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"Smart" Change in Strategy: IBM's Response to Challenging Times

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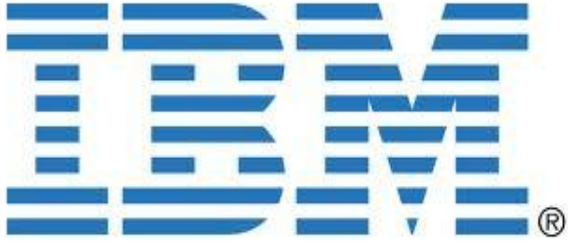> *"Ethics and competitiveness are inseparable. No society anywhere will complete very long or successfully with people stabbing each other in the back; with people trying to steal from each other; with everything requiring notarized confirmation because you can't trust the other fellow; with every little squabble ending in litigation; and with government writing reams of regulatory legislation, tying business hand and foot to keep it honest. There is no escaping this fact: the greater the measure of mutual trust and confidence in the ethics of a society, the greater its economic strength."*
>
> — *John Akers, former IBM Chairman*

"SMART" Change in Strategy:
IBM's Response to Challenging Times*

Introduction

It might surprise the average reader to know that American giant International Business and Machines, better known as IBM, only dedicates about 20% of its services to the manufacture of its hardware. The remaining 80% is devoted to consulting in the computer and technology fields. IBM's consulting programs all share one common characteristic: the word *SMART* – or a derivative thereof – typically precedes the name of the specific consulting program involved. What is readily apparent is that these *SMART* programs have reignited a new phase of innovation and creativity in a world demanding an equitable balance of economic, social, and environmental concerns.

Founded on June 16, 1911, in Endicott, New York, IBM has always been a frontrunner in innovation. Some of its business practices, both past and more currently, have been controversial; others have developed responsibly and ingeniously in answer to customer and shareholder demands and to meet, and even exceed, government regulations.

IBM has summarized its approach in doing business in a world marked by serious challenges:

"The issues we are addressing – from clean water, to safe food, to sustainable and vibrant cities, to smarter work, to empowered communities – are not a choice between business

strategy and citizenship strategy. They are both." [3]

This company recognizes the interconnected global community that exists and realizes that:

"The way the world literally works has to become smarter."

IBM has funneled its resources into building smarter transportation systems, cities, power grids, money, food systems, healthcare, telecommunications, and water – around the globe. And this smarter way of doing business is not just applied internally, but also to businesses, municipalities, governments, and countries.

The Evolution of a Multinational Corporation

IBM is headquartered in Armonk, New York. As of 2009, IBM employed more than 399,409 worldwide.[4] Other relevant statistics from its 2009 annual report indicate increases in revenue by $95.75 billion, operating income by $17.01 billion, net income by $13.42 billion, and total equity by $22.63. However, the company's total assets declined by $109.02 billion in that same year.[5]

To further understand the breadth of this company, it is important to recognize that its commitment to innovation is reflected by the number of patents it holds. From 1993 to 2007, IBM was awarded over 38,000 U.S. patents and has invested approximately $5 billion a year in research, development, and engineering since 1996. IBM's current active portfolio contains approximately 26,000 patents in the U.S. and over 40,000 patents worldwide as a direct result of its investments. *Business Standard* reports that IBM "shattered the patent record in 2008, becoming the first company to surpass 4,000 patents in a single year."[6] Ostensibly, IBM is a formidable organization, having effectively launched a campaign to create new assets, promote the optimization of existing assets, and analyze data to better lives in various ways.

The Environment
Waste Reduction

IBM established a corporate policy on environmental protection in 1971 with the support of a comprehensive global environmental management system. According to company reports, its total hazardous waste decreased by 44% over the past five years and 94.6% overall since 1987. IBM's total hazardous waste calculation consists of waste generated from both non-manufacturing and manufacturing operations. Waste from manufacturing operations includes waste recycled in closed-loop systems where processed chemicals are recovered for subsequent reuse rather than for potentially toxic disposal. Within the last decade, IBM has redesigned processes to eliminate almost all closed-loop recycling and has actively substituted more environmental-friendly materials. IBM has additionally constructed a modeling solution to help

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[3] IBM 2008 Corporate Responsibility Report, *Last visited* March 8, 2011, <http://www.ibm.com/ibm/responsibility/report-home.shtml>.

[4] IBM 2009 Annual Report. *Last visited* March 8, 2011, <http://www.ibm.com/annualreport/2009/2009_ibm_annual.pdf>.

[5] IBM 2009 Annual Report, *Financial Highlights*. *Last visited* March 8, 2011, <http://www.google.com/finance?q=NYSE:_IBM&fstype=ii>.

[6] IBM tops patent leadership in 2008. *Business Standard*. Mumbai, India. January 15, 2009.

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protect the environment and reduce its own carbon footprint by using a *Green Sigma* system.[7] IBM's goal with the Green Sigma offering is to partner with clients to both realize economic benefits and to achieve a reduction of the company's impact on the environment.[8]

Since 2005, IBM's total hazardous waste has decreased by 33.9 percent. By 2009, IBM recycled 45 percent of all of its hazardous waste while 31.4 percent (mainly sludge from industrial wastewater treatment plants) was sent to landfills. Of the nonhazardous waste IBM generated in 2009, 76 percent was recycled.[9] But while IBM has made significant inroads in reducing landfill waste, it must still grapple with accumulated electronic or "e-waste." In the post-World War II age, IBM, like all other technology manufacturing companies, realized enormous success with the production of computers and software. But with rapidly changing technology, electronics have been rendered obsolete in short periods of time. The U.S. alone discards 30 million computers each year of which the Environmental Protection Agency estimates only 15-20% is recycled with the remainder disposed of into landfills.[10]

According to the Environmental Protection Agency, the U.S. is currently home to approximately 3,091 active landfills and over 10,000 old municipal landfills,[11] most of which contain e-waste or Waste Electrical and Electronic Equipment (WEEE). E-waste includes discarded, surplus, obsolete, or nonfunctioning electrical or electronic devices. The particles and compounds which comprise these devices are known to causes serious health and pollution problems to humans, animals, and eco-systems. Some electronic scrap components, such as cathode ray tube (CRT) computer monitors, contain contaminants such as lead, cadmium, epoxy resins, fiberglass, PCBs, PVC (polyvinyl chlorides), thermosetting plastics, and mercury – all known toxins. The release of these materials into the ground contaminates underground aquifers and into the air as methane gas increasingly continues to pose serious environmental dangers.[12] To date, there is no federal or state legislation that would require the producers of these items – including IBM – to mine these landfills and recover their discarded products.[13]

Other negative environmental charges have specifically plagued IBM. For example, it has been reported that IBM used liquid cleaning agents in circuit board assembly operations for more than two decades. Six separate spills and leaks were recorded, including one leak in 1979 of 4,100 gallons from an underground tank. These oversights left volatile organic compounds behind in the soil and aquifers of Endicott, New York, the original home of IBM's world headquarters. Elements of toxic organic compounds were identified in the town's drinking water, albeit within regulatory limits. Additionally, from 1980, IBM has reportedly pumped out 78,000 gallons of chemicals – including trichloroethane, freon, benzene, and perchloroethene – directly into the air. IBM Endicott has been identified by the Department of Environmental

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[7] *Green Sigma* is part of a system which is currently being developed in Dublin, Ireland, and focuses on carbon, water, atmospheric emissions, liquid waste, solid waste, ground emissions, and the reporting on these elements. *Retrieved* May 23, 2010, <http://www.ibm.com/ibm/responsibility/world/environmental/pollution.shtml>..

[8] "IBM." *Retrieved* May 23, 2010, http://www-935.ibm.com/services/uk/bcs/pdf/ibm221602greensigmafinal.pdf.

[9] *See* <http://www.ibm.com/ibm/environment/pollution/>. *Last visited* March 6, 2010.

[10] *See* <http://www.epa.gov/epawaste/conserve/materials/ecycling/manage.htm>. *Last visited* March 6, 2010.

[11] *See* <http://www.zerowasteamerica.org/landfills.htm>. *Last visited* March 8, 2010.

[12] Jones, Daniel C.(2010). *Business Management*. 8:38, Feb. 26.

[13] *See* <http://www.epa.gov/dfe/pubs/comp-dic/lca-sum/ques8.pdf>. *Last visited* March 8, 2010.

Conservation as a major source of air and water pollution, however, state health officials have been unable to conclusively link the pollution to specific health problems.[14]

Transportation and Alternate Sources of Energy

Undoubtedly, the measure of true principled growth of both individuals and businesses is taking full accountability for past mistakes and committing to change. IBM has – especially within the last several decades – launched laudatory environmental initiatives. In addition to the reduction of its own generated waste, IBM has ventured into smarter commuting practices and the use and development of alternate sources of energy. With respect to worker commuting, IBM was recognized in 2005 as one of the "Top 20 Best Workplaces for Commuters" by the United States Environmental Protection Agency (EPA) in recognition of the company's efforts to reduce traffic and air pollution.[15] And in the field of solar power, Tokyo Ohka Kogyo Co., Ltd. (TOK) and IBM have been in the process of collaborating to establish affordable methods for introducing the next generation of solar energy products into the global marketplace.[16] Known as CIGS (Copper-Indium-Gallium-Selenide) solar cell modules, this thin film technology, has been touted as being capable of reducing the overall cost of solar cells to further enable their widespread adoption.[17]

Additionally, IBM has also made a switch to natural gas which has helped the company lower its greenhouse gas emissions by 70 percent and its energy use by 21 percent since 1990. In 2005 and 2006 alone, the company saved $4.4 million through a 2 percent reduction in fuel consumption.[18] Other noteworthy initiatives include the following:

- **2005:** Received Low Carbon Leaders Award from The °Climate Group.
- **2006:** Established IBM's 2nd generation CO_2 emissions reduction goal, building upon its results between 1990 and 2005. IBM's energy conservation actions conserved 4.3 billion kWh of energy, avoided 2.7 million metric tons of CO_2 emissions (an amount equal to 40 percent of its 1990 emissions), and saved the company $273 million in energy expense.
- **2006:** Received the U.S. EPA's Climate Protection Award (the first company to receive the award twice) and was recognized by the U.S. EPA under the *Climate Leaders* program for attaining voluntary goals.
- **2007:** Prohibited the use of polyvinyl chloride (PVC) in IT system enclosures and perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA) in new IBM manufacturing, development, and research processes.
- **2007:** Was recognized by the EPA for its leading green power purchases in the U.S. and for its support and participation in the EPA's Fortune 500 Green Power Challenge. IBM

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[12] "In an I.B.M. Village, Pollution Fears Taint Relations With Neighbors." *New York Times Online*. 15 March 2004.
[13] "Environmental Protection." *Retrieved* May 23, 2010, <http://www.ibm.com/ibm/responsibility/world/ environmental /pollution.shtml>.
[14] "IBM and Tokyo Ohka Kogyo Turn Up Watts on Solar Energy Production." *Retrieved* May 23, 2010, <http://www.ibm.com/ibm/responsibility/world/ environmental /pollution.shtml>.
[15] "IBM." *Retrieved* May 27, 2009, <http://www.ibm.com/ibm/green/index.shtml>.
[16] *See* <http://www.ibm.com/ibm/environment/information/40_Years_of_IBM_Environmental_Leadership.pdf>. *Retrieved* May 23, 2010.

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purchased enough renewable energy in 2007 to meet 4% of its U.S. electricity use and 9% of its global electricity purchases.[19]

- **2008:** Joined the Carbon Disclosure Project's Supply Chain Project at its inception.
- **2009:** Purchased 560 million kWh of renewable energy, representing 11.3 percent of the company's global electricity usage and a CO_2 emissions avoidance of 191,000 metric tons.
- **2009:** Avoided the emissions of more than 334,000 metric tons of CO_2 through its energy conservation efforts and procurement of renewable energy.
- **2010:** Established requirement that all IBM suppliers develop, deploy, and sustain a corporate responsibility and environmental management system, set voluntary environmental goals, and disclose performance.
- **2010:** Achieved elimination of *all* uses of PFOS and PFOA in the company's semi-conductor manufacturing operations.
- **2010:** Announced it had built a solar cell in which the key layer that absorbs most of the light for conversion into electricity is made entirely of readily available elements and is manufactured using a combination of solution and nanoparticle-based approaches. This solar cell set a new world record for efficiency and holds the potential for producing low-cost energy that can be used widely and commercially.[20]

Human Resources

Internationalization, Shifting Demographics, and Unionization

In 2010, IBM employed approximately 105,000 workers in the U.S. – a decrease of 30,000 since 2003. In the first quarter of 2005, IBM eliminated 14,500 positions – predominantly in European countries. On June 8, 2005, IBM Canada Ltd. eliminated approximately 700 positions. However, in its determination to broaden its focus by engaging emerging markets, these figures are offset by IBM's employment of over 75,000 people in India – an increase of over 66,000 in 2003.[21] Additionally, IBM offices in China, the Philippines, and Costa Rica have been witnessing a recruitment boom due to lower wages, less regulatory controls, local revenue growth, and increasing percentages of educated and skilled technical and business workers. IBM has explained this reconstitution of its global workforce to be an integral part of an overall strategy to "rebalance" its portfolio of professional skills.

Even with a workforce this large and this diverse, union representation has not been a significant factor in management-labor relations. Traditionally, IBM has resisted labor union organizing, although unions do represent some IBM workers outside the United States, most notably in the United Kingdom. Perhaps this has not been problematic as IBM has a long record of rewarding its employees with benefits and bonuses and was one of the first corporations to provide group life insurance (1934), survivor benefits (1935), and paid vacations (1936) to its workforce. Additionally, employees have been encouraged to discuss their grievances and concerns with

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[19] *See* <http://www.ibm.com/ibm/environment/news/greenpower_2007.html>. *Retrieved* March 8, 2011.

[20] *See* <http://www.ibm.com/ibm/environment/information/40_Years_of_IBM_Environmental_Leadership.pdf>. *Retrieved* March 8, 2011.

[21] Freeland, Chrystia (2010-10-22). "The Mumbai consensus." *Reuters - Analysis & Opinion*. <http://blogs.reuters.com/chrystia-freeland/2010/10/22/the-mumbai-consensus/>. *Retrieved* March 8, 2011.

management through the company's *Open Door* program. This form of internal resolution dispute was first implemented by John J. Watson, Sr. (the company's first president) in the 1910s.The *Open Door* program was a traditional company practice that granted employees with complaints hearings with senior executives, including the company's president.[22]

Diversity in Policy and Practice

With respect to civil rights, IBM's historical tendency has been to veer from the norm and act preemptively. For instance, in contravention to the U.S.'s entrenched policy of segregation – in part legislated by judicial fiat in *Plessy v. Ferguson*[23] – and well before the enactment of the the Civil Rights Act of 1964[24] and the Americans with Disabilities Act,[25] IBM had already begun to diversify its workforce. In 1899, the Computing Scale Company – one of three companies to later form IBM – employed African-American Richard MacGregor as well as three women, Lilly J. Philp, Nettie A. Moore and Emma K. Manske.[26] By 1914, IBM added a disabled employee to its workforce.[27] On September 21, 1953, IBM's second president, Thomas J. Watson, Jr., sent out a controversial letter to all IBM employees stating that IBM needed to hire the best people, regardless of their race, ethnic origin, or gender. He also publicized this policy so that in his negotiations to build new manufacturing plants with the governors of two states in the U.S. South, his message that IBM would neither construct nor maintain "separate-but-equal" workplaces would be unambiguous.[28]

IBM added sexual orientation to its nondiscrimination policy in 1984 acknowledging that by eliminating such barriers, the company would acquire a competitive advantage because IBM would be able to hire talented people turned down by its competitors.[29] IBM has gone even further with its human relations policies by providing same-sex partners of its employees with health care benefits and by creating both a *GLBT Diversity Network Group* and the *Employee Alliance for Gay and Lesbian Empowerment* (EAGLE), the latter boasting over 1000 registered members worldwide. The *Human Rights Campaign* has rated IBM 100% on its index of gay-friendliness since 2003.[30] This recognition and protection of human rights has not just been restricted to employees in the United States. For example, in 2007 and again in 2010, IBM was ranked first in *Stonewall's* annual *Workplace Equality Index* for U.K. employers. Globally, IBM has won over forty gay, lesbian, bisexual, and transgender awards.[31] And with respect to working

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[22] Mills, Daniel Quinn & Friesen, G. Bruce (1996). *Broken Promises: An Unconventional View of What Went Wrong at IBM*, Harvard Business Press, pp. 69–70.

[23] 163 U.S. 537 (1896).

[24] Pub. L. 88-352, 78 Stat. 241, enacted July 2, 1964.

[25] *Americans With Disabilities Act of 1990*, Pub. L. 101-336, 104 Stat. 327, enacted July 26, 1990, codified at 42 U.S.C. § 12101.

[26] "IBM." <http://www.ibm.com/employment/us/diverse/heritage_ibm_1900.shtm>l. *Retrieved* March 8, 2011.

[27] "IBM Valuing Diversity: Heritage - 1910s." *IBM*. <http://www.ibm.com/employment/us/diverse/heritage_ibm_1910.shtml>. *Retrieved* March 8, 2011.

[28] "IBM's EO Policy letter is IBM's foundation for diversity." *IBM*. <http://www.ibm.com/employment/us/diverse/50/tc.shtml>. *Retrieved* March 8, 2011.

[29] "IBM Valuing Diversity: Heritage - 1980s." *IBM*. <http://www.ibm.com/employment/us/diverse/heritageibm1980.shtml>. *Retrieved* March 8, 2011.

[30] HRC Corporate Equality Index Score. *International Business Machines Corp. (IBM) profile*. <http://www-ibm.com>. *Retrieved* May 27, 2009.

[31] "IBM." <http://www-03.ibm.com/employment/us/diverse/awards.shtml#glbt>. *Retrieved* May 5, 2009.

women, IBM was the only technology company ranked in *Working Mother* magazine's Top 10 for 2004[32] and one of two technology companies in 2005.[33]

Unsettled Accounts

Privatization Backlash

In an attempt to privatize the processing of welfare assistance applications and determine eligibility for food stamps, Medicaid, and other needs-based benefits, Indiana Governor Mitch Daniels signed a 10-year, $1.16 billion deal with IBM in 2006. The objective of this alliance was to upgrade and outsource the state's paper-based welfare application system to a system which uses a statewide call center and online document processing. Part of this new plan was to shift 1,500 of the state's 2,200 caseworkers to the private sector. After receiving myriad complaints from clients whose claims were allegedly lost or wrongfully denied, the State of Indiana cancelled the contract and filed a lawsuit against IBM. IBM has countersued the Indiana Family and Social Services Administration for claimed deferred payments, arguing that the Daniels administration failed to anticipate the consequences of increased new applications due to an economic downfall.[34]

Punch Card Systems and the Third Reich

One of the most controversial business relationships is said to have occurred during World War II between IBM and the Third Reich. In his book, *IBM and the Holocaust*,[35] author Edwin Black maintains that the Nazi government, in its determination to eradicate Europe's Jewish populations, needed a way in this pre-computer age to manage the massive trafficking of people to ghettos, detention facilities, and ultimately, concentration camps to complete the "final solution." With the movement and relocation of millions of people, number systems had to be used to identify the camps, classify the prisoners, and relate the status of each person taken into custody. These punch cards were not sold, but leased and serviced on site each month. Black points to documentary evidence in the form of lease and service contracts entered into between the Third Reich and IBM-New York regarding the lease and service of these machines. IBM has countered with the argument that it had no control over how the machines were used and therefore was in no way complicit with the Holocaust.

Foreign Corrupt Practices Act (FCPA)

As the world's businesses become more aligned to international trends and transactions, the temptation to gain an unfair advantage with foreign governments to secure potentially lucrative contracts through bribery, extortion, and other forms of corruption has become more pervasive. In response to this type of monopolistic – and often criminal – form of business dealing, the referred to as the "anti-bribery" statute – which is designed to prohibit any U.S. or foreign United

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[32] "100 best companies 2005." *Working Mother Media, Inc.* <http://www.workingwoman.com/top10.html>. *Retrieved* June 6, 2006.

[33] "100 best companies 2005." *Working Mother Media, Inc.* <http://www.workingwoman.com/top10.html>. *Retrieved* June 6, 2006.

[34] Associated Press, May 14, 2010. *The Republic*. Columbus, Indiana.

[35] Black, Edwin (2001). *IBM and the Holocaust: The Strategic Alliance between Nazi Germany and America's Most Powerful Corporation.* Washington, DC: Dialog Press. In 2003, the *American Society of Journalists and Authors* bestowed its Best Non-Fiction Book of the Year award to this work.

[34] *The Foreign Corrupt Practices Act of 1977*, 15 U.S.C. §§ 78dd-1, et seq.

States Congress enacted the Foreign Corrupt Practices Act (FCPA)[36] – more commonly corporation that has a class of securities registered or that is required to file reports pursuant to the provisions of the Securities and Exchange Act of 1934 from giving anything of value to a foreign official or to a foreign political candidate or party to gain an unfair business advantage against its competitors.

The dilemma facing the ever-expanding multinational corporation is the lack of absolute control over foreign subsidiaries and others who serve as potential agents for the company. While a company is generally not legally responsible for the criminal acts of its agents and employees (unless it knowingly authorizes or participates in such behavior), the FCPA does contain an accounting provision whereby the details of each foreign transaction must be reported to the Securities and Exchange Commission (SEC). In this manner, the parent can be held liable for its failure to ensure the accuracy of a subsidiary's books and records even if it has no knowledge or reason to know of the false information provided within.[37] The provisions of this Act are enforced by both the SEC and the U.S. Department of Justice (DOJ).

On May 21, 1997, both the New York Times and the Wall Street Journal reported that an Argentinean federal judge had indicted 10 people on charges of bribery in connection with a contract entered into between an Argentinean subsidiary of IBM and Banco de la Nación – Argentina's state-owned bank. IBM Argentina and its former President, Ricardo Martirano, were accused of paying an estimated $37 million in bribes to secure an agreement to computerize Banco de la Nación's 525 branches. In July of 1997, an Argentinean court of appeals overturned the bribery charges but left the lesser charge of fraud standing. IBM-NY-USA immediately fired its Argentinean subsidiary executives in response to this scandal.[38]

This case came directly under the purview of the FCPA and was investigated by both the U.S. SEC and the DOJ. In 2000, IBM agreed with the SEC to pay a civil penalty of $300,000 and to accept entry of an administrative "cease and desist" order arising out of alleged bribes while the DOJ ended its own investigation.[39]

Another FCPA incident occurred in South Korea in 2003, the facts of which were very similar to the Argentinean Banco de la Nación controversy. In both cases, local prosecutors in the IBM subsidiary's host country charged the subsidiary with paying bribes to government officials or employees of state-owned companies to secure a state procurement contract. After local investigations commenced, IBM fired its subsidiary executives. U.S. charges were never formally initiated. The primary difference between the two cases was the size of the purported bribes: in Argentina, the transfer would have yielded approximately $250 million in new contracts, whereas in South Korea, IBM's subsidiary reportedly netted under $50 million in new contracts for about $300,000 in alleged bribes.[40]

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[37] 15 U.S.C. §§ 78dd-1.

[38] Gamble, William (September 22, 1997). The IBM Argentina Case - Comments on the Foreign Corrupt Practices Act. *Emerging Market Strategies*. <http://www.emergingmarketstrategies.com/articles/29-the-ibm-argentina-case--comments-on-the-foreign-corrupt-practices-act.htmll>. *Last visited* March 10, 2011.

[39] *Securities and Exchange Commission v. International Business Machines Corp.*, 1:00CV030400 (D.D.C. Dec. 21, 2000); *In the Matter of International Business Machines Corp.*, Administrative Proceeding File No. 3-13097, Rel. No. 34-43761, Dec. 21, 2000.

[40] Smith, Richard (January 8, 2004). Oops, I(BM) Did it Again. <http://www.fool.com/investing/general/2004/01/08/oops-ibm-did-it-again.aspX>, *Retrieved* January 5, 2011.

In an attempt to avoid the appearance of impropriety, IBM has voluntarily curtailed its involvement in foreign-based projects bidding. Additionally, it has prepared a *Code of Conduct* which is incorporated in each of its contracts and expressly references the FCPA. The truncated language of the Code reads as follows:

IBM's Code of Conduct

This Code of Conduct (Code) applies to all your activities in your IBM business relationship with us. By establishing this Code and making it part of your relationship with IBM, we are acknowledging your critical role in defining and protecting our most valuable collective asset - the trust that our clients, investors, colleagues and communities place in IBM and our business associates.

Our industry and the markets we serve continue to undergo significant changes. As a whole, these changes make the ways in which we do business more complex and constantly present new regulatory, ethical and legal issues. You must observe the highest ethical principles in all your activities in your IBM business relationship, and avoid engaging in any activity that involves even the appearance of impropriety.

This Code defines the minimum standards of business conduct and business practices with which IBM expects you to comply in regards to your IBM business relationship. If local laws and regulations are more permissive than this Code you are expected to comply with the Code. If local laws and regulations are more restrictive, you must always comply with those legal requirements.

Financial Integrity and Accounting

Accurate and reliable financial and business records are of critical importance. You should not engage in any actions that could result in conveying false or inaccurate financial information to IBM or our clients. You must ensure that all submissions you make to IBM, for example, orders, sales reporting, special bid requests, rebates, reimbursement requests, are complete and accurate.

No Wrongful Payments

At all times you are required to comply with all applicable US and local anti-bribery laws, such as the United States Foreign Corrupt Practices Act and similar local laws.[Emphasis added]. You must not, directly or indirectly, make or offer bribes, kickbacks, or other payments of money or anything of value to anyone, including officials, employees, or representatives of any government, company, or public or international organization, or to any other third party, for the purpose of wrongfully obtaining or retaining business related in any way to IBM Products or Services. This includes giving money or anything of value to any third party; where there is reason to believe it will be passed on to anyone involved in the business decision process for the purpose of influencing the decision. When dealing with others, including other IBM business associates, you must exercise reasonable due diligence to ensure that you are aware of any potential warning signals that may indicate potential issues.[41]

IBM and the Future: Building a Smarter Planet

IBM was made some bold moves throughout the world, demonstrating a new, innovative type of leadership. It has specifically launched a panoply of new programs, of which only several will be highlighted. These examples include:

Smarter Planet (CityOne IBM)

This particular program addresses the aging infrastructure, inefficient banking, water quality, transportation, communication, and crime control concerns which exist primarily in cities (in

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[41] *See* <http://www-2000.ibm.com/partnerworld/pwhome.nsf/weblook/pubjoinmemctragreementcode.html>. *Last visited* March 9, 2011.

which over half of the world's population now resides). Data is collected and analyzed to project when and if roads, bridges, and highways are dangerous and in need of immediate attention and repair. Data indicating shifting demographics as well as peak times of commuting, communicating, and monetary and service transactions are gathered, interpreted, and translated into potentially new policies which are designed to better the citizen's quality of life as well as improve customer services. With respect to crime control, IBM has developed the technology to detect gunfire which reports such suspicious criminal activity to the nearest police precinct even before a "911" call can be made.[42]

Smarter Food

In January, 2011, the U.S. Government passed the Food Safety Modernization Act,[43] giving the FDA the mandate to implement a science-based system for producing, processing, transporting, and preparing foods in ways to maximize safety for the consumer. Paul Chang, director of IBM's international "traceability" system, is ready to tackle the challenges posed by the new law.[44] By using its established pharmaceutical tracking program, IBM already possesses the ability to trace food products from farm and factory to food stores. With ever increasing product recalls (152 billion per year) and resulting deaths from tainted products (5,000 per year), IBM, in cooperation with the Food and Drug Administration (FDA), should be able to determine the precise movement and storage of products in the food chain and invoke a recall to minimize outbreaks of food-borne illnesses.[45]

The Act will attempt to establish over the next two years exactly how the tracking is to be accomplished and may likely lead to the promulgation of new FDA requirements which will in essence, require farmers and manufacturers to purchase computer systems to monitor and track shipments, using labels and scanning devices as part of this process.[46]

Smarter Water

It has been said that water is quickly becoming the world's most precious commodity; that instead of living in a petroleum-based world, we are now living in a water-based world. Sources of clean water are indisputably becoming scarcer and more polluted as the world's population continues to escalate at unprecedented, unsustainable levels. One phenomenon which has demonstrated this serious ecological change is Lake Chad in North Africa – once one of the world's largest fresh water lakes. As of the date of this writing, Lake Chad has all but dried up, leaving hundreds of thousands of people without livelihoods derived from fishing and farming and without a reliable source of drinking water.[47]

It is important to note that of the world's global water sources, only 3% is fresh water and 21% of this 3% is found in the Great Lakes of the U.S.[48] This sustained threat to these scant resources which support all life is beginning to attract more publicity and attention and to spur creative

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[42] *See* <http://www.youtube.com/watch?v=Tmf0ugQrDFk&NR=1>, *Retrieved* January 5, 2011.

[43] H.R. 2751, S.510, signed into law by President Obama on January 4, 2011.

[44] *See* <http://www.ibm.com/ibm100/us/en/icons/foodsupply/transform/>. *Retrieved* March 5, 2011.

[45] Layton, Lyndsey (January 24, 2011). *Washington Post.* <http://www.washingtonpost.com/wp-dyn/content/article/2011 /01/ 23/ AR2011012302238.html>, *Retrieved* March 4, 2011.

[46] McQuillen, William (2010). IBM, Oracle May Gain on U.S. Food-Safety Law's Tracking Mandate. *Washington Post*, Dec 28, 2010.

[47] "Lake Chad: Experiences and Lessons Learned in Brief," February 27, 2006. <http://www.worldlakes.org/uploads/06Lake Chad 27February2006.pdf>. Retrieved February 15, 2008.

[48] "Great Lakes-US EPA," June 28, 2006. <http://www.epa.gov/glnpo/basicinfo.html>. *Retrieved* February 19, 2011.

resolve. With respect to national action, some countries are reacting to this crisis more quickly than others. For example, Israel maintains a 75% water recycling program while Los Angeles, California, U.S. only recycles 3% of its water – and this is primarily done to sustain the city's landscaping.[49]

In response to this encroaching worldwide crisis, IBM has undertaken certain progressive steps in furthering sustainable business practices with respect to water conservation and monitoring by partnering with the Beacon Institute for River and Estuaries to provide real-time watershed data from the Hudson River that scientists, educators, and policymakers are able to access for public education and policy development.[50] IBM's monitoring of the Hudson River – often noted as the most instrumented river in the U.S. – is primarily done through solar-powered stations designed to gather and synthesize information regarding climate conditions, water flow rates, and water particle compositions. This data provides the necessary information to alert local communities with respect to toxic particle presence, to show rates of erosion which could possibly alter the course of the water source, and to monitor unusual flow rates which could lead to flooding.[51]

Smarter Transportation

Bus, train, car, plane – the most common forms of transportation on land, air, and sea. With population, urbanization, and globalization increasing at unprecedented rates, there is a need now more than ever to predict consumer demand, enhance the customer experience, optimize current modes of transportation, and create new ways of traveling that are efficient and environmentally-friendly. This is especially important as the number of cities with populations in excess of one million have now topped 476 (up from 83 in 1950) and the current forms of movement are unproductive, inefficient, and ecologically unsustainable. For instance, in 2007 alone, U.S. road congestion wasted 2.8 billion gallons of fuel and 4.2 billion hours of commuting time. IBM has already explored solutions to this waste of resources by examining available alternatives. One such option would be to put more emphasis on rail transport as one ton of rail freight can be moved 423 miles using only one gallon of fuel while a single freight train can replace 280 trucks. The safe, secure, and clean movement of passengers and freight is critical to the uninterrupted provision and delivery of food, education, healthcare, retail, and manufactured goods and services and is one more program of IBM's challenge to build a smarter planet.[52]

Smarter Communications

With increasing interconnectivity between people worldwide, news of local, national, and global crises is communicated within seconds and populations are given the more time to react. However, with respect to the more rural areas of not just the U.S., but of emerging countries and markets, extending and expanding broadband services is what IBM is attempting to accomplish. Broadband over Power Line (BPL) has proven to be a cost-effective solution for providing high-speed Internet access in such underserved and remote areas. BPL technology givers its users

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[49] Wesoff, Eric (December 8, 2009). The Myth of VCs and Water Not Mixing. <http://www.greentechmedia.com>. *Last visited* January 5, 2011. *See also* <http://www.youtube.com/watch?v=vJGq_oSb1A8&NR=1&feature=fvwp>.

[50] "IBM." <http://www-935.ibm.com/services/uk/bcs/pdf/ibm221602greensigmafinal.pdf>, *Retrieved* May 23, 2010.

[51] *See* <http://www.youtube.com/watch?v=y3CZQOtVx6s>, *Last visited* March 9, 2011.

[52] *See* < http://www.ibm.com/smarterplanet/transportation>, *Last visited* March 9, 2011.

access by sending a radio frequency signal over existing power lines, achieving faster uplink speeds than DSL or cable connections. Many utility companies either already offer, or have the potential to offer, the ideal infrastructure to expand Internet services, by providing the wiring that extends to virtually every home and building in these areas.[53]

Smarter Healthcare

In the wake of the enactment of the *Patient Protection and Affordable Care Act* [54] (PPACA) in March of 2010, additional attention was given to the need to reduce medical costs and to increase quality medical service to more patients. IBM is currently consulting with government agencies, healthcare systems, and private healthcare insurance companies to consolidate and digitalize patients' medical records, eliminating the wasted time and financial resources it currently takes to access a patient's records, thereby reducing duplicated procedures, missed diagnoses, and unnecessary treatments. IBM is also working to provide basic medical services and information online, obviating the necessity for the patient to travel to an emergency room or clinic unnecessarily. IBM's revamping of how medical records are stored includes an update of its XIV and DS8000 products which are designed to store petabytes of information and automatically encrypt storage drives.[55]

Smarter Energy Grids

IBM is currently in the process of helping to develop alternate sources of energy, consolidate existing utilities, reduce energy usage, and identify energy obsolescence in an attempt to reduce greenhouse gases, wean communities from foreign oil, and instruct populations on better ways to consume responsibly. IBM's "smart grid" ideas aim to eliminate or reduce the possibilities of black and brown-outs while focusing on the development of new architecture to accommodate integrated and varied sources of clean energy. As the deployment of solar, hydroelectric, and wind technologies are accelerated, IBM is also helping businesses and governments maximize service levels of existing utilities, better manage the security of these systems, and execute network monitoring and management functions — all while meeting regulatory requirements and cost objectives.[56]

Smarter Governments

IBM has been offering its data analyses services from the inception of the company. The U.S. government has used its data analysis services and ever-evolving equipment to gather census data, actually securing one of the largest contracts with the government during the height of the Great Depression. With the passage of the Social Security Act of 1935, and the need to account for employment records of over 26 million people, IBM, represented the only bidder as it alone had the tabulating equipment required to complete this task. Throughout the years, IBM continues to uses its resources for governments at all levels, helping to meet public needs and accommodate increasing populations.[57]

"Watson," Smarter Cities Challenge, and the World Community Grid

[53] *See* <http://www-935.ibm.com/services/us/index.wss/summary/gn/a1031760>, *Last visited* March 9, 2011.
[54] Pub.L. 111-148, 124 Stat. 119 (2010).
[55] Greenberg, Andy (2009). IBM's "Smart" Moves. *Forbes.com*, February 9, 2009.
[56] *See* <http://www.ibm.com/ grid/>, *Last visited* March 9, 2011.
[57] *See* <http://www-05.ibm.com/uk/ibm/history/interactive/ibm_history_2.pdf>, *Last visited* March 14, 2011.

By now, most readers have been introduced to "Watson," IBM's computer challenger on *Jeopardy*. Programmed with myriad algorithms, this computer's "knowledge" potential was demonstrated in its recent victories over two of the best former *Jeopardy* contestants. Through the use of *Watson*, IBM is helping to generate revenue for charitable and worldwide research causes. It has also engaged in a relatively new program entitled "Cities Challenge," whereby "cities ask us to help them solve knotty issues by bringing in half a dozen high level IBM consultants who spend three weeks in the city, learn about the issues and make recommendations."[58]

As this year represents IBM's centennial, the company is encouraging every member of its workforce to donate a minimum of eight hours' community service time. In addition to its commitment to volunteerism, IBM has also created the "world community grid" which "brings people together from across the globe to create the largest non-profit computing grid benefiting humanity. It does this by pooling surplus computer processing power. We believe that innovation combined with visionary scientific research and large-scale volunteerism can help make the planet smarter."[59]

Conclusion

As there is no "perfect person" in our global village, there are certainly no perfect businesses either. Companies are simply an amalgamation of people furthering certain preordained business objectives. People falter. Businesses commit violations. But what is important to note is that those people and those companies who fail to ascribe to an ethical code of conduct or are averse to learning from past mistakes and poor decision-making habits are usually predisposed to repeating such ill-advised and often disastrous behaviors and actions.

IBM certainly has had its share of setbacks and questionable practices. But unlike many companies its size, it aims to venture into markets to aid the planet and to better peoples' lives. Responsible innovation and creativity are the keys to this type of success as long as such activities are closely evaluated and monitored — and modified, if so warranted.

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[58] Email communiqué with Sandy Dochen, IBM, March 15, 2010.

[59] *See* <http://www.worldcommunitygrid.org/>, *Retrieved* March 15, 2011.