certain Hazardous Substances in Electrical and Electronic Equipment (2002/95/EC, known as RoHS). The RoHS Directive bans the use of lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls, and polybrominated diphenyl ether flame retardants in new electrical and electronic equipment put on the market in EU member countries as of July 1, 2006. However, IBM’s efforts to reduce the usage of these substances in products started well before actions by the European Union. In fact, IBM has prohibited the use of polybrominated biphenyls and polybrominated diphenyl ether flame retardants in products since the early 1990s. Similarly, IBM imposed restrictions on the use of lead, cadmium, mercury, and hexavalent chromium in non-critical applications in the mid- and late 1990s. As such, IBM is well ahead in its efforts to meet the new EU requirements.

IBM’s primary emphasis in meeting the requirements of the RoHS Directive has been on lead (Pb) and lead solder, due to the technological challenge it represents. To meet its lead reduction and elimination objectives, IBM began an aggressive and comprehensive effort in 1999 to systematically address the use of lead in our broad array of technology and hardware products, working internally with our research and development teams as well as externally with our supply chain. Under this program, IBM has also been an active participant and supporter of various technical consortia and is working with a number of universities and a national laboratory on solutions to important technological and manufacturing issues relating to the introduction of lead-reduced or lead-free technologies.

IBM intends to fully comply with the European Union RoHS requirements by the July 1, 2006, deadline in the legislation. IBM’s schedule for producing RoHS-compliant products varies by product line and even within a product line, depending on the fundamental technology involved, the extent of the component modifications and qualifications, and the supply chain adjustments required to produce the products. Many of IBM’s products are already RoHS compliant, and the schedule for the remaining depends on the availability of RoHS-compliant parts and products meeting the necessary reliability requirements.

As we continue to work to identify alternatives for all applications of the substances targeted by the RoHS Directive, we do expect to continue to use some RoHS substances in several critical applications. These include the use of lead (Pb) solder in some server and storage products and the use of mercury in high-energy-efficiency lamps for video displays. The use of RoHS substances in these applications is critical to maintain certain products and product reliability until proven concerns with alternatives are sufficiently mitigated. As such, the European Union has granted exemptions to its requirements for these applications until suitable alternatives can be identified.
Management of product content information
Since 2003, IBM has required that suppliers disclose the substances referenced in the EIA/JEDEC Joint Industry Guide for Materials Composition Declaration of Electronic Products for parts acquired for newly designed products. For perspective, this can amount to multiple environmental data points for each of 7,000 discrete part numbers which, on average, are in our eServer brand products.

The aggregation and analysis of such quantities of data for assessing the product content status required the development of a new suite of software tools which enable:

- Automated data capture and uploading of environmental data by supplier and part number in a central corporate repository;
- Self-checking features in the environmental data collection form to prevent invalid responses;
- Aggregation of parts data into status reports;
- Tracking of parts data availability for product compliance assessments; and
- Rapid response capabilities for product inquiries and audits.

IBM's initiative means we have established an effective process to provide material declarations to demonstrate conformance to key environmental requirements for products in a global marketplace. This capability will be enabled as material data from suppliers is finalized. It will be particularly important as regulators and industry pursue the standardization of the declarations demonstrating compliance.

Educating the supply chain on RoHS
IBM's hardware business units and procurement staff have led environmental education for key segments of the supply chain, explaining the use of the material declaration forms and their importance to our efforts to manufacture products which comply with the European Union's RoHS Directive. For example, when IBM's Retail Store Solutions (RSS) brand teams introduced education for their suppliers in 2003, only 10 percent knew about the impending directive. The RSS teams worked with each contract manufacturer to develop plans to update card assembly equipment, devise profiles for the various electronic card products, and ultimately qualify new lead-free assembly processes for subcomponents like planar cards, power supplies, and keyboards. RSS brands also began quarterly performance meetings with their contract manufacturers, which now include RoHS status reviews part-by-part, from electronic components through to the final box.

Performance against other product design for the environment goals
In addition to the product energy efficiency goals discussed earlier, IBM also has goals on the use of powder coatings and recycled content plastics in its products.

Powder coatings
IBM finished 97.8 percent of its decorative metal covers using powder coatings in 2004, against its goal of maintaining powder use at or above 90 percent. Using this environmentally preferred material enabled IBM suppliers to avoid the emission of more than 870,000 pounds of volatile organic compounds that would have been realized if liquid paint had been used to finish the same square footage.

Recycled plastics
Of the plastic resins IBM procured in 2004, 3.8 percent were recycled resins versus the corporate goal of 5 percent. A key contributor to this performance was an extended delay in the commercialization of one supplier's recycled content material. In spite of the challenge of this goal, IBM continues to try to work with its suppliers to obtain the recycled content material that will meet its requirements.

PRODUCT PACKAGING
To minimize the waste associated with protective product packaging, IBM developed its Packaging Guidelines in 1990. Updated periodically, these guidelines prohibit the use of ozone-depleting chemicals, heavy metals, polybrominated biphenyls, and polybrominated biphenyl oxides. The guidelines also provide direction to minimize toxic elements in packaging materials; identify methods, processes, and design strategies to drive source reduction; and promote the use of packaging materials that are reusable, recyclable, or contain high amounts of recycled content.

For over 10 years, IBM has prohibited the use of polyvinyl chloride (PVC) and the use of free-flowing cushioning materials (such as "plastic peanuts") in IBM packaging. It has also prohibited the use of permanently commingled (dissimilar materials inseparable without tools) except in cases in which they are part of reusable packaging designs or technically required for product quality, such as in static-shielding bags.

Key elements of IBM's Packaging Guidelines have been embedded in various engineering specifications and procurement documents, which extend their reach.
beyond IBM to include its supply chain and other business partners. IBM has also worked closely with the U.S. EPA on the development of the Packaging section in the new EPEAT (Electronic Products Environmental Assessment Tool) criteria. EPEAT is a tool for evaluating the environmental performance of electronic products throughout their life cycle.

Internally, the company is developing new online tools to collect information on product packaging and facilitate packaging compliance and auditability for products built both internally and externally. In addition, IBM has partnered with industry peers and the University of California—Santa Barbara Bren School to develop a common packaging guideline for the electronics industry. Titled “Environmentally Responsible Packaging: A Guideline and Certification Program for the Electronics Industry,” the initiative includes a common educational package and certification program to assist with specification for packaging materials selection and use. By collaborating with industry peers on a common guideline, we will help manufacturers and parts suppliers worldwide avoid wasteful inconsistencies in our industry.

PRODUCT END-OF-LIFE MANAGEMENT

IBM has long been a global leader in computer recycling. Through its product end-of-life management (PELM) programs, IBM manages the end-of-life of the IT products it uses in its own operations and those it gets back from product lease returns worldwide. In addition, as part of its PELM activities, IBM began offering product takeback programs externally in Europe in 1989 and has extended them around the globe and enhanced their depth and breadth over the years.

IBM’s Global Asset Recovery Services organization now offers Asset Recovery Solutions to commercial customers in many parts of the world, and continues its efforts to extend them further. These solutions include the management of data security and disk overwrite services, a worldwide remarketing network for product resale, and state-of-the-art refurbishing and recycling capability for IT equipment. Additionally, in many countries, IBM offers solutions to household consumers for the end-of-life management of computer equipment, either through voluntary IBM initiatives or country programs in which the company participates. In the countries of the European Union, IBM has been modifying its programs for both consumers and commercial customers to meet the requirements of the Waste Electrical and Electronic Equipment (WEEE) Directive.

Product landfill use goal and performance

IBM’s product end-of-life management operations worldwide processed 58,440 metric tons of end-of-life products and product waste during 2004 and sent only 1.72 percent of the total to landfills. These operations thus outperformed the company’s PELM landfill metric target, which is to maintain a landfill rate below 3.0 percent.

<table>
<thead>
<tr>
<th>PELM Disposition Results</th>
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</thead>
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<tr>
<td><strong>Landfill</strong></td>
<td>1.7%</td>
</tr>
<tr>
<td><strong>Waste-to-Energy</strong></td>
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</tr>
<tr>
<td><strong>Incinerate</strong></td>
<td>0.6%</td>
</tr>
<tr>
<td><strong>Reuse</strong></td>
<td>14.5%</td>
</tr>
<tr>
<td><strong>Recycle</strong></td>
<td>51.8%</td>
</tr>
<tr>
<td><strong>Recole</strong></td>
<td>28.0%</td>
</tr>
</tbody>
</table>

Product recovery and reuse analysis

Since 1995, when IBM first began providing the volumes of end-of-life product and product waste it recovered and processed (i.e., resold, refurbished, or recycled) in the company’s annual corporate environmental report, through year-end 2004, IBM has documented the collection and recovery of nearly 1.2 billion pounds (more than 544 million kilograms) of product and product waste worldwide.

In 2004, IBM’s PELM network resold, reused, or recycled more than 561,000 PCs, 428,000 monitors, and 580,000 laptops from the total end-of-life product returns worldwide. These numbers of products do not include any of IBM’s share of returned products processed by country product takeback programs (e.g., Netherlands’ ICT, Switzerland’s SWICO program).

Comparing the total number of PCs, monitors, and laptops IBM resold, reused, or recycled worldwide in
2004 to the total number of new IBM sales worldwide of similar products in 2004, the company resold, reused, or recycled 11 PCs for every 100 new sales, 13 monitors per 100 new sales, and 13 laptops per 100 new sales. The best performance was in the United States, where IBM resold, reused, or recycled 26 PCs for every 100 new sales, 28 monitors per 100 new sales, and 29 laptops per 100 new sales.

Challenges and Priorities

ENVIRONMENTAL PROTECTION

• Continuing our efforts to further reduce the greenhouse gas emissions associated with our operations and assisting our clients in doing the same.

SECURITY AND PRIVACY

As one of the world’s leading information technology companies, we believe we have a preeminent responsibility—on both the technical and policy fronts—to contribute to the evolution (if not creation) of thoughtful frameworks for privacy and data security.

We had one of the earliest global policies protecting employee information; today, we continue to address questions concerning the responsible access to and use of data and we are a recognized leader on the policy fronts as well as in the market, where we implement privacy and security solutions for our clients.

• Continuing to reduce the environmental footprint of our products through initiatives such as material substitutions, design innovations, energy management, and technological advancements.

• Continuing to expand our product asset recovery offerings to further enhance the solutions we provide our clients for the end-of-life management of their IT equipment.

• Continuing our commitment to environmental leadership in all of our business activities.

For more information on IBM’s efforts to protect the environment, visit our Environment Web site: www.ibm.com/ibm/environment/.

IBM is the first major corporation to revise its equal opportunity policy to include protection against genetic discrimination.

Dramatic breakthroughs in life science are unleashing a new era in health care, with advances in genetic testing at the very forefront of the revolution. Providing people with information about their chances for certain diseases enables them to address risk factors and seek early intervention. Powering the revolution is innovation—particularly in grid computing which is churning out the intense computations necessary for genetics research.

It’s an exciting time for the life sciences and for IBM, which is engaged in the technology innovations that are helping to make these discoveries possible. Nonetheless, people around the world have expressed concerns that information from genetic testing could be used to prevent them from getting jobs and health insurance.
“This work is enormously promising—but it also raises very significant issues, especially in the areas of privacy and security,” wrote IBM Chairman and CEO Sam Palmisano in a letter to employees in October 2005. “The opportunity the world has to improve life in the century ahead through genomics-driven, personalized medicine and preventive care will only be realized fully if it also takes into account the protection of genetic privacy. We must make that a priority now.”

To that end, he also signed a revision of IBM’s equal opportunity policy, first published by Thomas Watson, Jr., in 1953, which commits that IBM will not use genetic information in its employment decisions. This policy makes IBM the first major corporation to pledge that hiring, promotion, and compensation of employees will be conducted without regard to an individual’s genetics.

And that’s very important not only for privacy reasons, but to advance the field of genomics science. Employees must be comfortable that their privacy will be protected to take full advantage of the health care benefits made possible by genetics testing.

“It has been IBM’s long-standing policy not to discriminate against people because of their heritage or who they are,” Sam Palmisano wrote in his letter to employees. “A person’s genetic makeup may be the most fundamental expression of both. So, we are taking this step today because it is the right thing to do—for the sake of the innovation that lies just over the horizon, and because it is entirely consistent with our values and with who we are as a company.”

IBM’s Data Governance Council Wants Information to Stay Safe and Secure

Among the multitude of marvels unleashed by the technology revolution is data—an almost endless supply of information that transmits instantly across the globe to fuel businesses, organizations, and governments.

In the meantime, companies are struggling with an alarming rate of data theft that has compromised reputations and exacted huge penalties in lost business. While data is often among an organization’s best resources, it is frequently undervalued when a business counts its assets. Yet, when data falls into the wrong hands, this same asset can immediately become a major liability.

For these and other reasons, IBM apparently struck a nerve when it formed the Data Governance Council in 2005. Expanding rapidly from the five member organizations when it launched to 45 member organizations later in the year, the Data Governance Council is largely composed of representatives from IT companies, governments, and the financial services industry.

During the course of the past year, the council formed three working groups to assess the security, privacy, compliance, and operational risk of business. For 2006, the council is working to expand participation with more representatives from European and Asian countries.

“Data governance is an incredibly important issue to both the public and private sector,” said Steven Adler, program director of IBM data governance solutions. “The Data Governance Council is moving ahead rapidly because our members are taking leadership positions and giving a great deal of their time.”

Adler noted that one of the biggest problems for organizations is how to manage and control all the data that resides within a company, especially as more and more companies do business with each other in an on demand environment, extending into large “data supply chains.” There is a clear need for common solutions and governance models to protect and share data on different levels.

But effective data governance, which combines multiple disciplines, will require a paradigm shift in the way companies, organizations, and governments have functioned for decades. Data governance requires the
collaboration of disciplines that have not traditionally worked together before, including security and privacy, regulatory compliance, data management, operational risk, and IT.

“The problems we are looking at are not new, and they have been studied individually in the past,” Adler said. “This is the first time we are looking at data governance from all of these angles, with holistic purpose, at the same time. If we can break the stovepipes that segregate people in organizations and can motivate them to share their knowledge and experience to govern data effectively, we will create new organizational models—new ways of working.”

The transformation will require new technologies that advance security and privacy with integrated controls throughout every level of an organization. Reflecting some of the needs articulated among the Data Governance Council, IBM has already brought out bundled solutions that enable organizations to build consistency and quality control in data governance, which could help companies better protect critical information.

“This is an enormous and fascinating topic,” Adler said. “New organizational models are required to transition from industrial management and highly specialized labor to data-based value creation and collaborative networks in the Information Economy. Technology and innovation can support this transformation, and it’s an awesome responsibility. Organizations and governments have great power in all of the data that technology has enabled us to collect. How we harness this—and use it appropriately—is the challenge.”

How “None of Your Business” Could be Good for Business

Each advance in technology brings with it questions about how people will use and interact with that technology. A good example can be found in the development of RFID technology and a recent design proposal by IBM researchers that could put more control over the technology into the hands of consumers.

Radio Frequency Identification (RFID) tags are small transponder labels or devices with antennas that can receive and respond to signals from an RFID transceiver. Many toll agencies use RFID technology today for electronic toll collection lanes. Libraries and bookstores can track and protect their stock with RFID tags inserted into the spine or back cover of books.

In addition, many retailers and manufacturers are using RFID labels to track pallets of goods and materials through their supply chain. The next step, already in development, is the attachment of RFID tags to everyday products that consumers buy—both for wholesale and retail stock management purposes, including geographical positioning for logistics tracking, but also for such after-sale issues as product warranty and item-return identification.

The same capabilities that would allow RFID technology to enhance a supply chain’s efficiency create questions for some consumer advocates, who worry that the information from the tags could be used for unauthorized surveillance and unwanted visibility long after a product has been taken home and worn, plugged in, hidden in a closet, given as a gift, or been treated in any of the other ways that products could get used.

How to reconcile the need for supply chain tracking and legitimate post-sale uses with privacy concerns seemed an intractable problem—until recently, when two IBM researchers proposed a possible design approach for RFID tag manufacturers to get the full benefit of the technology while maintaining consumers’ privacy.

IBMers Paul Moskowitz and Günter Karjoth called their approach a “clipped tag” design. Each RFID tag or label consists of a small antenna embedded or, more commonly, specially printed on the surface. Once the item’s purchased, consumers or store cashiers could take a coin and scratch through part of the antenna, reducing its longer distance radio-frequency range as was used during supply chain operations, yet retaining its other, legitimate uses when read at close range of a few feet.

Or, in a similar approach as outlined in their paper, an antenna could be printed on perforated material and easily detached, or it could include a peel-off layer that,
when removed, also removes enough of the antenna to keep the RFID tag from being read by transceivers at anything but very close distances.

The ideas were positively received and may help move the industry’s conversation beyond intractable positions to actual solutions. But some people asked: why would IBMers involve themselves in RFID research when we don’t make RFID tags ourselves? The answer is pretty simple: many of our clients are using RFID now or are developing the kinds of supply chains that could benefit from the technology, and IBM helps them implement these solutions.

In the end, such an elegant solution to a challenge both technological and social speaks volumes about the kinds of innovation IBMers like Paul Moskowitz and Günter Karjoth produce. It could matter very much to our clients, and in turn to their own customers, and therefore it matters very much to us and our business.

**Challenges and Priorities**

**SECURITY AND PRIVACY**

* Increasing the adoption and use of encryption to protect data from unauthorized access.

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**GOVERNMENTS AND PUBLIC POLICY**

“The light bulbs went on.”

Why IBM is leading the open computing community.

In our distinct roles as an adviser, supplier, and advocate, with many relationships to governments at every level, IBM is often asked why we’ve adopted a strategy for ourselves and our clients built on open computing.

IBM is indeed the leading advocate for the creation and adoption of open standards around the world. Our work with national and local governments has demonstrated that implementing open source and open standards technology can address many governments’ need to deliver e-government services and transform their operations for an on demand environment, even while it can help meet a government’s IT budget challenges.

In the research community, innovation has long been the product of collaboration. Scientists sharing ideas and building on each other’s insights have produced advance after advance, expanding human knowledge, contributing to growing productivity, and helping to lift living standards. One need only look at the recent progress in medicine and supercomputing as evidence of how valuable collaboration in the research community has been.

This model of collaborative innovation is founded on the ability to communicate effectively, so it is not surprising that the Internet, the quintessential open standard infrastructure built under the auspices of the
U.S. government, should have taken off first in the research community where it was refined, made more usable, and ultimately delivered to the larger society as a global platform on which business, government, and all society's institutions could innovate. The rest is history—history that is still being made.

Yet prior to the Internet and the open standards movement, IT companies built systems that were proprietary and frequently incompatible, the motive being to lock in customers and maximize earnings.

“Not surprisingly, the result was a Tower of Babel that made integration difficult, costly, and time-consuming,” as Irving Wladawsky-Berger, IBM vice president, technical strategy and innovation, noted in one of his blog entries. “Years ago, just sending an e-mail to someone outside your company was a challenge. Then we noticed that those early users of the Internet in universities and research labs were easily communicating with each other around the world, not only exchanging e-mail but also sharing files and documents. After awhile, the light bulbs went on.”

What the light exposed was the fact that open standards could help us to transcend proprietary systems. Thus began the continuing march toward universal connectivity.

Some time after the academic community was already using open standards, business saw the light and began exploiting the unprecedented flexibility and interoperability, in and outside the enterprise, that open standards brought to computing infrastructures. Since then the IT industry has begun increasingly to coalesce around a variety of open standards, competing on the best implementation of the standard rather than trying to gain a choke hold on a segment of the industry.

Open standards began making history in another way as well. They enabled collaborative innovation around the design and development of sophisticated software, especially the kind of software that has to work on every kind of system over the Internet, regardless of vendor or architecture. With an open, global, infrastructure supporting collaboration, like-minded people by the thousands from all over the world began organizing themselves into open source software communities. The best and the brightest—on a scale no IT company could hope to duplicate—began working together, bringing their expertise to bear on all aspects of the IT infrastructure, making it more integrated with the Linux operating system, for example, and more efficient and powerful with grid computing.

The standards-based success of the Internet, and open source initiatives like Linux and the movement toward an open document format increasingly popular with governments, can help transform rigid IT environments into open, on demand engines. But technology standards alone do not address some of the more unique and sophisticated requirements that many industries
face today. Businesses now want to implement open software standards that are unique to their industries so they can achieve greater levels of business process integration; improved access to mission critical data; faster conversion of raw materials into finished goods; and a seamless reach to partners, suppliers, customers, and other perceived stakeholders.

“At IBM, we are doing everything we can to help establish open software standards for specific industries so they can integrate their unique processes. Meanwhile, we’re helping build the open, collaborative communities whose activities are so vital to developing the robust, manageable, open, global infrastructure on which business, governments, and individuals can innovate,” said Wladawsky-Berger. “We are bringing our talent, our money, and our intellectual capital to bear on each of these efforts.” And that commitment is dramatically evident in a number of major initiatives IBM has taken.

To accelerate innovation through the open source communities, IBM and four other major corporations announced in November 2005 the creation of a new company, the Open Invention Network—which will acquire patents and license them royalty-free to others who agree not to assert their patent rights against Linux. Joining IBM in this first-of-a-kind initiative are Novell, Phillips, Red Hat, and Sony.

In October 2005, IBM pledged royalty-free access to certain patents for the development and implementation of selected open software standards unique to the health and education industries to help these vitally important industries lower costs and improve the quality of services.

(IBM began 2005 by announcing open access to key innovations covered by 500 IBM software patents to developers working on open source software. In the process, IBM set the stage for an industry-wide “patent commons” to foster further innovation among information technology developers and users.)

“At the heart of this open movement is a set of standards that everyone can agree to,” Wladawsky-Berger said. “The notion that, by observing standards, one can make tremendous progress is very powerful. It means that, for the first time in history, we can seriously contemplate building globally integrated businesses, industries, and economies.”

Challenges and Priorities

GOVERNMENTS AND POLICY

- Encouraging governments to foster innovation across a broad range of disciplines and endeavors.
- Advancing open standards, enabling open source software development, and creating a balanced intellectual property regime.
### Global Corporate Contributions by Type

<table>
<thead>
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<th>$ IN MILLIONS</th>
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### Global Corporate Contributions by Geography

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<tr>
<td>Total</td>
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<td>127.1</td>
<td>140.2</td>
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### Global Corporate Contributions by Issue

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<td>2.2</td>
<td>5.1</td>
<td>8.9</td>
</tr>
<tr>
<td>Environment</td>
<td>0.6</td>
<td>0.7</td>
<td>0.6</td>
<td>0.6</td>
<td>0.7</td>
</tr>
<tr>
<td>Total</td>
<td>126.1</td>
<td>127.1</td>
<td>140.2</td>
<td>142.8</td>
<td>143.7</td>
</tr>
</tbody>
</table>
**IBM Employee Charitable Contribution Campaign**

<table>
<thead>
<tr>
<th></th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amount donated ($ in millions)</td>
<td>27.7</td>
<td>32.8</td>
<td>30.4</td>
<td>32.3</td>
<td>33.1</td>
</tr>
<tr>
<td>Participation rate</td>
<td>58%</td>
<td>61%</td>
<td>57%</td>
<td>56%</td>
<td>58%</td>
</tr>
<tr>
<td>Recipient agencies</td>
<td>10,100</td>
<td>10,250</td>
<td>10,300</td>
<td>11,200</td>
<td>11,300</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>CANADA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amount donated (US$ in millions)</td>
<td>1.3</td>
<td>1.6</td>
<td>1.9</td>
<td>2.2</td>
<td>2.3</td>
</tr>
<tr>
<td>Participation rate</td>
<td>59%</td>
<td>57%</td>
<td>56%</td>
<td>53%</td>
<td>55%</td>
</tr>
<tr>
<td>Recipient agencies</td>
<td>923</td>
<td>1,028</td>
<td>1,060</td>
<td>1,132</td>
<td>1,199</td>
</tr>
</tbody>
</table>

**Lost Workday Case Rate per 100 Employees**

IBM’s safety record continues to be among the best in industry. This table details the performance results of IBM’s safety programs in a sampling of countries with manufacturing or hardware development operations in 2004. IBM consistently demonstrates low lost workday case rates (a measurement of injury/illness severity and business impact).

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IBM</td>
<td>0.11</td>
<td>0.08</td>
<td>0.10</td>
<td>0.08</td>
<td>0.08</td>
</tr>
<tr>
<td>Available Peer Industry</td>
<td>0.61</td>
<td>0.40</td>
<td>0.44</td>
<td>0.41</td>
<td>0.43</td>
</tr>
<tr>
<td>China</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IBM</td>
<td>0.15</td>
<td>0.12</td>
<td>n/a</td>
<td>0.00</td>
<td>0.02</td>
</tr>
<tr>
<td>Available Peer Industry</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>France</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IBM</td>
<td>0.24</td>
<td>0.25</td>
<td>0.18</td>
<td>0.20</td>
<td>0.21</td>
</tr>
<tr>
<td>Available Peer Industry</td>
<td>0.94</td>
<td>0.90</td>
<td>0.70</td>
<td>0.70</td>
<td>0.72</td>
</tr>
<tr>
<td>Hungary</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IBM</td>
<td>0.57</td>
<td>0.24</td>
<td>0.19</td>
<td>0.37</td>
<td>0.38</td>
</tr>
<tr>
<td>Available Peer Industry</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Ireland</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IBM</td>
<td>0.29</td>
<td>0.25</td>
<td>0.11</td>
<td>0.41</td>
<td>0.48</td>
</tr>
<tr>
<td>Available Peer Industry</td>
<td>1.20</td>
<td>1.06</td>
<td>1.77</td>
<td>1.32</td>
<td>1.32</td>
</tr>
<tr>
<td>Japan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IBM</td>
<td>0.00</td>
<td>0.01</td>
<td>0.02</td>
<td>0.01</td>
<td>0.02</td>
</tr>
<tr>
<td>Available Peer Industry</td>
<td>0.06</td>
<td>0.04</td>
<td>0.06</td>
<td>0.03</td>
<td>0.05</td>
</tr>
<tr>
<td>Mexico</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IBM</td>
<td>0.00</td>
<td>0.02</td>
<td>0.00</td>
<td>0.16</td>
<td>0.60</td>
</tr>
<tr>
<td>Available Peer Industry</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Singapore</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IBM</td>
<td>0.05</td>
<td>0.14</td>
<td>0.43</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Available Peer Industry</td>
<td>0.06</td>
<td>0.43</td>
<td>0.39</td>
<td>0.38</td>
<td>0.38</td>
</tr>
<tr>
<td>U.S.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IBM</td>
<td>0.36</td>
<td>0.36</td>
<td>0.23</td>
<td>0.35</td>
<td>0.22</td>
</tr>
<tr>
<td>Available Peer Industry</td>
<td>1.35</td>
<td>0.8</td>
<td>0.8</td>
<td>1.3*</td>
<td>n/a</td>
</tr>
</tbody>
</table>

*n/a = Not Available

*Industry Classification System changed between 2002 and 2003, preventing a direct comparison with past years. Peer Industry data for 2003, the first year under the new system, is based on an average of industry data for NAICS (North American Industry Classification System) codes 518200, 541510 and 334410 (data processing, hosting, and related services; computer systems, design, and related services; and semiconductor and other electronic components manufacturing).

Countries shown are those in which IBM’s manufacturing operations are located. The injury rates assume an average of 2000 hours worked per employee per year. Singapore data pertains only to injuries with 3 or more days lost time. Because of the differences in governmental reporting requirements, a direct comparison between countries is not appropriate. The peer industry rate is an estimate of the average rate for companies doing a type of work similar to that done by IBM in that country. Some country numbers have been updated from prior years.
EMPLOYMENT DATA FOR U.S. LOCATIONS

2004

<table>
<thead>
<tr>
<th>AREA</th>
<th>TOTAL</th>
<th>MEN</th>
<th>WOMEN</th>
<th>ALL MINORITIES</th>
<th>BLACK</th>
<th>ASIAN</th>
<th>HISPANIC</th>
<th>NATIVE AMERICAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Officials/Mgrs</td>
<td>17,494</td>
<td>12,515</td>
<td>4,979</td>
<td>2,775</td>
<td>1,018</td>
<td>1,078</td>
<td>573</td>
<td>106</td>
</tr>
<tr>
<td>Professionals</td>
<td>60,353</td>
<td>40,385</td>
<td>19,968</td>
<td>15,175</td>
<td>4,569</td>
<td>7,658</td>
<td>2,620</td>
<td>328</td>
</tr>
<tr>
<td>Technicians</td>
<td>11,992</td>
<td>10,615</td>
<td>1,377</td>
<td>2,551</td>
<td>1,044</td>
<td>664</td>
<td>757</td>
<td>86</td>
</tr>
<tr>
<td>Marketing</td>
<td>39,699</td>
<td>28,658</td>
<td>11,041</td>
<td>9,713</td>
<td>2,814</td>
<td>5,234</td>
<td>1,454</td>
<td>211</td>
</tr>
<tr>
<td>Office/Clerical</td>
<td>6,747</td>
<td>2,234</td>
<td>4,513</td>
<td>2,372</td>
<td>1,548</td>
<td>281</td>
<td>465</td>
<td>78</td>
</tr>
<tr>
<td>Craft Workers</td>
<td>1,338</td>
<td>843</td>
<td>495</td>
<td>208</td>
<td>95</td>
<td>63</td>
<td>44</td>
<td>6</td>
</tr>
<tr>
<td>Operatives</td>
<td>2,276</td>
<td>1,449</td>
<td>827</td>
<td>460</td>
<td>187</td>
<td>179</td>
<td>87</td>
<td>7</td>
</tr>
<tr>
<td>Totals</td>
<td>139,899</td>
<td>96,699</td>
<td>43,200</td>
<td>33,254</td>
<td>11,275</td>
<td>6,000</td>
<td>822</td>
<td></td>
</tr>
</tbody>
</table>

Table reflects all regular and complementary U.S. employees. The company’s complementary workforce includes various workers hired under temporary, part-time, and limited-term employment arrangements. Data for previous years is available online at www-306.ibm.com/employment/us/diverse/employment_data.shtml.

ENVIRONMENTAL PROTECTION

Environmental Capital and Expense Worldwide

<table>
<thead>
<tr>
<th>$ IN MILLIONS</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital</td>
<td>54</td>
<td>132</td>
<td>52</td>
<td>18</td>
<td>21</td>
</tr>
<tr>
<td>Expense</td>
<td>110</td>
<td>115</td>
<td>119</td>
<td>104</td>
<td>102</td>
</tr>
<tr>
<td>Total</td>
<td>164</td>
<td>247</td>
<td>171</td>
<td>122</td>
<td>123</td>
</tr>
</tbody>
</table>

Environmental Expenses Worldwide

2004

<table>
<thead>
<tr>
<th>$ IN MILLIONS</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Personnel</td>
<td>34.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consultant fees</td>
<td>1.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Laboratory fees</td>
<td>1.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Permit fees</td>
<td>0.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waste treatment and disposal</td>
<td>14.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water and wastewater management operations</td>
<td>20.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Air emission control operations</td>
<td>1.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Groundwater protection operations</td>
<td>1.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other environmental systems operations</td>
<td>2.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waste and materials recycling</td>
<td>2.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Superfund and former IBM site remediation</td>
<td>17.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Miscellaneous/other</td>
<td>3.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>101.8</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Estimated Environmental Savings and Cost Avoidance Worldwide

2004

<table>
<thead>
<tr>
<th>$ IN MILLIONS</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Location pollution prevention and operations</td>
<td>48.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corporate operations</td>
<td>38.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Packaging improvements</td>
<td>20.2</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Environmentally preferable materials usage</td>
<td>5.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Energy conservation and cost avoidance</td>
<td>22.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Superfund and site remediation efficiencies</td>
<td>3.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Insurance savings*</td>
<td>12.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spill remediation cost avoidance**</td>
<td>1.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compliance cost avoidance**</td>
<td>55.4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>208.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Savings achieved through use of RCRA financial assurance in lieu of environmental impairment insurance.
** These savings are estimates based upon certain assumptions. The figure for spill remediation cost avoidance is estimated from IBM’s actual experience with remediation costs. Compliance cost avoidance includes consideration of potential penalties, legal fees, and business interruptions that are avoided. A figure for potential penalties and legal fees was estimated from an analysis of 2004 U.S. EPA data. An estimate for business interruption was based upon potential impact of a plant shutdown.
Electricity Use and CO\textsubscript{2} Emission Data

<table>
<thead>
<tr>
<th>YEAR</th>
<th>ELECTRICITY USE (million kWhrs)</th>
<th>CO\textsubscript{2} (EST) (tons x 1,000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>5,325</td>
<td>3,412</td>
</tr>
<tr>
<td>2001</td>
<td>5,228</td>
<td>3,247</td>
</tr>
<tr>
<td>2002</td>
<td>5,031</td>
<td>2,902</td>
</tr>
<tr>
<td>2003</td>
<td>4,446</td>
<td>2,573</td>
</tr>
<tr>
<td>2004</td>
<td>4,390</td>
<td>2,416</td>
</tr>
</tbody>
</table>

The above figures include estimates for portions of IBM’s office space that are leased. CO\textsubscript{2} emissions are calculated for all energy use, including electricity, fuel oil and natural gas.

Energy Conservation and Avoided CO\textsubscript{2} Emissions

<table>
<thead>
<tr>
<th>YEAR</th>
<th>CUMULATIVE ELECTRIC SAVINGS (million kWhrs)</th>
<th>CUMULATIVE AVOIDED CO\textsubscript{2} (EST) (tons x 1,000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>609</td>
<td>296</td>
</tr>
<tr>
<td>2001</td>
<td>944</td>
<td>442</td>
</tr>
<tr>
<td>2002</td>
<td>1,139</td>
<td>505</td>
</tr>
<tr>
<td>2003</td>
<td>1,290</td>
<td>560</td>
</tr>
<tr>
<td>2004</td>
<td>1,412</td>
<td>603</td>
</tr>
</tbody>
</table>

The above annual figures represent results from each year’s new conservation programs, plus results from programs of previous years (which are discounted by 25 percent per year). Savings prior to 1999 are not included.

Goal: To save the equivalent of 4 percent of IBM’s actual annual electricity and fuel use by improving energy efficiency and giving credit to renewable energy use.

Results: In 2004, IBM achieved a 3.6 percent saving through energy efficiency improvements and 4.1 percent saving through the use of renewable energy, for a 7.7 percent total savings against the 4 percent goal.

Total Chemical Quantities Worldwide

2004 reportable quantities

<table>
<thead>
<tr>
<th>CHEMICAL</th>
<th>METRIC TONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper Compounds</td>
<td>1,451</td>
</tr>
<tr>
<td>Nitrate Compounds</td>
<td>1,346</td>
</tr>
<tr>
<td>Xylene</td>
<td>760</td>
</tr>
<tr>
<td>n-methyl-2-pyrrolidone</td>
<td>306</td>
</tr>
<tr>
<td>Methanol</td>
<td>152</td>
</tr>
<tr>
<td>All others</td>
<td>664</td>
</tr>
<tr>
<td>Total</td>
<td>4,679</td>
</tr>
</tbody>
</table>

As defined by U.S. SARA Section 313 and PPA.
As defined by U.S. SARA Section 313.
The increase in releases and transfers from 2002 through 2004 was due to the increase in discharges to water of nitrates associated with IBM’s new 300mm semiconductor manufacturing facility, which became operational in 2002 and ramped up to full production in 2004. IBM is constructing an additional stage of its treatment plant to enhance nitrate treatment. This new stage is scheduled to become operational in 2006.

**Goal:**
To achieve an annual water savings from IBM’s semiconductor manufacturing operations of 2 percent of total water usage, based on the water usage of the previous year and measured as an average over a rolling five-year period.

**Results:**
Achieved a 10.3 percent savings in 2004, for an average annual water savings of 7 percent.
Nonhazardous Waste Generated and Recycled Worldwide

<table>
<thead>
<tr>
<th>METRIC TONS x 1,000</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total recycled</td>
<td>142</td>
<td>127</td>
<td>120</td>
<td>82</td>
<td>83</td>
</tr>
<tr>
<td>Total generated</td>
<td>185</td>
<td>167</td>
<td>154</td>
<td>106</td>
<td>109</td>
</tr>
<tr>
<td>Percent recycled</td>
<td>77%</td>
<td>76%</td>
<td>78%</td>
<td>77%</td>
<td>76%</td>
</tr>
</tbody>
</table>

Goal: To recycle 67 percent of nonhazardous waste generated.

Result: Achieved a 76 percent recycling rate in 2004, with 59 percent of the locations achieving or exceeding the goal.

Fines and Penalties Worldwide

<table>
<thead>
<tr>
<th>$ IN THOUSANDS</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Fines</td>
<td>$1.9</td>
<td>$0.01</td>
<td>$0.8</td>
<td>$0.0</td>
<td>$0.0</td>
</tr>
</tbody>
</table>

Over the past five years, IBM has paid three fines for a total amount of $2,765.
Editorial Policy

This report serves as a set of highlights to IBM's corporate responsibility activities and as an update to most of the data IBM reports on a regular basis. It follows IBM's previous reports on workforce diversity and community relations programs, our public environmental reporting that began in 1990, our first Corporate Responsibility Report published in 2003 (covering 2002 data), and the establishment in 2005 of our Corporate Responsibility Web site (www.ibm.com/ibm/responsibility) for ongoing reporting.

In addition to the Corporate Responsibility Web site, additional, important information about IBM's corporate philanthropy, corporate governance, diversity, environmental programs, and other initiatives is available on ibm.com at the following addresses:

- Community relations www.ibm.com/ibm/ibmgives
- Corporate governance www.ibm.com/investor/corpgovernance
- Environment www.ibm.com/ibm/environment
- Government www.ibm.com/government
- Privacy www.ibm.com/privacy
- Security www.ibm.com/security
- Supply chain www.ibm.com/procurement
- Workforce diversity www.ibm.com/diversity

In combination, the Web sites and this printed update provide a comprehensive view of IBM's corporate responsibility activities and reporting.

Where appropriate, multiple years of data have been included to demonstrate trends and provide year-to-year comparisons. Selected environmental and financial data include that for IBM and its controlled subsidiary companies, which in general are majority owned. Other data is that of IBM.

We have included information on the areas of corporate responsibility we believe are the most relevant and meaningful with regard to IBM's global activities. Among the references used in preparing this report are the Global Reporting Initiative (GRI) Sustainability Reporting Guidelines, the corporate social responsibility surveys of a number of external organizations, and questions we are often asked by our clients, employees, shareholders, nonprofits, government and non-governmental organizations, and other people and communities with whom we have ongoing relationships.

We view this report as a valuable tool for maintaining dialogue with a variety of interested parties, including our employees, customers, investors, neighbors and regulators. For additional information, questions or comments on the report, call (800) IBM-4YOU or, outside the United States, (404) 238-1234. Additional information about IBM and its business performance may be found in the company's annual report, available on the Internet at www.ibm.com/annualreport. Copies of the annual report also may be obtained from Computershare, PO Box 43072, Providence, Rhode Island 02940-3072; (888) IBM-6700. Investors residing outside the United States, Canada and Puerto Rico should call (781) 575-2727.

TDD/TTY for hearing-impaired stockholders within the U.S., Canada and Puerto Rico: (800) 490-1483; outside the U.S., Canada and Puerto Rico: (781) 575-2694. Requests by e-mail: ibm@computershare.com.
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On the cover
Danny Patterson, one of thousands of IBM On Demand Community Volunteers, is IBM’s senior location executive for Mobile, Alabama, and Pensacola, Florida, and a leader for tape storage sales. He is pictured here working with some of the children at the Lighthouse Day Care Center in Grand Bay, Alabama, where he volunteers and provides administrative support. Among his other community interests, he has created a local foundation—the Lighthouse Community Development Corporation—to speed economic development in the region and serve as an apprentice to the statewide Alabama Commission on Higher Education. Recently, Danny Patterson has been volunteering much of his personal time for people in Mobile displaced by Hurricane Katrina, in addition to the other initiatives he’s undertaken for the community following the hurricane.
Innovations in Corporate Responsibility
2004-2005

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