Incorporating Triple Bottom Line Strategies into Corporations

Bill C. Lin

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Rochester Institute of Technology

Master's Thesis

INCORPORATING TRIPLE BOTTOM LINE STRATEGIES INTO CORPORATIONS

By Bill C. Lin

February 2007

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Bill Lin
Abstract

In this new era of globalization, the competition among multi-national corporations in various industries is tighter than ever. Due to this intense struggle for corporations to grow their bottom line, the corporations have recognized that a new approach to business is necessary. Corporations have realized that they can no longer just think about their economical profitability to survive in this environment, but they also have to be good stewards to the people they employ and be conscious of the impact the corporation’s daily operations have on the environment. Because of this new found recognition, corporations have started using phrases such as being sustainable, being responsible and being good corporation citizens, in their corporation reporting and publications.

The work of this thesis, will analyze the sustainability/responsibility/citizenship report and websites of five-U.S. multi-national corporations in various industries. This research will look at what sustainability/responsibility/citizenship activities corporations are claiming to be doing and verify the validity of those activities from additional independent sources. Furthermore, this thesis will look at whether or not these activities meet the definition of what the corporations are claiming to be sustainable/responsible/citizenship.

After performing the research, this thesis has concluded that the activities that each of the companies is claiming to be implementing are indeed being implemented and that these activities do help the individual corporation to achieve its own definition of what is sustainable/responsible/citizenship.
Dedication/Acknowledgement

I want to take the time and thank everybody that has helped me through this process. I especially want to take the time to thank my family and friends who have tirelessly listened during many of late nights pounding on the keyboard and also those of you who have helped me edit and re-edit all my works throughout my academic career. Also, I want to thank the faculty of Rochester Institute of Technology especially my advisor Dr. Morelli who has opened up my eyes and mind on the issue of sustainability, Joe Rosenbeck and Dr. Schneider who have definitely challenged me and worked with me in the numerous of classes which I have taken with them. With that said, it is definitely a bittersweet moment for me personally putting the final touches on one of my last academic papers. I can honestly say, I have definitely grown up and learned about the world around me and the school of RIT and its faculties have definitely played a major role in making me a better person.
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The terms “sustainability” and “sustainable development” are often used to represent something that they are not and the use of the terms “sustainability” and “sustainable development” in this work reflect definitions given by a variety of sources. This research is using these terms because it is convenient to do so, but is not endorsing them as true sustainability or sustainable strategies. Often, what businesses call sustainable development strategies are actually more Triple Bottom Line or Green Business strategies. These are often the first steps for corporations to pursue true sustainable development strategies. In order to determine the validity and the true sustainable nature of these activities, much more information is needed and is beyond the scope of this research. For the purposes of this thesis, the term “Triple Bottom Line Strategies” will be used to encompass all of the various definitions.
1.0 Introduction

1.1 Topic

Since the dawn of the Industrial Revolution, industries have played a significant role in generating the technological advancements to make life’s daily grind almost effortless. The emergence of product development in industry has provided the world with the technical expertise to build cars, erect skyscrapers, and construct factories. As these technologies were developed, improved, and produced, the processes that created these goods not only polluted our environment, but also consumed the world’s natural resources. To limit the environmental impact caused by industries, it is imperative that we introduce the concept of sustainable development (SD) into everyday engineering applications and business strategies. Sustainable Development is an evolving concept that can help us to shape our future and that of the world’s resources.

The most widely accepted definition of sustainable development is development that meets the demands of the present generation without compromising the well being of future generations (Duraiappah, 2003). With the world’s population expected to top nine billion around 2050, the notion of “business as usual” would surely be disastrous (World Wide Web, http://www.wbcsd.org/web/publications/Basic-Facts-Trends-2050.pdf, “Basic Facts and Trends 2050”). With this explosive growth of human population comes the price of consumption of already limited natural resources such as land, water, and fuel. These resources would be used to accommodate the increase in demand for consumer products and services such as cars for transportation and the burning of fossil fuel for power. Unless sustainability concepts such as recycling, new eco-efficient processes, and non-hazardous materials are implemented and developed, the quality of the global environment will worsen, increasing the strain on the natural environment including landfills, which would most likely be required to accommodate the expected surge in waste. This in turn will decrease the land and resources available for use by future generations. This vicious cycle will eventually consume and overwhelm our way of life.

This topic was analyzed for several reasons. For example, by investigating how corporations integrate their definition of sustainable development into their operations and strategies, engineers, scientists, and corporations will be provided with an understanding of the application of sustainability. Applications can then be developed that will reduce or eliminate
waste, recycle used parts, and save natural resources. This, then, may provide the corporation with monetary savings and may enhance its corporate image as an innovative leader in green development and in being viewed as a good steward of the environment. Being a good steward of the environment can be cost effective, but it can also result in good public image/relations, which could improve stakeholder loyalty and provide a social license for the corporation to operate. Also, it can lead to increased revenue as more and more consumers are purchasing goods and services from green corporations (Rosenbeck, Topic 9).

In this thesis, the area of sustainable development was evaluated by analyzing the following research focus.

1.2 Research Focus:

1.2.1 Primary Research Questions

How have some leading U.S. multinational corporations integrated sustainable development-like activities into their daily operations?

This research has accomplished its objectives by doing corporate case analyses of five large U.S. companies on the Dow Jones Sustainability Index. The companies listed in Table 1 were analyzed during this work.

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\textbf{NOTE:} Because this website is protected, a login name and password are required. For the sake of this paper, the following must be given to access this information above: email address—\texttt{billlin77@yahoo.com}, password—pdM2ABSRYBEX.
These companies were chosen for the corporate case studies because they are large U.S. international conglomerates that have successfully taken the step of integrating sustainable development elements into the design of their operations. Also, they are members of the Dow Jones Sustainability Index, a recognized social measure. This research first defines what sustainable development is for these different companies and then delves into what activities these companies are undertaking in order to achieve their sustainable development goals. This investigation focuses on items resulting in savings, resource consumption, energy consumption, waste emission, and corporate charitable contributions to communities. It also includes literature reviews of some of the most widely used concepts and tools in implementing the element of sustainable development into corporations.

The audience for this work is engineers, researchers, developmental scientists, business managers, and environmental health and safety (EHS) professionals. It is intended to show the benefit of integrating sustainable development into everyday corporate operations. By raising awareness of sustainable development, it is possible to raise the awareness of business managers, engineers and scientists to the impact of their products and actions.

1.3 Definitions

For the purpose of this thesis, the general definitions of Sustainable Development, Sustainability, Triple Bottom Line, Triple Bottom Line Accounting, Corporate Sustainability, and Dow Jones Sustainability Index North America are presented as follows:

1.3.1 Sustainable Development — meeting the demands of the present generation without compromising the well-being of future generations. (Duraiappah, 2003)

1.3.2 Sustainability — balancing a growing economy, protection for the environment, and social responsibility in such a way that they together lead to an improved quality of life for ourselves and future generations. (World Wide Web, www.epa.gov/sustainability/basicinfo.htm#what, “Sustainability”)

1.3.3 Triple Bottom Line — the spectrum of economic, environmental, and social value that an organization must embrace. (World Wide Web, wwwbsdglobal.com/tools/principles_triple.asp, “Triple Bottom Line”)
1.3.4 **Triple Bottom Line Accounting** — an expanding from the traditional company reporting framework to take into account not just financial outcomes but also environmental and social performance of the company.


1.3.5 **Corporate Sustainability** — a business approach that creates long-term shareholder value by embracing opportunities and managing risks deriving from economic, environmental and social developments.

(World Wide Web, [www.sustainability-index.com](http://www.sustainability-index.com) “Corporate Sustainability”)

1.3.6 **Dow Jones Sustainability Index North America** — The Dow Jones Sustainability North America Index (DJSI North America) cover the leading 20% in terms of sustainability of the 600 biggest North American companies in the Dow Jones World Index. (World Wide Web, [www.sustainability-index.com](http://www.sustainability-index.com), “Index Overview”)

**NOTE:** For this thesis, the definitions presented in 1.3.1 - 1.3.5 are general definitions. The respective definitions of Sustainable Development, Sustainability, Triple Bottom Line, Corporate Citizenship, and Corporate Sustainability will be presented individually in each of the corporate case studies when applicable, and the validity of their respective definition will also be assessed.

2.0 **Background**

2.1 **Brief History of Sustainable Development**

In the course of the past 35 years, the world has, at long last, begun to understand some of the impacts its daily activities have on the environment. Air pollutants from energy production for our daily activities, emissions from cars during our daily commute, the consumption of natural resources, and production of waste are reducing air quality in many areas worldwide, as well as causing acid rain, global warming, and ozone depletion. In 1987, the report *Our Common Future* (also know as the Brundtland Report) recognized that, at the current pace, economic and technological developments that are taking place in the world could compromise the development needs of future generations.
It was because of the Brundtland Report that the idea of sustainable development became popular. The first major manifestation of this popularity occurred at the United Nations Conference for Environment and Development in 1992. At this conference, the United Nations adopted five agreements, including their blueprint for sustainable development, Agenda 21.

Agenda 21 was the first comprehensive plan of action to be taken globally, nationally, and locally by organizations of the United Nations System, governments, and major groups. This agenda addressed the development of societies and economies by focusing on how to preserve the environment and natural resources. (World Wide Web, www.ace.mmu.ac.uk/iae/english.html, “Adoption of sustainable development”)

2.2 United Nations Commission on Sustainable Development

After the conference for Environment and Development, the United Nations General Assembly established the United Nations Commission on Sustainable Development. The commission is comprised of 53 member states whose purpose was to follow the progress made during the Earth Summit and ensure an effective implementation of Agenda 21 and the Rio Declaration on Environment and Development, to provide policies guidance for the Johannesburg Plan of implementation, and to provide a forum for dialogue and partnership for sustainable development with governments, NGOs and the international communities. (World Wide Web, www.un.org/esa/sustdev/csd/csd_mandate.htm, “UN Commission”)

As the result of this open forum for partnerships, the Commission on Sustainable Development supports a number of innovative activities, the most notable of which is the Partnership Fair. The goal of the Partnership Fair is to provide a venue for various groups and communities to develop partnerships for sustainable development, to learn from each other and to help develop synergies among the partners. The Partnership Fair is an official program of the Commission on Sustainable Development. (World Wide Web, www.un.org/esa/sustdev/partnerships/partnerships_fair.htm, “Partnership Fair”)
2.3 Sustainability in America

After the U.N. conference, the term “sustainable development” started to resonate in American government. In June of 1993, President Clinton formed a groundbreaking partnership between industrial leaders, government, and non-profit organizations to recommend a national action strategy for a Sustainable America. By early 1996, the committee had agreed on a set of tenets that it believed would result in reaching its goal of a Sustainable America.

- **GOAL 1: HEALTH AND THE ENVIRONMENT**
  Ensure that every person enjoys the benefits of clean air, clean water, and a healthy environment at home, at work, and at play.

- **GOAL 2: ECONOMIC PROSPERITY**
  Sustain a healthy U.S. economy that grows sufficiently to create meaningful jobs, reduce poverty, and provide the opportunity for a high quality of life for all in an increasingly competitive world.

- **GOAL 3: EQUITY**
  Ensure that all Americans are afforded justice and have the opportunity to achieve economic, environmental, and social well-being.

- **GOAL 4: CONSERVATION OF NATURE**
  Use, conserve, protect, and restore natural resources on land, air, water, and maintain biodiversity in ways that help ensure long-term social, economic, and environmental benefits for ourselves and future generations.

- **GOAL 5: STEWARDSHIP**
  Create a widely held ethic of stewardship that strongly encourages individuals, institutions, and corporations to take full responsibility for the economic, environmental, and social consequences of their actions.

- **GOAL 6: SUSTAINABLE COMMUNITIES**
  Encourage people to work together to create healthy communities where natural and historic resources are preserved, jobs are available, sprawl is contained, neighborhoods are secure, education is lifelong, transportation and health care are accessible, and all citizens have opportunities to improve the quality of their lives.
• **GOAL 7: CIVIC ENGAGEMENT**
  Create full opportunity for citizens, businesses, and communities to participate in and influence the natural resource, environmental, and economic decisions that affect them.

• **GOAL 8: POPULATION**
  Move toward stabilization of U.S. population.

• **GOAL 9: INTERNATIONAL RESPONSIBILITY**
  Take a leadership role in the development and implementation of global sustainable development policies, standards of conduct, and trade and foreign policies that further the achievement of sustainability.

• **GOAL 10: EDUCATION**
  Ensure that all Americans have equal access to education and life-long learning opportunities that will prepare them for meaningful work, a high quality of life, and an understanding of the concepts involved in sustainable development.

(The President's Council on Sustainable America 9)

2.3.1 Actions to Integrate Sustainability in America

With these agreed upon goals, the council's next step was to discover what barriers currently exist in the U.S. to prevent a wider acceptance of sustainable development and what actions must be taken in order to integrate SD into mainstream America. Based on their findings, the council recommended the following:

- Linking environmental, economic and social information
- Creating common metrics for environmental performance
- Involving individuals and communities in improving environmental performance

The President's Council concluded that, as America moves into the 21st century, a broader understanding of the nature, source, and the linkage of environmental, economic and social information is required. The system had (1) to be goal, performance, and information-driven, (2) to be attuned to natural ecological cycles, (3) to incorporate the values of community and place and (4) to be sensitive to the variations in the business sectors and changes in the
economy. Moreover, it had to continue to refine traditional tools of environmental management while encouraging the development of new tools and collaborative strategies. The council believed that, if America took these steps, it could achieve its vision of a Sustainable America.

(The President’s Council on Sustainable America 17)

2.3.2 Vision Statement of the President’s Council on Sustainable America

“Our Vision is of life-sustaining earth. We are committed to the achievement of a dignified, peaceful, equitable existence. A Sustainable United States will have a growing economy that provides equitable opportunities for satisfying livelihood and a safe, healthy quality of life for current and future generations. Our nation will protect its environment, its natural resource base, and the function and viability of natural systems on which all life depends.”

2.4 Sustainability in Europe

2.5 European Sustainable Development Strategies

Along with incorporating SD into specific government charters, the European Commission also formed the European Sustainable Development Strategies in 2001. This commission was to develop key objectivities and guiding principles of sustainable development for European countries to implement. The following are the 2001 key objectives and guiding principles that the commission had developed:

- **ENVIRONMENTAL PROTECTION**

  Safeguard the earth’s capacity to support life in all its diversity, respect the limits of the planet’s natural resources and ensure a high level of protection and improvement of the quality of the environment. Prevent and reduce environmental pollution and promote sustainable production and consumption to break the link between economic growth and environmental degradation.
• **SOCIAL EQUITY AND COHESION**
  Promote a democratic, socially inclusive, cohesive, healthy, safe and just society with respect for fundamental rights and cultural diversity that creates equal opportunities and combats discrimination in all its forms.

• **ECONOMIC PROSPERITY**
  Promote a prosperous, innovative, knowledge-rich, competitive and eco-efficient economy which provides high living standards and full and high-quality employment throughout the European Union.

• **MEETING OUR INTERNATIONAL RESPONSIBILITIES**
  Encourage the establishment and defend the stability of democratic institutions across the world, based on peace, security and freedom. Actively promote sustainable development worldwide and ensure that the European Union’s internal and external policies are consistent with global sustainable development and its international commitments.

In order to meet these key objectivities, the following Guiding Principles were formed:

• **PROMOTION AND PROTECTION OF FUNDAMENTAL RIGHTS**
  Place human beings at the centre of the European Union’s policies, by promoting fundamental rights, by combating all forms of discrimination and contributing to the reduction of poverty worldwide.

• **INTRA- AND INTERGENERATIONAL EQUITY**
  Address the needs of current generations without compromising the ability of future generations to meet their needs in the EU and elsewhere.

• **OPEN AND DEMOCRATIC SOCIETY**
  Guarantee citizens’ rights of access to information and ensure access to justice. Develop adequate consultation and participatory channels for all interested parties and associations.

• **INVOLVEMENT OF CITIZENS**
  Enhance the participation of citizens in decision-making. Promote education and public awareness of sustainable development. Inform citizens about their impact on the environment and their options for making more sustainable choices.
• **IN Volvement of Businesses and Social Partners**
  Enhance the social dialogue, corporate social responsibility and private-public partnerships to foster cooperation and common responsibilities to achieve sustainable production and consumption.

• **Policy Coherence and Governance**
  Promote coherence between all European Union policies and coherence between local, Regional, national and global actions in order to increase their contribution to sustainable development.

• **Policy Integration**
  Promote integration of economic, social and environmental considerations so that they are coherent and mutually reinforce each other by making full use of instruments for better regulation, such as balanced impact assessment and stakeholder consultations.


  From these objectives and principles, the European Commission had made some important progress in encompassing more sustainable development elements into how each of the participating members operates. For example, the EU has developed a CO₂ emission trading system aiming to encourage industrial plants to reduce their emission. Also, the EU has instituted an Impact Assessment for all major policy proposal on their contribution to sustainability.


3.0 Literature Review

3.1 Sustainable Development and Corporate Social Responsibility

  For the purpose of this research, this thesis used the World Business Council on Sustainable Development premise that asserts that Corporate Social Responsibility (CSR) policies are an integral part in the approach to implement sustainable development strategies
Although the exact fit of CSR policies in terms of sustainable development can be vigorously debated, the WBCSD believes that a Corporate Social Responsibilities policy is the human factor of doing business and therefore a part of the three fundamental and inseparable pillars of sustainable development. These pillars of sustainable development, as defined by the World Business Council on Sustainable Development, are (1) creating economic wealth, (2) environmental improvement, and (3) social responsibilities. Corporations are reporting the result of their CSR policies through sustainability reports or The Triple Bottom Line of corporate reporting. (World Wide Web, www.wbcsd.org/DocRoot/IunSPdIKvmYH5HibN4XC/csr2000.pdf, “CSR Report 2”)

The Triple Bottom Line of corporate reporting breaks away from the traditional business accounting methods. In its broadest sense, the triple bottom line reporting captures the spectrum of values that organizations must embrace -- the economic, environmental and social. In practical terms, triple bottom line accounting means expanding the traditional company-reporting framework to take into account not just financial outcomes but also environmental and social performance. (World Wide Web, wwwbsdglobal.com, “Triple Bottom Line Corporate Reporting”)

3.1.1 Corporate Roles in Social Responsibility

“A good company delivers excellent products and services, and a great company does all that and strives to make the world a better place.”

This line, uttered by Bill Ford, CEO of Ford Corporation, aims at the heart of an age-old debate concerning why companies should integrate Corporate Social Responsibility (CSR) into their business model (Pearce II and Doh 30). Corporations have often expressed concern that business will be persuaded to take on social responsibilities that should be handled by governments or individuals. They are afraid that taking on social projects might divert precious resources away from its core commercial activities. The issue is not whether companies will engage in socially responsible activities, but how they should do so. The central challenge for a corporation is how best to achieve the maximum social benefit from a limited amount of resources available for social projects (Pearce II and Doh 31).
Taking a proactive approach in developing a good CSR model into their business model will help align the corporation’s social values, which in turn could reduce costs to the corporation (by eliminating liabilities) and lead to the identification of new commercial opportunities through which the business can grow. (World Wide Web, www.wbcsd.org/DocRoot/RGK80O49q8ErwmWXIwtF/CSRmeeting.pdf “Corporate Social Responsibility”)

3.1.2 Roles of Business in Society and Corporate Decision-Making

In today’s harsh, competitive, global business environment, a corporation must be adaptable to the changing cultural views and opinions of society. A corporation’s role in society has changed dramatically in the recent years. In the past, society trusted that a corporation would “do the right thing” or did not believe it was an issue of corporate responsibility, but recent corporate misdeeds and accidents have ruined society’s trust in the corporate world (Rosenbeck, Topic 12).

A new U.S. Chamber of Commerce report sheds light on the current expectations for business in the U.S. This report reveals that, for today's businesses, the question is no longer whether corporate citizenship should be a priority, but, rather, how they should approach it in the context of their business and the scope of their commitment. The results are highly informative:

- 98% believe that corporate citizenship needs to be a priority for companies
- 91% believe the public has a right to expect good corporate citizenship
- 84% believe the corporate citizenship makes a tangible contribution to the bottom line


These results elucidated by the U.S. Chamber of Commerce support a previous Weber Shandwick survey. There, some 8,000 consumers around the U.S. and Europe were questioned, and approximately 80% of those responding indicated that they have considered switching brands when a company was negatively portrayed in the media with respect to social responsibility issues. (World Wide Web, www.wbcsd.org, “Driving Success: Marketing and Sustainable Development”)

Today, corporate decisions are made under a variety of circumstances, objectives, and multiple stakeholders’ interests. Decision-makers must be able to transform their decision-making process from an exclusively financial view to one of an integrated view of social,

3.1.3 Identification of New Business Driver

From the current market trends and results of recent studies, this thesis is implying that sustainable development will become an important business driver in the global market. The emergence of sustainable development as the new framework for companies to address their environmental management and business needs was evident in a recent survey of European and North American companies in different sectors as performed by the consulting firm of Arthur D. Little, Inc. The result of the survey shows that 8 in 10 companies interviewed agree that they could derive “real business value” by implementing “A sustainable development approach to strategy and operations across its organization” (The Green Business Letter). Implementing sustainable development strategies allows a corporation to gain a better understanding of the issues and trends that face its daily operations by enabling it to track its progress against set targets, thereby allowing a corporation to understand and focus on its operation gaps and deficiencies so corrective actions can be initiated (Rosenbeck, Topic 12). In addition, it allows the corporations that practice sustainable development to have a better marketing and development positioning for a world of increasing constraints and regulations (Day 5).

By positioning themselves for future constraints, these corporations have the advantage of making the transition at their own pace, acting upon their new strategic focus when it is financially viable. Their competitors who wait until the new constraints are in effect before reacting must act under compliance deadlines, which could raise the cost of the transition to meet these new regulations and constraints. Also, by being on the forefront of sustainable development, these proactive companies are able to explore a variety of technologies, management systems, and processes before settling on a formula that hopefully would provide them with the maximum benefit for their investments (Day 5). Reactive companies, in contrast, must select a new system without the benefit of prior experimentation and testing. Thirdly, by being proactive and taking a leadership position, companies will be afforded some influence over the form of future constraints. A great example of the benefit of taking the leadership position was BMW, which took a visible leadership position on the issue of product take back in Germany. BMW anticipated, and even promoted, new regulatory take-back requirements,
which, because it held a strong market position in automobile disassembly, not only helped reduce waste but also provided it with a market advantage. (Day 5)

Beyond positioning within current markets, firms that pursue sustainable development may find business opportunity in the development of new markets. These firms create visions of a sustainable future, anticipate future or latent consumer demands, and address them today. Often this may mean pursuing entirely new technologies to serve basic needs. It can also mean strengthening the capacity of markets that are currently weak so that they can be the strong, loyal customers of tomorrow (Day 5).

Perhaps the emergence of sustainability as the new paradigm for business in the 21st century can be summed up best by Professor S.L Hart of the University of North Carolina at Chapel Hill: “The challenge of global sustainability could be the biggest commercial opportunity in recent history. The levels of innovation and economic growth required will create huge opportunities for those entrepreneurs who can envision it.”

(Arnst, Reed, McWilliams, and Weimer 2)

3.1.4 Interpretation of Sustainable Concept

Even though the term “sustainable development” derived its most widely accepted definition of “meeting the need of the present without compromising the ability of future generations” from the Brundtland Report, it is evident that corporations have interpreted sustainable development in different ways. In 1991, Proctor and Gamble came up with a simpler definition of sustainable development: “Sustainable development is about a better quality of life for everyone, now and for future generations to come” (Klimley 3). With regard to the Bottom-Line Philosophy approach of sustainable development, P&G concluded that “[w]eighing the current economic benefits of activities against the effect of those activities on future generations” (Clikeman 2).

Regardless of how corporations define SD, it is beginning to integrate and ingrain itself into the corporate environment. Companies that tout sustainable development not only integrated the concept into their policies, but also are increasingly advertising their sustainable development activities to stakeholders. This task is accomplished by not only reporting the financial result of the corporation but by coupling that report with the social and environmental
performance reports as well. Companies practicing sustainable development believe it is in their own best long-term interests to conduct business in an environmentally and socially responsible way. These companies believe that sustainable development strategies are in the best interest of their company because the management of these corporations views this approach of doing business as an important risk management method to helping them avoid environmental and social disasters. After all, the costs of responsible environmental and safety programs are inconsequential compared to the enormous economic losses that might result from environmental mishaps or employee injuries. As Clikeman notes, “When you make your business grow sustainably, your triple bottom line can be measured by environmental, social, and economic performance” (2).

3.1.5 Sustainable Reporting

With the increasing need to report their activities, corporations are looking for standards and guidelines to report their results. One of the most widely accepted standards commonly used are the Global Reporting Initiatives (GRI) guidelines. The goals of GRI reporting are to make Sustainable Reporting as routine as financial reporting, standardize metrics and format for Sustainability Reporting, and to ensure that Sustainable Reports are auditable (Rosenbeck, Topic 12).

A corporation that follows the GRI Guidelines will have six main parts in its report:

(1) CEO statement that describes key elements of the report

(2) Profile of the reporting organization, providing a context for understanding and evaluating information in subsequent sections.

(3) Executive summary and key indicators, which are designed to help stakeholders assess the performance of an organization over time and in comparison with other organization.

(4) Vision and strategy, including discussion of how the organization’s vision integrates economic, social and environmental performance.
(5) Policies, organization, and management systems, including a discussion of stakeholder engagement.

(6) Performance information covering economic, environmental, and social performance through quantitative and qualitative indicators (Andrews 7).

Table 2 below shows the main categories of indicators that follow the GRI reporting guidelines:

Table 2 — GRI Indicators

<table>
<thead>
<tr>
<th>Environmental Performance</th>
<th>Economic Performance</th>
<th>Social Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy</td>
<td>Profit</td>
<td>Workplace</td>
</tr>
<tr>
<td>Materials</td>
<td>Intangible Assets</td>
<td>Human Rights</td>
</tr>
<tr>
<td>Water</td>
<td>Investments</td>
<td>Suppliers</td>
</tr>
<tr>
<td>Emissions, Effluents, and Waste</td>
<td>Wages and Benefits</td>
<td>Product and Services</td>
</tr>
<tr>
<td>Transport</td>
<td>Labor Productivity</td>
<td></td>
</tr>
<tr>
<td>Suppliers</td>
<td>Taxes</td>
<td></td>
</tr>
<tr>
<td>Products and Services</td>
<td>Community Development</td>
<td></td>
</tr>
<tr>
<td>Land Use/Biodiversity</td>
<td>Suppliers</td>
<td></td>
</tr>
<tr>
<td>Compliance</td>
<td>Product and Services</td>
<td></td>
</tr>
</tbody>
</table>

(Andrews 8)

**NOTE:** For this research, the above GRI indicators will be used to analyze the chosen corporation’s sustainable development strategies where applicable.

3.1.6 Value of Integration of Sustainable Development

In this aggressive and competitive world of global market, one might ask how the integration of a vague concept like sustainable development translates into real commerce. A recent Business for Social Responsibility Fund (BSR) study showed that a corporate SD strategy could yield many true business benefits. Not only are there real savings from cost avoidance,
pollution prevention, energy efficiency, and waste reduction efforts, sustainable development strategy can also yield other less tangible, but just as valuable, benefits for businesses (The Green Business Letter). The table below is a representation of the results from the BSR survey and also some less tangible, but just as valuable, benefits of sustainable development for businesses.

Table 3 — Value of Sustainable Development

<table>
<thead>
<tr>
<th>Type of Values</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access to Capital</td>
<td>Swiss Bank purchased several million shares of stock in Bristol-Myers Squibb as part of its efforts to invest in companies with strong environmental and financial performance.</td>
</tr>
<tr>
<td>Asset Retention</td>
<td>Companies such as Dell Computer, Interface Flooring, and Volkswagen have or are developing products that are leased rather than sold to customers, enabling the companies to retain much of the product value.</td>
</tr>
<tr>
<td>Brand Image</td>
<td>McDonald’s has enhanced its brand image by buying $2 billion worth of recycled products since 1990 without paying a price premium or otherwise increasing costs.</td>
</tr>
<tr>
<td>Competitive Advantage</td>
<td>Quad/Graphics Inc., a printing company, asked state regulators in West Virginia to establish a very high performance standard for air emissions that Quad/Graphics could meet but its competitors could not.</td>
</tr>
<tr>
<td>Employee Relations</td>
<td>Gap. Inc. believes that its employees like to work in a place where they can express their own values. As a result, it has found that its environmental initiatives have helped attract and retain talented and committed employees.</td>
</tr>
<tr>
<td>Innovations</td>
<td>DuPont, Herman Miller, and Patagonia are among those that have spurred innovation inside their own companies and prompted their</td>
</tr>
</tbody>
</table>


suppliers to do the same by applying environmental principles to design and production of products.

Collins & Aikman Floor Coverings has experienced increased demand after offering a closed-loop recycled carpet product that meets or exceeds performance criteria of its virgin products at no additional costs.

Boeing is among several companies that have documented significant increases in productivity, ranging from 1% to 15% from use of “green building” design elements.

Electrolux reported that its most environmentally sound product lines accounted for 5% of its sales and 8% of its profits in 1996.

Dow Chemical environmental initiatives are expected to yield a 30% to 40% ROI by the year 2005 and contribute 1% of the company’s revenues over 10 years.

Prince Street Carpets, a subsidiary of the interface Companies, installed sky-lights in its production facilities, which not only reduced energy consumption but also enhanced quality by allowing products to be viewed under a natural light.

(The Green Business Letter)

**NOTE:** Much more information and research is needed in order to legitimately call these benefits “sustainable.” This research is using them strictly as convenient examples and does not endorse the validity of the claims.

### 3.1.7 Sustainability as an Investor Strategy

In addition to receiving those intangible benefits of sustainable development as mentioned above, corporations are also increasingly aware that, by setting good industry-wide practices regarding sustainability, there is a potential to attract more corporate investors. Increasingly, investors are diversifying their stock portfolio with companies that have good reputations regarding corporate operations.
Because of this increasing interest in sustainable investment, Dow Jones and various partners created the Dow Jones Sustainability Index (DJSI) in 1999. This index provided private and institutional investors with a tool to allow them to benchmark the performance of their Sustainable Investment (World Wide Web, www.sustainability-index.com, “Sustainability Investment”), proving itself advantageous in every regard. Corporations included in the DJSI enjoy many benefits, both tangible and intangible, including the following:

- Public recognition of being an industry leader in strategic areas covering economic, environmental and social dimensions;
- Recognition by important stakeholders such as legislators, customers and employees (e.g., leading to a better customer and employee loyalty);
- Highly visible results, both internal and external to the company, as all components are publicly announced by the index publisher and companies are entitled to use the official "Member of DJSI" label.


3.2 SD Stages

With the potential advantages a corporation can gain from sustainable development, it is necessary to look at the learning curve a corporation must experience in order to understand and then efficiently implement a sustainable development strategy. An article written by Professor Hart in the Harvard Business Journal Review emphasized that, in order for companies to develop a truly sustainable development strategy, they must progress through three stages:

(1) Pollution Prevention — “The first step for most companies is to make the shift from pollution control to pollution prevention. Pollution Prevention focuses on minimizing or eliminating waste before it is created. This requires a will for the corporation to make continuous improvement on how they use energy and reduce waste in their operation. This stage of corporate strategy is driven by emerging global standards and waste savings” (5).
(2) Product Stewardship — “This stage focuses on minimizing not only pollution from manufacturing but also all environmental impact associated with the full life cycle of products. As companies in stage one move closer to zero emissions, reducing the use of materials and production of waste requires fundamental changes in underlying product and process design” (6).

(3) Clean Technology — “Companies in this stage of environmental strategy have an eye on the future and plans to invest in tomorrow’s technologies” (7).

3.3 Components of Sustainable Development

The following table contains some commonly used key components of sustainability that corporations can use in order to pursue their sustainable development goals:

Table 4 — Components of Sustainable Development

<table>
<thead>
<tr>
<th>COMPONENTS</th>
<th>DEFINITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECO-Efficiency</td>
<td>Delivery of competitively priced goods and services which satisfy human needs and bring quality of life, while progressively reducing ecological impacts and resource intensity throughout the life cycle in line with earth’s carrying capacity</td>
</tr>
<tr>
<td>By-Product Synergy</td>
<td>The idea that one industry’s waste is another industry’s feed stock</td>
</tr>
<tr>
<td>Alliance and Partnership</td>
<td>Formed Alliance and partnerships with people and corporation that one might not have been willing to work with in the past</td>
</tr>
</tbody>
</table>
Looking beyond traditional accounting to increase value to stockholders, customers, consumers, employees, and communities

(Rosenbeck, Topic 9)

3.3.1 Tools for furthering Sustainable Development

3.3.2 Life Cycle Assessment (LCA)

LCA is a tool that is used world-wide to measure and quantify sustainable development. This tool evaluates the environmental performance of products or processes by accounting for the environmental impact of a product/process from the beginning to the end of its cycle. (World Wide Web, www.wise-intern.org/journal01/christineverhart2001.pdf intern, “Life Cycle Assessment”)

3.3.3 Designing for Environment (DFE)

DFE is the process for creating a product or service that is easier to recover, reuse, or recycle. During the design phase of the product or service, all effects the product or service could have on the environment are examined. Cradle-to-grave analysis begins and ends outside the boundaries of a company’s operations, which includes a full assessment of all inputs to the product and examines how customers use and dispose of it. This designing process thus captures a broad range of external perspectives by technical staffs, environmental experts, end customers, and even the community representatives in the process (Hart 6).

3.3.4 Remanufacturing

Basically, remanufacturing is the process of disassembling a product, during which time the parts are cleaned, repaired or replaced then reassembled to sound working conditions. A product is considered remanufactured if it meets one or more of the following criteria:

- Its primary components come from a used product;
• The used product is dismantled to the extent necessary to determine the condition of its components;
• The used product's components are thoroughly cleaned and made free from rust and corrosion;
• All missing, defective, broken or substantially worn parts are either restored to sound, functionally good condition, or they are replaced with new, remanufactured, or sound, functionally good used parts;
• To put the product in sound working condition, such machining, rewinding, refinishing or other operations are performed as necessary;
• The product is reassembled and a determination is made that it will operate like a similar new product.


3.3.5 Greening Supply Chain

The greening of supply chain can be accomplished through purchasing agreement, supply chain audit, and establishing a code of conduct (Rosenbeck, Topic 9). A great example of a corporation that has successfully greened the supply chain is Xerox Corporation, a major conglomerate that has established a set of sourcing policies for its suppliers. For example, in 2000, Xerox established the following position on paper sourcing:

"Xerox sources its paper from companies committed to sound environmental, health and safety (EH&S) practices and sustainable forest management in their own operations and those of their suppliers. Our intent is to protect the health and integrity of forest ecosystems, conserve biological diversity and soil and water resources, safeguard forest areas of significant ecological or cultural importance, and ensure sustainable yield. Companies must be committed to compliance with all applicable EH&S regulatory requirements in the countries where they operate."

To support this position on paper sourcing, Xerox established a set of Environmental Health and Safety requirements, and all of their paper suppliers must submit a written, detailed documentation of conformance with those guidelines. The key provisions of the requirements are the following:

• "Commitment to compliance with all applicable EH&S regulatory requirements, including forestry codes of practice and regulations governing legal harvesting of wood;
• An effective mill environmental management system and objectives for continual improvement in environmental performance above and beyond regulatory requirements;
• Independent third party certification of supplier-owned or managed forestry operations to a Xerox-accepted sustainable forest management standard.
• A procurement process that
  o Ensures the exclusion of illegally harvested wood raw materials from Xerox papers;
  o Ensures the exclusion of wood raw materials derived from forest areas of significant ecological or cultural importance unless certified to a Xerox-accepted sustainable forest management standard;
  o Encourages all suppliers of wood raw materials to practice sustainable forest management.
• Strict limits on the use of hazardous materials, including exclusion of elemental chlorine, in the processing and content of Xerox papers.”


3.4 Integral Principles of Sustainable Development Strategies

When utilizing these tools and concepts to form sustainable development strategies, there are some common interrelated principles that emerge as an integral part of any SD strategy:
(1) Taking the long-term view — Sustainable development is built on long-term commitment, with the clear understanding that, while immediate solutions are not necessarily apparent, they stand a better chance of emerging if there is a long-term undertaking to engage in a positive manner with stakeholders. (World Wide Web, http://www.wbcsd.org/DocRoot/RGk80O49q8ErwnWXIwtF/CSRmeeting.pdf “Corporate Social Responsibility”)

(2) Building capacity — This course of action helps societies develop the capacity to help themselves. This, of course, is preferential to corporate handouts, and an essential component of partnership (World Wide Web, http://www.wbcsd.org/DocRoot/RGk80O49q8ErwmWXIwtF/CSRmeeting.pdf “Corporate Social Responsibility”). By building capacity, the organizations, groups, communities, or societies increase their ability to perform functions, solve problems, achieve objectives, and deal with their development needs in a broader context and in a sustainable manner (Lusthause 1999).

(3) Building partnerships — Building partnership between businesses and other groups in society provides a better platform for success, which helps to deliver long-term benefits for both parties. A perfect example of the benefit of building a partnership between a company and the community in which it resides is the Flint River Renewal Program by Dupont. After 77 years of operations in Flint, Michigan, Dupont was going to close its manufacturing plant in 1997. The original solution for the former manufacturing site was for Dupont to remove all the valuable equipment and then sell the contaminated sites. However, the decommission team realized, instead, that greater value could be had for Dupont and the local community if they become partners and transformed the former sites into an industrial park. By engaging the local community, Dupont transformed the once manufacturing plant into an industrial park, from which the local community benefits because the tenant employs over 100 people and generates over $1 million dollar a year. Dupont also benefited because it was able to sell off over $20 million worth of assets, plus a facility with high market values, and enjoy wide media coverage when the park won Dupont the Safety, Health and Environmental Excellence Award in 1997. (World Wide Web, www.wbcsd.org/DocRoot/RGk80O49q8ErwmWXIwtF/CSRmeeting.pdf “Corporate Social Responsibility”)

(4) Cooperating on Technology — The benefits of innovative technologies are best spread through cooperation between those who own the technology and those who need it. Simply transferring technology without cooperation has been shown to fail. For example, in the Constanza Valley of the Dominican Republic, the vegetable farmers and the chemical industry were under fire from the local communities because of environmental degradation and health risks for the community and local wild life caused by the farmers’ use of pesticides. The publicity was so negative that the President of the Dominican Republic banned the farming of vegetables in the Constanza Valley region. To reverse this publicity, Norvatis formed a five-year
Farmer Support Team Program in which local farmers learned improved application techniques and basic pesticide safety procedures for crop protection. This program helped improve the overall environmental quality of the Constanza Valley, and Norvatis enjoyed a boost in corporate reputation when the Farmer Support Team Programs won NGO awards. (World Wide Web, www.wbcsd.org/DocRoot/RGk80O49q8ErwmWXIwtF/CSRmeeting.pdf "Corporate Social Responsibility")

Even though there are a plethora of sustainable developments tools and components available for a corporation to use for a sustainable development business strategy, corporations must be conscious that, without a framework to give direction to those activities that are deemed sustainable, the impact of those activities will dissipate over time. Hart phrases it succinctly: "A vision of sustainability for an industry is like a road map to the future, showing the ways products and services must evolve and what new competencies will be needed to get there" (Hart 7).

3.5 Conclusion

There are many issues in the literature surrounding sustainability. This literature review looked specifically at the following topics: (1) the emergence of a sustainable development as a new business driver for the global market, (2) the integration of sustainable development into business strategies, and (3) potential barriers for sustainable development. The literature contains a variety of means to measure and integrate sustainability to businesses, a selection of which was reviewed in this chapter. In the following chapters, this thesis looked at how the corporations in the case studies will achieve the corporate sustainable development through the concept of the Triple Bottom Line elements and seek out the motivations behind the corporations' activities, as well as the effects of these activities on the corporation, and then attempt to find the most common activities present among the case studies while endeavoring to explain the difference among them.
4.0 Methodology
4.1 Tasks and Objectives

Methodology for Primary Research Question

4.1.1 Information Review

An in-depth review of the chosen corporations’ sustainable definitions, visions, and corporate sustainable development reports was obtained from the company’s corporate website and, where applicable, government agency website such as the Environmental Protection Agency and the Dow Jones Sustainability Index Website. From the information review in each of the corporate case studies, sustainable development issues such as the corporation’s activities, their motivation for each of their activities, and the effect of the activities on the corporation was identified in an attempt to determine whether there is any common activities that each of the corporate case studies is implementing and then to explain the difference among the corporation activities. Further this thesis validated the validity of these activities by cross-reference a few of these sustainable/responsible/citizenship activities with independent sources. Some of the common indicators that were used to analyze each of the corporation’s triple bottom line strategies are presented in Table 2. These indicators were applied to the chosen corporation where applicable. This research examined the following triple bottom line elements where applicable:

(1) **Hazardous Waste Emission from Corporate Operations** — what activities the corporations are undertaking in order to eliminate or reduce hazardous waste emission;

(2) **Social Improvement and Investment** — what efforts corporations are making in communities where their operations are based, more specifically activities such as community education training, raising living standards and worker’s conditions such as wages, medical welfare, corporate/community partnerships, and community participation in corporate decision-making.

(3) **Purchasing Standards** — what, if any, purchasing standards exist between the corporations and their supply chain, and also how the corporations enforce their
purchasing standards, i.e., an annual audit, a contracted agreements, third-party verification, etc.

(4) Energy Consumption and Type of Energy Used — what activities the corporations are doing in order to reduce energy use and make their processes more energy-efficient, plus whether the corporations are attempting to develop alternative sources of energy.

4.2 Identifying Elements

After identifying the corporations’ sustainable development definition, vision, and goals, the research inspected the activities each of the corporations is implementing in its operations to achieve its goals and the elements of the GRI. This research targeted the following activities:

(1) Process Improvement and Technology Innovation evaluated the corporation’s attempts to improve processes so as to reduce and eliminate waste emission from operations, as well as increase operating efficiency of plant operations.

(2) Social Donation and Training analyzed the attempts the corporation is making to improve the social well-being of the communities in which it bases its operations; specifically, the target activities such as corporate-sponsored community training, charitable donations, employees’ benefits such as medical availability, and purchasing policies such as favoring using local suppliers.

(3) Purchasing Standards did examine what mechanisms the corporations have implemented to enforce their purchasing standards, if these existed.

(4) Energy Consumption did examine how efficiently each of the corporations consumes energy.
4.3 Evaluating Criteria

Evaluation of the results from 4.2 was performed. The evaluation criteria examined whether past performances indicate an increasing or decreasing trend, determine whether the corporation meets the set corporate goals and targets, and gauge the performance of the industry standards.

Example:

(1) Waste emission trends — What trend can be determined from the data available? If an increasing trend in waste emission is detected, further investigation was performed to evaluate the cause of the circumstances in which the increase has occurred and what corrective actions, if warranted, are being taken to prevent reoccurrence. (One possible cause of increased waste emission may be the acquisition of a new plant or business such was the case with GE’s acquisition of a new silicon plant)

(2) Social contributions — Is there an increasing or decreasing trend in the amount of social contribution and community education given by the corporation, and what impact have these corporate programs had on the communities?

(3) Purchasing standards — Is the corporation actively enforcing its purchasing standards and how well does the corporation work and communicate with its suppliers about the corporation’s changing needs?

(4) Energy Consumption — Are there any trends in energy and energy sources used by the corporations, and are they actively seeking or researching cleaner energy sources?

4.4 Compare and Contrast

The results obtained in 4.2 were evaluated to determine if the corporation is actively pursuing the corporate-defined sustainable development goals, visions, and definition identified in 4.1.1. This was accomplished by case analysis after all the necessary information was obtained.
4.5 Verification Process

As part of the verification process, this thesis validated the validity of the published activities that each of the corporation had presented in its sustainability/responsibility/citizenship reports and website by cross-referencing these activities to independent sources. Furthermore, this thesis verified the results it obtained in the corporate case studies with the Pacific Sustainability Index (an independent sustainability research performed by the Robert Environmental Center of the Claremont Mckenna College).

5.0 Expected Results

This thesis should have several findings. First, it reviewed and discussed the major social, economical, and environmental business drivers in the current global business markets for the case companies. Second, it reviewed and discussed the role of the triple bottom line elements in these drivers. Third, I expected to find the value added to each corporation because of implementation of the triple bottom line business strategy. By integrating a triple bottom line strategy, the corporation should add value in the following areas: (1) compliance issues, (2) daily operations, (3) risk management, (4) marketing, (5) capital investments, and (6) strategic direction. Finally, I expected to use the results to build a methodology to demonstrate how a corporation can develop a triple bottom line business strategy by analyzing the common and different activities in each of the corporations.
6.0 Case Studies

The following are the corporate case studies that were analyzed for this thesis. The information that was gathered in each of the case studies was in accordance with the thesis proposal that was submitted and approved by the thesis committee.

6.1 Pfizer

History

Founded in 1849 by Charles Pfizer, the Pfizer Corporation was first established in Brooklyn, NY. Currently, the Pfizer Corporation is headquartered in New York City. With 122,000 employees in 180 countries and an average annual research and development budget of $7.7 billion, Pfizer is one of the largest pharmaceutical and health care companies in the world.


Pfizer’s Mission and Vision

In its inaugural Corporate Citizenship Report of 2005, Pfizer laid the groundwork for its solution to sustainable healthcare. Pfizer’s mission statement in its first published Citizenship Report is “To become the world’s most valued company to patients, customers, colleagues, investors, business partners, and communities where we live and work.” (World Wide Web, www.pfizer.com/pfizer/subsites/corporate_citizenship/report/cc_report_2005.pdf, “Citizenship Report”) In order to properly achieve its mission statement, Pfizer has the following nine essential core values that it integrates into its business in order to achieve its mission statement:

1. Integrity - Demand of Pfizer and others the highest ethical standards, and our products and processes will be of the highest quality.

2. Respect for people – The recognition that people are the cornerstone of Pfizer’s success, we value our diversity as a source of strength, and we are proud of Pfizer’s history of treating people with respect and dignity.
3. Customer Focus - Committed to meeting the needs of our customers, and we constantly focus on customer satisfaction.

4. Community We play an active role in making every country and community in which we operate a better place to live and work, knowing that the ongoing vitality of our host nations and local communities has a direct impact on the long-term health of our business.

5. Innovation - is the key to improving health and sustaining Pfizer's growth and profitability.

6. Teamwork - We know that to be a successful company we must work together, frequently transcending organizational and geographical boundaries to meet the changing needs of our customers.

7. Performance - We strive for continuous improvement in our performance, measuring results carefully, and ensuring that integrity and respect for people are never compromised.

8. Leadership We believe that leaders empower those around them by sharing knowledge and rewarding outstanding individual effort. Leaders are those who step forward to achieve difficult goals, envisioning what needs to happen and motivating others.

9. Quality - Since 1849, the Pfizer name has been synonymous with the trust and reliability inherent in the word quality. Quality is ingrained in the work of our colleagues and all our values. We are dedicated to the delivery of quality healthcare around the world. Our business practices and processes are designed to achieve quality results that exceed the expectations of patients, customers, colleagues, investors, business partners and regulators.
Pfizer’s Approach to Corporate Citizenship

Even though Pfizer had not previously published a Corporate Citizenship Report, the corporation claims it has been taking an active role in citizenship in the communities where it resides. Pfizer listed some of its ongoing corporate citizenship activities and accomplishments on its corporate website. One example of its ongoing active participation was the fact that Pfizer has been on the Dow Jones Sustainability Index (DJSI) every year since 2000 and was cited by the research firm DJSAM as “A corporate sustainability leader in the pharmaceutical industry and among the best in stakeholder engagement and corporate citizenship.”

According to Pfizer’s claim, the corporation’s path to citizenship and sustainable healthcare starts at the top. Annually, the Board of Governance Committee reviews Pfizer’s code of conduct to ensure it meets or exceeds the current and emerging social, political, and public policies. Aside from the involvement of management in reviewing the public policies, Pfizer’s colleagues receive the Policies of Business Conduct, which it is called “The Blue Book.” It is expected that each colleague of Pfizer will sign a statement of acknowledgment that each individual that works for Pfizer is expected to follow (World Wide Web, www.pfizer.com/pfizer/subsites/corporate_citizenship/report/cc_report_2005.pdf, “Citizenship Report”).

Aside from the published Blue Book that each individual receives and signs, Pfizer also participates in a program called the United Nations Global Compact. This Global Compact is essentially a network of various agencies ranging from United Nations agencies, corporations, non-governmental agencies, academic institutions and labor unions, all of who endorse a set of principles on good corporate citizenship. As of the publication of this 2005 report, Pfizer was still the only U.S. pharmaceutical company to sign the United Nations Global Compact. The following are the 10 principles that the networks of the Global Compact endorse:

1. Business should support and respect the protection of internationally proclaimed human rights within their sphere of influence.
2. Business should make sure their own corporations are not complicit in human rights abuses.
3. Business should uphold the freedom of association and the effective recognition of the rights to collective bargaining.
4. Business should uphold the elimination of all forms of forced and compulsory labor.
5. Business should uphold the effective abolition of child labor.
6. Business should uphold the elimination of discrimination in respect of employment and occupation.
7. Business should uphold precautionary approaches to environmental challenges.
8. Business should undertake initiatives to promote greater environmental responsibility.
9. Business should encourage the development and diffusion of environmentally friendly challenges.
10. Business should work against all forms of corruption including extortion and bribery.


In order to ensure that Pfizer is following the principles set by the United Nations Global Compact, it has created a Corporate Citizenship Coordinating Committee. This committee is made up of different operation divisions from research and development to investor relations. These management-level colleagues worked together to collect data on Pfizer’s performance and benchmarked them against the Global Compact Principles.

Citizenship Partners

Aside from ensuring that Pfizer is following the Global Compact, the Corporate Citizenship Committee has formed a variety of public and private partnerships around the world with the corporations found in table 5 below:

Table 5- Corporate Citizenship Partners

<table>
<thead>
<tr>
<th></th>
<th>Organizations that Pfizer has formed partnership with:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Business for Social Responsibilities</td>
</tr>
<tr>
<td>2</td>
<td>Business Women Initiatives against HIV/AIDS</td>
</tr>
<tr>
<td>3</td>
<td>Center for Disease Control</td>
</tr>
<tr>
<td>4</td>
<td>Corporate Citizenship Center at Boston College</td>
</tr>
<tr>
<td>5</td>
<td>Ethical Globalization Initiatives</td>
</tr>
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<td>6</td>
<td>Global Business Coalition on HIV/AIDS</td>
</tr>
<tr>
<td>7</td>
<td>Global Environment Management Initiatives</td>
</tr>
<tr>
<td>8</td>
<td>The Global Funds to Fight AIDS, Tuberculosis, and Malaria</td>
</tr>
<tr>
<td>9</td>
<td>Harvard University Corporate Social Responsibilities Initiatives</td>
</tr>
<tr>
<td>10</td>
<td>International Business Leader Forum</td>
</tr>
<tr>
<td>11</td>
<td>The Nature Conservancy</td>
</tr>
<tr>
<td>12</td>
<td>The President’s Emergency Plan for AIDS Relief</td>
</tr>
<tr>
<td>13</td>
<td>Project Hope</td>
</tr>
<tr>
<td>14</td>
<td>Rainforest Alliance</td>
</tr>
<tr>
<td>15</td>
<td>Transparency Internationals and USA</td>
</tr>
<tr>
<td>16</td>
<td>United States Agency for International Developments</td>
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<td>17</td>
<td>World Business Council on Sustainable Development</td>
</tr>
<tr>
<td>18</td>
<td>World Environment Center</td>
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<td>19</td>
<td>World Resource Institute</td>
</tr>
</tbody>
</table>

Global Citizenship Framework

In order to properly integrate corporate citizenship into the decision making process throughout Pfizer’s business operation, it developed the Global Citizenship
Framework, around which the 2005 Corporate Citizenship report is organized. Table 6 below illustrates Pfizer’s Global Citizenship Framework:

**Table 6 Global Citizenship Framework**

<table>
<thead>
<tr>
<th>Our Purpose</th>
<th>Research and Development</th>
<th>Manufacturing</th>
<th>Sales and Marketing</th>
<th>Supply Chain and Distribution</th>
<th>Our Priorities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Helping people to live Longer Healthier and Happier Lives</td>
<td>Develop safe and effective medicine</td>
<td>Produce safe and high-quality medicines conserve energy</td>
<td>Communicate benefits and risks of medicines</td>
<td>Ensure safe and reliable systems</td>
<td>We will achieve our purpose through:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1. Discovering and developing new medicine</td>
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<td></td>
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<td></td>
<td>2. Improving access to medicine</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3. Partnering on health system solutions</td>
</tr>
</tbody>
</table>

**Companywide Responsibilities**

- Practice good governance
- Ensure compliance and ethics
- Respect employees
- Protect the environment
- Support communities

**Knowledge and Scale**

Leveraging our global scale, diverse skills and financial strength to develop innovative approaches to improve human health

- Economic capital
- Human capital
- Scientific and medical expertise
- Global business infrastructure

**Pfizer’s Environmental Health and Safety Vision**

As a part of Pfizer’s mission of becoming the world’s most valued company, the corporation believes it is essential to have excellent Environmental Health and Safety (EHS) records. Pfizer believes this is achieved through a solid EHS program. The corporation believed in order to achieve excellence in EHS laid out the followings missions:

1. Maintaining safe and environmentally sound operations, integrating EHS considerations into all business activities,

2. Contribute to the common effort to protect the natural and workplace environment,

3. Foster openness and dialogue with colleagues and the public,


In order to achieve this set of EHS missions, Pfizer has established eight strategic priorities to help guide its worldwide operations. These priorities are:

1. Achieve 100 percent compliance
2. Reduce EHS risks of Pfizer operations
3. Improve Pfizer’s accident and injury rate
4. Reduce Pfizer’s environmental footprint
5. Align EHS across Pfizer businesses
6. Optimize EHS resources throughout Pfizer
7. Assure Pfizer maintains high quality EHS management systems
8. Influence our operating environment through strategic EHS communications


**Pfizer EHS Management System**

It is the expectation of Pfizer that every single one of its employees needs to be part of its Corporate Citizenship activities. Pfizer’s EHS management team - develops and decides strategic decisions for Pfizer regarding its EHS priorities and values for its global operations. Figure 1 below shows the management structure on how the corporate EHS decisions are developed within the Pfizer organization.

**Figure 1-Pfizer EHS Management Structure**

![Diagram of Pfizer EHS Management Structure]

**Hazardous Waste Emission**

In this section, the thesis looked at the activities Pfizer is implementing in order to reduce or eliminate the impact of their daily operational activities on the environment. Specifically, this thesis will look at Pfizer’s Climate Change Initiatives, Green Chemistry
Activities and engineering control methodologies. These particular initiatives were examined because these specific programs are the heart of Pfizer’s emission reduction programs of Hazardous Waste and Ozone Depletion elements.

**Green Chemistry**

According to Pfizer’s claim, Green Chemistry Initiatives play a fundamental role in its environmental protection program. The Green Chemistry Initiatives are embedded into the way Pfizer’s scientists, engineers, and EHS professionals conduct business. These multi-discipline teams apply well-accepted Green Chemistry principles into new products and processes in order to enhance Pfizer’s EHS reputation. The 12 Green Chemistry Principles that Pfizer uses are as follows:

1. Prevent waste rather than treat
2. Maximize incorporation of all materials-atom economy
3. Design synthesis to use or generate least hazardous chemical substances
4. Design safer chemicals to do the desired function
5. Minimize or use innocuous auxiliary agents
6. Minimize energy requirements
7. Use renewable raw materials or agents
8. Minimize unnecessary derivatization
9. Use catalytic versus stoichiometric reagents
10. Design process-related products to be biodegradable
11. Use on-line analytical process monitoring to minimize formation of hazardous by-products
12. Chose safer reagents that minimize the potential for accidents.

By following these Green Chemistry Principles, Pfizer’s scientists and engineers were able to enhance process robustness, reduce emissions, reduce the use of hazardous materials, and increase the recycling of process waste, which produced the following notable results:
1. Cutting the process' solvent requirement from 60,000 to 6,000 gallons per ton of sertraline
2. Eliminating the use of 440 metric tons of titanium dioxide per year
3. Eliminating the use 150 metric tons of 35% hydrochloric acid per year
4. Eliminating the use of 100 metric tons of 50% sodium hydroxide per year
5. Reducing the amount of organic process waste from 4300 tons to 300 tons per year in their Viagra manufacturing process in Ireland and the UK.


Even though these results have been admirable during the manufacturing of medicine by using Green Chemistry, Pfizer has also implemented engineer controls to continuously improve in the area of waste generation and highly hazardous waste release into the environment. As seen by the results below, there have been some small successes in waste emission, but it is still far from being perfect.

Waste Emission

At Pfizer, the corporation classified their waste type into two categorizes:

1. Special wastes - Waste that could adversely impact public health or the environment if mishandled. These wastes include biomedical waste, solvent and hazardous chemical wastes, returned pharmaceutical products and heavy metals.
2. Non-special waste - These wastes include paper, cafeteria waste and recyclable glass, metals and plastics.
3. Figure 2 below shows the results of waste generation from 2000 through 2003 for Pfizer Corporation:
From the results above, Pfizer Corporation had an increase in waste generation from 2000 to 2003. According to the company, this increased waste was a result of unprecedented growth in the company’s global manufacturing process, which Pfizer itself claims has challenged its ability to achieve waste reductions.

From 2000 to 2003, Pfizer Corporation had a revenue increase of 73% from $26 billion to $45 billion. At the same time, the total waste generated (including recycled waste off site) increased by 14%, non-special waste increased by 7% and special waste generated (including waste recycled off site) increased by seventeen percent (World Wide Web, www.pfizer.com/ehs/environ/waste.html, “Waste”). However, after extensive research, this thesis discovered that from 2002 through 2003 the total waste generated has decreased about 9% from the 2002 number, and the amount of waste recycled has increased roughly 67% from the baseline level of 2002 (World Wide Web, www.pfizer.com/pfizer/subsites/corporate_citizenship/report/cc_report_2005.pdf, “Citizenship Report”). Pfizer attributes these decreases in waste reduction to the introduction of in-process recycling and process change and redesign at several of its manufacturing locations (World Wide Web, www.pfizer.com/ehs/environ/waste.html, “Waste”).
**Highly Hazardous Waste Release and Toxic Release Inventory**

One of the cornerstones of Pfizer's EHS program is the reduction of emissions of highly hazardous waste (HHS). This is a vital program in the corporation's overall environmental program given that it is one of the more highly scrutinized programs by the U.S. Environmental Protection Agency (EPA). The EPA requires industry to provide an annual inventory of routine and accidental releases for specific toxic chemicals. This requirement is in accordance with the Superfund Amendment and Reauthorization Act (SARA) and is commonly referred to as the Toxic Release Inventory (TRI), which includes data on releases to air, land, and water. Corporate wide, Pfizer's definition of HHS includes the following:

- Highly toxic substances
- Carcinogenic substances
- Chemicals that can cause birth defects or other reproductive problems
- Severe eye irritants and corrosives

(World Wide Web, [www.pfizer.com/ehs/environ/hazards.html](http://www.pfizer.com/ehs/environ/hazards.html), "HHS")

**Performance-Release of HHS**

In order to properly reduce the release of highly hazardous substances, Pfizer has implemented various programs such as its state-of-the-art emission controls and has focused on eliminating or reducing the use of HHS in manufacturing processes through their Green Chemistry Initiatives as mentioned in the above sections. By collaborating with various research chemists, production engineers and EHS professionals, Pfizer has achieved significant reductions in the use of highly hazardous substances in the production of important Pfizer products. Figure 3 and 4 below illustrate the success Pfizer has had in reducing the release of highly hazardous substances and the distribution of how the HHS was released into the environment. Between 2000 and 2003, Pfizer was able to cut HHS emissions by 67% to 174,514 kilograms (kg) from a baseline of 521,516 kg in 2000. In 2003 alone, Pfizer was able to reduce HHS releases by 40% to 174,514 kilograms (kg) from 315,200 kg in 2002.
Figure 3-Release of Highly Hazardous Substance (HHS)

![Highly Hazardous Substances Release](chart)

Figure 4-Distribution of HHS Releases to the Environment

![Distribution of 2003 HHS Releases to the Environment](chart)


Performance-Toxic Release Inventory

Figure 5 below shows the TRI data through 2002 for Pfizer Corporation. The data available on the corporate website is for all U.S. facilities prior to the acquisition of Pharmacia in April of 2003. As seen from the table, Pfizer reported TRI releases in 2002 totaling 1.7 million kilograms. In particular, Pfizer reported one facility in Holland, Michigan, that accounted for approximately 73% of the total 2002 TRI releases. Under the Toxic Release Inventory, 95% of Pfizer’s releases to land are attributed to the wastewater discharges to the underground injection control (UIC) wells at the Holland facility. The State of Michigan and the U.S. EPA permitted this discharge.
Pfizer claims that even though it has been in compliance with EPA and state environmental TRI regulations, Pfizer is still committed to reducing its TRI release. With this as part of its HHS objectives, Pfizer has installed a steam air stripper at their Holland facility to remove most TRI chemicals contained in the wastewater discharged to the well. The air stripper, which went into full operation in the first quarter of 2004, will result in a reduction of TRI releases to the well of over 60% in 2004 and over 90% in subsequent years.

**Figure 5-TRI Release**

![Diagram of TRI Release]

**Footnote on Well Injection from Pfizer’s Corporate Website.** “The disposal of wastewater into Class I UIC wells, such as those at our Holland, Michigan facility, has been practiced in the U.S. for over 60 years and has been found to be a reliable and safe practice. Class I wells are used for the injection of industrial and municipal waste fluids into isolated rock formations beneath the deepest underground sources of drinking water. Wastes disposed in these wells are safely contained below ground for thousands of years and, in many cases, the hazardous components in the waste degrade into less hazardous forms over time. Wells range in depth from 1,700 to over 10,000 feet below the ground surface. The injection zone at our Holland facility is over a mile below the nearest usable groundwater resource.”


**Climate Change Initiatives**

Aside from the reduction of waste generation and release initiatives, Pfizer is one of the pharmaceutical industry leaders in the Climate Change Initiatives. The Climate Change Initiatives are the reduction of green house gases (GHG), which are the result of burning fossil fuel. In order to contribute to the effort of reducing GHG, Pfizer joined the
EPA’s Climate Leader program in 2002. The Climate Leader program is a voluntary industry and government relationship that helps industry promote climate change initiatives (World Wide Web, www.pfizer.com/ehs/initiatives/climate_change.html, “Climate”). As a partner with the EPA, Pfizer has set the following corporate goals for the reduction of green house gases:

1. Reduction of CO² emission by 35% per $1 million of sales by 2007 from the baseline year of 2000.
2. To reduce Volatile Organic Compound (VOC) Emission Reduction by 40% on an absolute basis from the 2002 baseline by year-end 2008.
3. To phase out the use of Class 1 Ozone Depleting Compounds (ODCs) in heating, ventilation and air conditioning (HVAC), fire suppression and industry process equipment by December 21, 2005 at Pfizer facilities owned prior to April 2003 and December 31, 2007 for facilities acquired after April 2003.
4. To reduce the Ozone Depletion Potential (ODP) by year-end 2007 of 80% from the 2002 baseline.


Progress:

From the 2005 Corporate Citizenship report, Pfizer gave a progress report on each of the Climate Change Initiatives it listed. This progress is discussed below:

1. Pfizer is on track to meet the goal of reduction of CO² emissions by 35% per $1 million in sales by 2007. Pfizer has currently reduced 28% of CO² in 2004 from its 2000 baseline.
2. Pfizer is on track to meet the goal of reducing VOC emissions by 40% by year-end 2008. In 2004, Pfizer has reduced VOC emissions by air and water by 27% from 2002 baseline. However, production increases at several facilities have offset the reduction from 2003 to 2004.

3. For the goal of phasing out the use of Class 1 ODCs in HVAC, fire suppression and industrial process equipment by 12/21/2005 (for facilities owned prior to 4/03), all but four sites are on track to meet the deadline. For the facilities acquired after 4/03, all but one facility will meet the deadline of phasing Class 1 ODCs.

4. Pfizer is currently on track to meet the goal of reduction of ODP by 80% by year-end 2007.

World Wide Web,

Social Investment and Contribution

This thesis looked at what activities/initiatives Pfizer is implementing in order to improve the communities in which they reside. From the research, Pfizer’s social investment and contribution breaks down into four distinct categories:

1. Caring for Community
2. Employee Commitment
3. Science Education
4. Grants

This thesis delved in depth into all four categories above.

(World Wide Web,

Caring For Community

As a pharmaceutical corporation, the very nature of Pfizer’s business is caring for the community. By discovering new drugs to solve the world’s health issues, the
corporation is trying to make health care more accessible for everyone. In caring for the community initiatives, Pfizer’s charitable focus is on Global Health and Community Programs.


**Global Health**

The Global Health Initiative of Pfizer is its commitment to finding a global solution to world health problems such as HIV/AIDS, Tuberculosis and Malaria. In order to find the solutions to these and many other debilitating diseases, Pfizer is actively supporting partnerships and programs that improve access to state-of-the-art medicines and training such as the Global HIV/AIDS Partnership. This partnership between governmental and non-governmental organizations (NGO) addresses the HIV/AIDS crisis in the U.S. and abroad by combining the distribution of critical medicines with training, education, mentoring and the building of a sound medical infrastructure.


Aside from partnerships with various governmental and non-governmental organizations (NGO), Pfizer has another program called the Global Health Fellows. This program calls for Pfizer to make available their scientists, physicians, nurses, epidemiologists, laboratory technicians, marketing managers, financial administrators, and health educators for up to six-month assignments with NGOs and multilateral organizations (MLOs). The fellowship is assigned based on the needs of the Global Health Fellow partners. While on assignment, the Global Health Fellows train and support their local counterparts so that the impact made by Pfizer’s Health Fellow is sustainable. Pfizer encourages their employees to participate in the program. Pfizer’s Fellow does not have to worry about expenses incurred because Pfizer is committed to funding transportation, lodging and other expenses while maintaining the Fellows position within the company.
Community Programs

Even though Pfizer is committed to various projects to make health care more accessible around the world, it also has several programs that aim to strengthen the local communities where the corporation resides; this is done through programs such as urban revitalization initiatives, school partnerships, and support for local civic and cultural institutions which contribute to the quality of life in the communities. This thesis will highlight several of Pfizer’s Local Citizenship and In Times of Need Initiatives.

Local Citizenship Initiatives

Pfizer's local community involvement is an expression of the corporation's core values, which include community, innovation, teamwork and respect for others, and reflects the expertise and leadership of Pfizer employees around the world. The Local Citizenship programs seek to improve the quality of life and the vibrancy of communities by forming partnerships with local civic, community and cultural organizations. This thesis will look at the following Local Citizenship Initiatives:

1. Brooklyn Redevelopment Initiatives
2. Groton New London Initiatives

Brooklyn Redevelopment Initiatives

Founded in the agricultural village of Williamsburg, Brooklyn, Pfizer was first established there in 1849. Even though Pfizer has reestablished its headquarters in New York City, the corporation has not abandoned its roots and has established a model public/private partnership to revitalize the community by creating new housing, a
pioneering public charter school and a safer neighborhood. This partnership brought Williamsburg back to life by creating the following:

- Built more than 140 new two-family homes for low-to moderate-income families
- Rehabilitated more than 400 apartments in the Brooklyn neighborhood and the surrounding communities
- Recruited a pharmaceutical labeling business into the area, and
- Renovated the local subway station and installed closed-circuit video cameras that are monitored around the clock by Pfizer's security staff.

By not abandoning its original roots, Pfizer has received many accolades for its urban revitalization program. For example, the former Mayor of New York, Rudolph Giuliani, praised Pfizer as “being one of the very best in corporate America.”


**Groton New London Initiatives**

The Groton New London Initiative was an initiative by Pfizer to promote economic expansion in the historic port of Groton Connecticut. In June 2001, Pfizer established its new research division headquarters in Groton. This new headquarters helped the historic port of Groton to create new jobs, increase home ownership, and revitalize cultural centers and environmental enhancements, and the community continues to benefit from Pfizer's presence. The improvement and the benefits reaped by Pfizer's presence in Connecticut was echoed by its governor, John G. Rowland, “The headquarter facility is creating critical mass of the new jobs and new life changing drugs that will improve the quality of life for all our citizens.”


In Time of Need Programs

Even though Pfizer takes an active part in restoring and helping the local communities in which they reside, Pfizer also has the In Time of Need Programs, which try to respond to communities that have been hit hard by natural disasters. For example, in December of 2004, a major earthquake and tsunami struck Asia and the east coast of Africa. The Pfizer Corporation began working with local governments and relief agencies to provide logistical support in order to properly assess what medicine and healthcare products were needed in the region. After the initial assessment was completed, Pfizer committed $25 million of healthcare products and $10 million in cash to local and international relief organizations that were operating in the regions hit hardest by the natural disaster.

As the relief efforts advanced and a clearer picture of what was needed developed, Pfizer increased its product donations to approximately $50 million of various medicines such as antibiotics, antifungal medicines and other necessary health products. In addition to these donations of life-saving medicines, Pfizer also loaned out its senior colleagues who had expertise in fields such as supply chain management, water sanitation, and public health to work alongside relief organizations such as the World Health Organization (WHO) in rehabilitation efforts in the disaster stricken areas.


Employee Commitment

Aside from its caring in the community programs, another of Pfizer’s social investment categories is its employee commitment programs. In the employee commitment programs, Pfizer employees contribute their time, effort and money for several noteworthy causes such as the Global Health Fellow program mentioned in the previous section of this thesis and also the Pfizer Volunteer Foundation program (PVP). In the PVP, Pfizer encourages its employees and retirees to volunteer their time in community organization such as healthcare groups, arts and culture organizations, and
social services agencies. Aside from volunteering the employees’ time, Pfizer also make available grants of $1000 to further benefit these groups in the communities where Pfizer resides.


**Science Education**

As an advocate of corporate citizenship, Pfizer has various programs to improve access to healthcare, revitalize communities and improve the quality of life not only culturally, but also educationally, to the youth in its communities. Pfizer has science education programs that partner with schools where Pfizer has a strong presence in the community. The goal of these partnerships is to build the teachers’ capacities for teaching science in the classroom, so that children can be excited about learning science

(World Wide Web, www.pfizer.com/pfizer/subsites/philanthropy/caring/science.education.school.jsp, “Science Education”). For example, Pfizer has developed a Green Chemistry Curriculum for middle school students. Pfizer believes this is important because it will teach students at an early age about the role of chemistry in alleviating the growing environmental concerns of the world (World Wide Web, www.pfizer.com/ehs/initiatives/green_chemistry.html, “Green Chemistry”). Pfizer believes this is important because not only can it help students prepare for a successful future, but it also helps to develop the next generation of scientists and engineers who can compete in a technological workplace. (World Wide Web, www.pfizer.com/pfizer/subsites/philanthropy/caring/science.education.school.jsp, “Science Education”)

Aside from partnering with local schools to promote science, Pfizer also has a strong presence for undergraduate and graduate students. The corporation holds various seminars and site visits for undergraduate and graduate students. In these visits and seminars, Pfizer often highlights the contribution of Green Chemistry to sustainable product development. This helps to provide an insightful perspective to students on the role of Green Chemistry in the research and development environment.
Pfizer Foundation Programs

Even though Pfizer has programs that will clearly leave its footprint in the local communities as mentioned above, Pfizer also has a charitable foundation which targets specific areas such as health care and science education. These donations improve access to health care from debilitating diseases such as HIV/AIDS in their Diflucan Partnership program. In this program, Pfizer donates its antifungal drug Diflucan to some of the most impoverished countries in the world and works with local health care workers on treating opportunistic infections related to AIDS.

Since 2000, Pfizer has trained over 20,000 health care professionals in the diagnosis and treatment of opportunistic infections related to AIDS and has donated more than $315 million worth of its drug Diflucan in 44 countries hardest hit by HIV/AIDS.

In its 2005 Corporate Citizenship Report, Pfizer reported a contribution of $28.1 million in 2004 from its employee-matching program, and another $57 million in charitable giving from Pfizer. These numbers increased from a baseline of $24.7 million and $32 million respectively from its 2002 level.

Overall, the Pfizer Corporation has a very generous social investment program.

Purchasing Standards

As part of its Corporate Citizen business operations, Pfizer supports a supplier diversity program, which promotes purchasing from minority-owned and women-owned
businesses. In 2004, Pfizer spent more than $700 million within its supplier diversity program for products and services. Aside from purchasing goods and services from these minority and women-owned business, Pfizer also holds workshops and programs to teach these businesses how to compete for contracts with large global company like Pfizer. Pfizer’s participation in its supplier diversity program does not stop just within its pocketbook. Pfizer’s corporate leaders are active board members on the National Minority Supplier Development Council, Inc. and the Women’s Business Enterprise National Council, Inc. on national and local levels. For the second consecutive year, Pfizer was listed as one of the Best Corporations for Multicultural Business Opportunities by DiversityBusiness.com and was recognized as the Top National Corporation for Opportunities for Women Owned Business. By taking an active part and supporting these organizations, the Supplier Diversity Program is designed to create a strategic advantage for Pfizer by offering Pfizer a competitive sourcing environment and innovative products and services while allowing Pfizer to support the economic prosperity of locally and nationally owned business of minorities and women.


Even though Pfizer has a well-defined diversity supplier program, the corporation recognizes that the way Pfizer operates its business not only can have an economic effect on local businesses, but could also have a dramatic impact on how the local businesses behave in order to compete for Pfizer’s contracts. Because of the possible consequence of behavior on the part of suppliers and contract manufactures, Pfizer joined the Green Supplier Network in order to improve products and services, increase energy efficiency, cost savings and waste elimination. Aside from joining the Green Supplier Network, Pfizer has a site-based procurement team to purchase environmentally friendly chemicals, furniture and office supplies. Pfizer currently has a variety of active pilot projects such as buying partially recycled papers and toner cartridges, which, in turn, could potentially cut the amount of GHG emitted by Pfizer. (World Wide Web, www.pfizer.com/ehs/initiatives/key_suppliers.html, “Suppliers”)
Energy Used

Being a global company, Pfizer has a huge energy need in order to properly operate its facilities around the world. Currently, most energy for global corporations like Pfizer is derived from the burning of fossil fuels. By burning fossil fuels, greenhouse gases are emitted that are harmful to the environment, as discussed earlier. Because of the emissions of harmful gases and the increasing expense of energy production from fossil fuels, Pfizer has developed several initiatives and goals to make their daily operations more energy efficient and less dependent on fossil fuel. For example, Pfizer is looking at several alternative sources of energy such as solar and wind energy. Pfizer recently installed photovoltaic fuel cells in their Germany plant to harness the energy of the sun to meet some of its daily energy demand.

Aside from using renewable energy sources such as solar and wind, Pfizer is also looking into co-generation energy. Co-generation technology is an efficient way of producing electricity and steam from natural gases. This is an appealing method of producing energy because it is often cheaper than fossil fuel and it emits much less GHG than its counterpart fossil fuel. In 2003, Pfizer set a corporation-wide goal of using clean energy and renewable energy technologies for 35% of their total energy need. (World Wide Web, www.pfizer.com/ehs/environ/energy.html, “Energy Used”)

Other than looking for different methods for producing energy, Pfizer is also looking into being more energy efficient in its current building construction and maintenance. At its current research and development headquarters in Connecticut, Pfizer has used the United States Green Building Design criteria. When the building is finished, it will be a leader in energy and environmental design (leed) certified building. By being leed certified, Pfizer is making a commitment not only being energy efficient but also to sustainability. (World Wide Web, www.pfizer.com/ehs/initiatives/key_suppliers.html, “Suppliers”)

Verification Process

In order to properly assure that Pfizer is performing the citizenship task it is reporting, this thesis verified some of the claims it has made by confirming it through other sources. The thesis specifically looked at the arenas of promoting Green Chemistry
through lectures and seminars given at various universities, some of its charitable
donations to research and promoting science education and the partnerships Pfizer claims
it has formed with the various corporate citizenship organizations.

Footnote - Due to the extensive research needed and beyond the scope of this thesis, the thesis will
only verify the selected activities in the above sections and does recognize that other activities have
not been verified by additional sources.

Green Chemistry Lectures/Seminars

In its corporate report, Pfizer claims that it recognizes the benefit of Green
Chemistry. The corporation believes that not only does it need to practice Green
Chemistry in its operations, but it also needs to take an active role in teaching the
undergraduate and graduate students in the university systems. After thorough research,
this thesis has confirmed that Pfizer does take an active role in promoting the practice of
Green Chemistry through lectures and seminars given by its scientific staff. In the section
below, this thesis will list several seminars that Pfizer staffs have given on Green
Chemistry:

New Jersey Institute of Technology

When: Wednesday, September 8, 2004 11:30AM

Who: Ron DiCola, Assistant Director, Corporate Environmental Affairs, Pfizer, Inc,

Presentation: “The presentation given by Mr. DiCola will include background on the
drug discovery, research and manufacturing process as a framework for introducing
Pfizer's Green Chemistry program. It will also give details about current and planned
Green Chemistry program elements and initiatives within Pfizer. External drivers and
stakeholders influencing the growing importance of Green Chemistry in the
pharmaceutical industry will be introduced and the connection between Green Chemistry
and Corporate Social Responsibility and Sustainability will be explored. Pfizer's work to
"green" the manufacturing processes for the active pharmaceutical ingredients Sertralene
(Zoloft) and Sildenafil Citrate (Viagra) will be used as practical examples to illustrate the
business case. The Green Chemistry business case presented will illustrate to students
entering the private sector the growing importance and challenges of Green Chemistry.
Mr. DiCola will draw upon 18 years of industry experiences to make a business case for
Green Chemistry.”
McGill University and American Chemistry Society

When: July 2005

Who: Berkeley W. Cue Ph.D-Pfizer employee retired

Presentation: The presentation by Mr. Cue is on making a business case for Green Chemistry in the pharmaceutical industry. He first presented a definition of sustainability and why it is important. The presentation then shows the benefits of using Green Chemistry to manufacture a variety of drugs such as Zithromax and Azithromycin. These drugs not only have good economic benefits such as $2 billion sales in 2003, but they are environmentally friendly drugs which use a renewable starting material and at the same time are very effective in curing trachoma which plagues 84 million people in 55 nations.


Green Chemistry: Principles and Industrial Principles

When: October 17-18, 2006

Who: Dr. Peter Spargo- Pfizer employee since 1988

Presentation: The course given by Dr. Spargo in Basel, Switzerland, is for an audience that wants to be involved in the principles of Green Chemistry and will guide them toward practical and effective implementation of these principles in the workplace.


From the sections above, it is the conclusion of this thesis that Pfizer is actively educating and promoting the principles of Green Chemistry as it claims in its Citizenship reports.

Research Grants and Donation

In Pfizer’s Citizenship report, Pfizer claims that it has made numerous contributions to promote not only education but research as well. In this section of the
thesis, the research will look at several grants and fellowships that Pfizer has bestowed on different scientists and universities by verifying its claims with various sources.

**University North Carolina**

In one of its newsletters that were published on 1/7/2004, the University of North Carolina Chapel Hill received a gift of $225,000 from Pfizer to support the University’s seminar series for the next three years. The Pfizer gift counts toward the Carolina First campaign goal of $1.8 billion.


**Cornell Medical**

In the fall of 2003 Cornell Medical Newsletter, Cornell highlights the contribution Pfizer has made to the school’s research program. Pfizer help Cornell established the Research Fellowship in Health Services Research. The fellowship consists of a two-year program with Master’s Level course work in health service research, combined with mentored research experience.


From these examples above, this thesis verified that Pfizer is actively participating in donating grants to promote education research.

**Pfizer Partnership**

In this section, the thesis verified the claims that Pfizer has formed partnerships with the responsible corporations it has listed in its Corporate Citizenship reports. This thesis will verify the partnership by exploring the websites of the following organizations:

1. World Resources Institute
2. World Environment Center
World Resources Institute:

According to Pfizer in its Citizenship report, it is a partner with the World Resource Institute (WRI). The WRI is an environmental think tank with an ambitious mission:

1. To reverse damage to ecosystems
2. To expand participation in environmental decisions
3. To avert dangerous climate change
4. To increase prosperity while improving the environment.


After researching the WRI website of its partners list, Pfizer was listed as one its participating partners, which verified the corporation’s claim as a participating partner of the WRI.


World Environment Center

“The World Environment Center (WEC) is an independent, not-for-profit, non-advocacy organization promoting sustainable development and the efficient use of natural resources in multinational corporations.” Its mission is the following:

1. Maintains an independent and non-advocacy position
2. Seeks to integrate environment, economics and education
3. Serves as bridge for the exchange of information and expertise among industry, government, and non-governmental organizations
4. Provides training and technical cooperation programs staffed by volunteer and paid experts from industry
5. Encourages corporate environmental leadership and responsibilities worldwide by providing international public recognition of outstanding accomplishment.

(World Wide Web, http://www.wec.org/about.htm, “Partner 2”)

After researching the WEC website, Pfizer was listed as one of its participating partners, which verified Pfizer’s claim as a participating partner of the WEC.


Global Business Coalition on HIV/AIDS

The Global Business Coalition (GBC) on HIV/AIDS is the organization, which is leading the business fight against HIV/AIDS and increasing the number and diversity of companies committed to fighting the global HIV/AIDS pandemic by engaging new businesses to join its extensive network.


After researching the GBC’s website, Pfizer was listed as a participating partner of the Global Business Coalition on HIV/AIDS, which confirms Pfizer’s claim as a partner of the GBC.


Verification Conclusion

In the sections above, the thesis verified that Pfizer is actively implementing its citizenship activities discussed in its citizenship report. Aside from verifying its activities from other sources, the thesis will look at what the results of other research have concluded about Pfizer’s sustainability. The thesis included the results of the Claremont Mckenna College research. In the Robert Environment Center, the faculty and students developed the Pacific Sustainability Index (PSI), which uses two systematic questionnaires to analyze the quality of the sustainability reporting. The questions selected for the PSI is based on the most frequently mentioned topics in over 500
corporate sustainability reports from 2002 through mid-2005. Figure 6 below shows the overall score given to Pfizer by the PSI.


Footnote-The PSI score are for information purposes and used as an alternative view by other research done. The thesis doesn’t necessarily endorse the validity of the score because it recognizes that it is an arbitrary analysis done by another source. Please see appendix attached for a in-depth methodology of the PSI.

Figure 6-Pfizer Score

<table>
<thead>
<tr>
<th>Category</th>
<th>Percent Coverage</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intent</td>
<td>76%</td>
<td>B+</td>
</tr>
<tr>
<td>Reporting</td>
<td>60.42%</td>
<td>B+</td>
</tr>
<tr>
<td>Performance</td>
<td>15.63%</td>
<td>B+</td>
</tr>
<tr>
<td>Overall</td>
<td>50.48%</td>
<td>B+</td>
</tr>
<tr>
<td>Social</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intent</td>
<td>80.56%</td>
<td>A-</td>
</tr>
<tr>
<td>Reporting</td>
<td>67.90%</td>
<td>B+</td>
</tr>
<tr>
<td>Performance</td>
<td>33.33%</td>
<td>B</td>
</tr>
<tr>
<td>Overall</td>
<td>59.65%</td>
<td>A-</td>
</tr>
<tr>
<td>Overall PSI Score</td>
<td>52.53%</td>
<td>A-</td>
</tr>
</tbody>
</table>

*Performance scores are calculated in both environmental and social reporting categories when data are better than peer average, taking a leadership position for the sector, and at its maximum performance.

From the scores above, the PSI score given to Pfizer was slightly above average. Pfizer had obtained the 5th highest PSI scores in the pharmaceutical industry behind Bristol Myer Squibb, Abott Laboratory, Astra Zeneca and Johnson and Johnson.


The methodology section of the Claremont Mckenna website clarifies how the index defines each of the grades given by the PSI: a state-of-the-art answer deserves an A+ while anything below a B- means that the corporation needs to improve. The analyst that
performed the PSI measurement for Pfizer indicated that Pfizer would have received a higher score if it would pull the disparate information together and increase the uniformity of reporting corporate wide.

(World Wide Web, www.roberts.mckenna.edu/psi/PSIScoresDetail3.asp?ReportNameID=1056, “Pfizer PSI”) Based on the research, the thesis agrees with the analyst that Pfizer’s website and corporate reporting needs to be more uniform. Pfizer has an excellent and in-depth discussion regarding its social values and objectives; however, in the environmental arena Pfizer needs to clarify its intent and explain in more detail what the corporation is currently doing in the environmental arena in order to achieve a better overall Citizenship report.
6.2 General Electric

General Electric History

As one of the world’s largest market capital conglomerates, General Electric (GE) business units stretch from light bulbs and refrigerators to jet turbines, the NBC television network and many, many more. Even though GE has become such a global corporation, it can trace its roots back as early as 1892 and arguably with one of America’s most famous inventors, Thomas Alva Edison, as one of its founding fathers. It was in 1876 when America marked its Centennial, which the electric exhibit in Philadelphia helped spark the innovation for new technology. Later that year, Thomas Edison opened up a laboratory in Menlo Park, New Jersey, where he tested and analyzed the exhibits he had seen in Philadelphia and developed the incandescent electric lamp. With the success of the electric lamp, Edison organized his business ventures and formed the Edison Electric Company in 1890. However, Edison was not without competitors. At the same time, The Thomas Houston Company, led by Charles A Coffins, was competing with Edison in the electric business. However, as the electric business grew, the two competing organizations recognized it was entirely too difficult to produce a complete electric installation strictly based on their own technology. Because of this growing difficulty, the two organizations merged and formed the General Electrical Company in 1892.


GE Corporate Profile

In Table 7 below, the total number of GE’s workforce, both in the US and other countries, is presented for background information only.

Table 7 GE Workforce Profile

<table>
<thead>
<tr>
<th>Countries</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>158,000</td>
<td>161,000</td>
<td>155,000</td>
<td>165,000</td>
<td>161,000</td>
</tr>
<tr>
<td>Other</td>
<td>152,000</td>
<td>154,000</td>
<td>150,000</td>
<td>142,000</td>
<td>155,000</td>
</tr>
<tr>
<td>Countries</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>310,000</td>
<td>315,000</td>
<td>305,000</td>
<td>307,000</td>
<td>316,000</td>
</tr>
</tbody>
</table>

(GE Global Citizenship Report 2006, 78)
GE Philosophy on Corporate Citizenship

Upon analyzing the Corporate Citizenship Report of GE, the overall theme and mission for General Electric’s Corporate Citizenship is entitled “Solving Big Needs.” This title, as explained by the current Chief Executive Officer (CEO) Jeffery Immelt, is basically how GE sees its responsibilities in this world and how GE plans to leverage its size and help solve some of the world’s most complex problems such as the ever demanding needs for cleaner water and a cleaner and more efficient source of energy, just to name a few. According to Immelt, for the corporation to truly make an impact on the varieties of big needs of the world, the company needs to have two distinct and basic qualities:

1. A great company — GE must possess the capability, reach and resources to make a difference.
2. To be a good company — To find what really matters because true impact means defining success in ways that go well beyond the bottom line.

The intent of this thesis was to analyze GE’s citizenship report and corporate website to determine what activities the corporation claims to be doing and the results of these activities, in order to show if GE is truly performing to the standards it sets and what the corporation is reporting to their stakeholders and the general public.


GE Global Citizenship Network

The two qualities given by CEO, the General Counsel, Brackette B. Denniston III, and Chief Learning Officer, Robert L. Corcoran, helped GE develop three interlaced dimensions necessary for good Corporate Citizenship:

1. Strong Economic Performance and Stakeholders Impact
2. Rigorous Compliance with fundamental accounting and legal requirements
3. Going beyond compliance by supporting ethical actions

General Electric believes implementing/or striving to achieve these three dimensions in its corporate activities will help them to become industry leaders in four specific areas. These areas are highlighted throughout their citizenship activities, and in particular its Global Citizenship Reports. Four areas of focus that GE has highlighted are the following:

1. Ecomagination - Is a business strategy which GE is currently implementing. It involves the acceleration of the marketability and visibility of GE’s product portfolio and its technical support abilities to help the corporation’s various customers base on its various environmental issues that it might encounter.

2. Emergent Markets - One way GE is concentrating in growing its revenue in the future is by attempting to take a leadership role in Emergent Markets. In order to take a leadership role in these markets, GE believes it must integrate its corporate citizenship philosophy from day one of arrival. This is necessary so GE can help the communities solve their big needs and therefore create value for the communities having GE within the community.

3. Compliance and Governance - GE is determined to maintain a high level of compliance and governance. This is done by including all of its business leaders in the compliance and governance process. GE believes by having a high standard, it supports high performance of the company and a high integrity culture within all its business organization and remains non-negotiable.

4. Environmental Health and Safety (EHS) Systems and Goals - GE wants to maintain its good EHS management system, in which is designed to
establish global EHS standards, promote business leadership and foster accountabilities and performance of its business performances.

The corporation chose these four areas to focus its corporate citizenship activities because it believes these areas of focus are vital to maintain its business performance as well as its citizenship performance. 

(GE Global Citizenship Report 2006, 6, 7)

**Brief Overview of GE’s Citizenship Commitments**

In table 8 below, the thesis provided a brief outlook of GE’s citizenship commitments that were published in its first Citizenship Report in 2005. This brief historical overview is important because it is from the progress of its citizenship activities in 2005; GE sets its future citizenship targets.

**Table 8-2005 Citizenship Commitments**

<table>
<thead>
<tr>
<th>Focus Areas</th>
<th>2005 Progress</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>1. Delivered 11% continuous revenue growth and 12% earning growth.</td>
</tr>
<tr>
<td></td>
<td>2. Awarded Fortune’s “Global and America Most Admired Company.”</td>
</tr>
<tr>
<td></td>
<td>3. Published its first Annual Report.</td>
</tr>
<tr>
<td></td>
<td>2. GE updated The Spirit &amp; The Letter in 31 languages and distributed in 100+ countries</td>
</tr>
<tr>
<td></td>
<td>3. Conducted timely investigation of ombudsperson concerns with 97% closed to date, averaging</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------------------------</td>
<td>-------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Globalization/Human Rights</strong></td>
<td>1. Reorganized its business and implemented “Company to country” approach</td>
</tr>
<tr>
<td></td>
<td>2. Invested in “localization” through training, best practices and global technology center.</td>
</tr>
<tr>
<td><strong>Environmental Health and Safety</strong></td>
<td>1. Reduced its injuries and illness by 5% and its lost time cases by 8%.</td>
</tr>
<tr>
<td></td>
<td>2. Certified GE’s 100th Voluntary Protection Program (VPP) site and its 200th VPP/Global Star site.</td>
</tr>
<tr>
<td></td>
<td>4. Announced Green House Gases and Energy use goals</td>
</tr>
<tr>
<td><strong>Public Policies</strong></td>
<td>1. Assumed a more public role with public statement on the role of government leadership on energy policies.</td>
</tr>
<tr>
<td><strong>Communities</strong></td>
<td>2. Contributed $215 million globally, including $50 million in cash, products, and services for disaster relief from the GE family.</td>
</tr>
<tr>
<td></td>
<td>3. GE Volunteers contributed more than 1 million volunteer hours on communities and relief initiatives worldwide.</td>
</tr>
<tr>
<td><strong>Customers, Products and Services</strong></td>
<td>1. Launched Ecomagination</td>
</tr>
<tr>
<td></td>
<td>2. Filed 2,561 patents</td>
</tr>
</tbody>
</table>
| Employees | 1. Paid out $2.4 billion in pensions and nearly $2 billion in other insurance costs.  
2. Invested in $1 billion in training and development. |
| --- | --- |
| Suppliers | 1. Conducted extensive suppliers audits, which developed 12,045 findings with 93% closed to date.  
2. Digitized audit finding tracking. |
| Shareowners | 1. Maintained inclusion in the Dow Jones Sustainability Index (DJSI).  
2. Added to the Innovest Global 100 “Most Sustainable Companies” |

(GE Global Citizenship Report 2006, 8)

**Environmental Health and Safety Policy**

As mentioned in the section above, GE believe EHS is a vital part of GE’s operations and is one of the focal points in which GE takes an active part in continuously improving. The EHS policies are as follows:

1. 100% EHS compliance everywhere GE operates and sells its products  
2. Eliminate hazards and provide a safe working environment  
3. Minimize the use and release of hazardous materials  
4. Assess all new activities and products regarding their EHS impact  
5. Implement GE EHS management system in all of its locations.

However, as the company mentions in its corporate website, it has identified four fundamental building blocks that must be integrated into its management system in order to make its EHS policies a reality. These building blocks are:

1. Operation responsibility and accountability for EHS performance  
2. The EHS programs that GE has implemented must be applicable to its global operations.
3. GE has effective training and tools for its operations


GE EHS Operational System

In order to inform and update all GE’s business units on the direction of corporate EHS policies and priorities, GE has an EHS council led by its Vice President of EHS, Stephen Ramsey. The Vice President meets three times a year with EHS leaders of GE’s various business units to not only exchange ideals of best practices, but also inform the leaders about updates of EHS policies and priorities. Figure 7 below shows the mechanism in which EHS policies are implemented and improved within GE.

Figure 7- GE Operational System

Waste Release

In the area of waste release, GE has undertaken to not only reduce waste from its own operations, but also to help its customers deal with rising environmental issues through its Ecomagination program. GE’s Ecomagination program is based on four commitments it has pledge to achieve:

1. Double its investment in Research and Development- GE has expended its investment in cleaner technologies from $700 millions in 2005 to $1.5 billion by 2010.

2. Increase its revenue from Ecomagination products- GE will grow revenue from products and services that provides significant measurable environmental performance advantages to customer of at least $20 billion by 2010.

3. Reduce Green House Gases (GHG) emissions and improve energy efficiency of its operations-GE is committed to reducing its GHG emissions 1% by 2012 and reducing the intensity of its GHG emissions 30% by 2008, and improving energy efficiency 30% by 2012 (compared to its baseline numbers in 2004).

4. Keep public informed- GE’s annual Citizenship report, Ecomagination website and advertising will be some of the ways GE will keep the public better informed.

(GE 2006 Global Citizenship Report, 23)

In this particular section of waste emission, this thesis focused on commitments 1 and 3 above and also delve deeper into GE’s EHS metrics in its corporate website.

Environmental Releases

Even before the inception of the Toxic Release Inventory (TRI) regulations in 1988, GE has been reporting its chemical releases to the Environmental Protection Agency (EPA). (GE’s first year reporting was 1987.) As an overall trend, GE has reduced its release by more than 80% as a result of voluntary actions performed by its business units. Figure 8 below shows the TRI releases between 2000 and 2004.
Even though the majority of GE’s business units have performed double-digit reduction of chemical releases into the environment, GE Advanced Material Units and GE Plastic Units offset the majority of these reductions. These two business units account for the majority of its global emissions and approximately 70% of its United States emissions. Figure 9 below shows the TRI release of GE Advance Material Units and GE Plastic Units.

Figure 8-GE TRI Releases

GE COMPANY TOXIC RELEASE INVENTORY (TRI)\(^1\)
(in millions of pounds)

<table>
<thead>
<tr>
<th>Year</th>
<th>TRI Releases</th>
</tr>
</thead>
<tbody>
<tr>
<td>00</td>
<td>6.25</td>
</tr>
<tr>
<td>01</td>
<td>5.07</td>
</tr>
<tr>
<td>02</td>
<td>4.58</td>
</tr>
<tr>
<td>03</td>
<td>1.57</td>
</tr>
<tr>
<td>04</td>
<td>5.00</td>
</tr>
</tbody>
</table>

33/50 Chemicals

Figure 9-GE Plastic and Advance Material Releases

GE PLASTICS AND ADVANCED MATERIALS EMISSIONS\(^1\) (in millions of pounds)

<table>
<thead>
<tr>
<th>Year</th>
<th>International VOC Emissions</th>
<th>U.S.TRI Emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>5.3</td>
<td></td>
</tr>
<tr>
<td>02</td>
<td>5.1</td>
<td></td>
</tr>
<tr>
<td>03</td>
<td>4.9</td>
<td></td>
</tr>
<tr>
<td>04</td>
<td>5.2</td>
<td></td>
</tr>
</tbody>
</table>

(GE Global Citizenship Report 2006, 53)
Upon thorough research within GE’s corporate website, GE has failed to explain in-depth which activities it is currently pursuing in order to reduce its releases within the environment. The only mention of activities that GE is currently performing in this area is the Chemical Management Program where its business units are actively performing voluntary measures to reduce its TRI releases (without going into in-depth detail on what these current activities actually are).


Waste Generation

Currently, GE does not have published corporate-wide numbers in waste generation and water usage. However, GE claims that these waste generation numbers and water usage numbers have been collected by many of its business units for use in internal reporting. The corporate-wide numbers in 2006 will be collected during the first quarter of 2007 and be used for process improvement. Since there is no corporate wide number for waste generation and water use, GE also did not give in-depth detail of the activities it is currently performing in order to properly take care of the waste it currently generates. However, GE does specifically state that it is dedicated to reducing the waste it generates by sending the waste to the proper recycling and treatment facilities that meet the company’s standards, which GE claims are protective of its workers and the environment (There were no defined measures of corporate safety standards, but GE claims it has significantly higher standards than the local communities where GE business resides).

(GE Global Citizenship Report 2006, 55)

Air and Waste Water Exceedances

Even though GE does not have a clearly defined corporate-wide metric for the area of waste generation, the corporation has kept public statistics in the areas of Air and Waste Water Exceedance and Green House Gases (GHG) emission. In this section, the thesis looked at these air and wastewater incidents. GE defines air and wastewater exceedances as any of the following:
1) Exceeds any wastewater parameter or applicable effluent standard

2) Exceeds any limit on the quantity of air pollutants emitted

3) Is found to be operating without any required air or wastewater permit

Figure 10 below shows the performance of GE in recent years in this arena:

**Figure 10- Air and Water Exceedances**

The graph above shows that 2005 was a mixed year for GE. In the area of air exceedance, GE has the lowest number ever with 11-recorded cases between all of its global facilities. However, the corporation had a slight increase of wastewater exceedance from the 2004 level. GE attributes this increase of wastewater exceedance to operational issues it has discovered with newly acquired facilities. According to GE’s corporate website, the company is in the process of integrating these new facilities, improving operational process controls and making additional capital investments when needed.


**GHG Emissions**

For the area of GHG emissions, the thesis discovered that this is the area where GE has the most defined goals and the clearest path to achieve them. In its first corporate wide Citizenship report of 2005, GE announced its corporate wide goals for the reduction of GHG:

1. 1% absolute reduction of GHG by 2012
2. 30% reduction of GHG intensity (GHG Emission/Revenue) by 2008

Footnote - All goals that were announced by GE have the baseline year of 2004.

Upon announcing these goals, the company realized that the absolute reduction of GHG by 1% corporate wide might present a technical challenge. Due to the size of GE worldwide and its estimated business growth, GE would need to implement various steps and activities to ensure that the corporation as a whole meets its goals. These steps are:

1. Forming an internal cross-business and cross-functional team to develop program details and requirements and to identify and drive implementation of best practices and development of its technology assets.
2. Setting clear expectations for individual GE business to prepare reduction plans.
3. Regularly schedule top management for involvement in the review of business plan, and progress toward reduction targets.
4. Launch a corporate wide communication campaign to engage all employees of this effort.


Aside from implementing these corporate wide communication programs to ensure that all of the business units are ready for the challenges, GE has also started to reduce the emission of GHG from every scenario imaginable.

**Reduction Activities**

In order to properly understand the activities that GE is undertaking to eliminate Green House Gases, a graphical display of GE’s GHG emissions is displayed in figure 11:
From the graph above, carbon dioxide accounts for nearly 80% of GE’s emission. The CO$_2$ is a result of the combustion of fuels from GE’s facilities and from the generation of purchased electricity, steam, hot water and chilled water at third party facilities and the emission from GE’s power plants. In order to help reduce the emissions of CO$_2$, GE is currently researching different clean technologies and redesigning new technologies in order to improve fuel consumption and GHG emission. For example, in the transportation initiatives, GE is developing a heavy-hybrid haul locomotive, which improves the fuels efficiency of the locomotive. In the jet engine arena, GE is developing new technologies for the GEnx jet engines, which improves fuel efficiency and reduces the Green House Gases of Nitrogen Oxide (NOx) emission. Aside from developing new clean technologies, GE is also redesigning its fuel injections system and its engine pistons and turbo design, all of which will reduce GHG emission. (World Wide Web, www.ge.com/en/citizenship/spotlight/ecomag1.htm, “GHG Initiatives 1”)

**GHG Disclosure**

In another form of good corporate citizenship, GE is participating in the Carbon Disclosure Project (CDP). By participating in this project, GE has taken an active role in becoming more transparent and disclosing activities to its stakeholders. In the Carbon Disclosure Project, institutional investors had petition for the disclosure of information on Greenhouse Gas Emissions to the 500 largest global companies. The CDP gathered the GHG information by sending out surveys on how each of the global companies

**Figure 11- GE GHG Emission**

**DISTRIBUTION OF EMISSIONS BY GHG TYPE**
(Excluding power plants)

<table>
<thead>
<tr>
<th>GHG Type</th>
<th>Emission Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO$_2$</td>
<td>86.76%</td>
</tr>
<tr>
<td>HFC-134a</td>
<td>11.98%</td>
</tr>
<tr>
<td>SF$_6$</td>
<td>0.87%</td>
</tr>
<tr>
<td>N$_2$O</td>
<td>0.28%</td>
</tr>
<tr>
<td>CH$_4$</td>
<td>0.11%</td>
</tr>
<tr>
<td>PFC</td>
<td>0.00%</td>
</tr>
</tbody>
</table>
responded to climate change issues. From the results of these surveys, the Carbon Disclosure Project noted that GE is very well positioned in coming up with low carbon solutions to various GHG emission markets.


**Energy Conservation**

Aside from undertaking clean technology research to reduce GHG emission, GE is also taking another approach to reduce GHG emission by finding ways to reduce its energy needs and discovering clean energy source. For example, GE is undertaken a global corporate project to re-lamp its manufacturing facilities with GE efficient lighting products. Also, GE is the largest participating member of the United States Environmental Protection Agency's Energy Star Million Monitor Drive which allows power saving features on personal office computer.


Aside from these corporate wide energy initiatives, GE has also undertaken business unit specific energy saving projects. For example, in its refrigeration manufacturing, GE has substituted an ozone depletion substance that was used for its foam-blowing agent. Instead GE is using a substitute agent named HFC-134a, which not only helps the energy efficiency of GE’s refrigerators but also does not deplete the ozone. This initiative by GE helped the corporation to receive the Stratospheric Ozone Protection Award from the EPA in 2004.


The examples listed above are just a few of the activities GE claims it has undertaken in order to not only eliminate GHG emission but also increases its energy efficiency and reduces its energy needs. According to GE’s citizenship report, the corporation has currently undertaken over 500 energy projects globally which have resulted in a reduction of 250,000 tons of GHG emissions and a saving of $14 million a year in energy costs. The amount of GHG reduction achieved by GE is equal to the emission of 50,000 cars on the roads.

Much like the sections above, GE has also taken a very active role in researching and developing new energy technology which will not only reduce the corporation need for combustible energy but also increases the efficiency of how energy is delivered. The following are just few GE research initiatives that are currently taking place:

1. In the renewable energy source area, GE has undertaken numerous research projects. For example, GE has taken advantage of the power of nature by harnessing the power of the wind and sun. GE is currently researching the development of a more sophisticated wind turbine, which contains advanced control features, and a new blade designed to help better maximize wind capture. GE is also currently partnering with the U.S. Department of Energy (DOE) to design a next-generation offshore wind turbine, which will be one of the most powerful wind turbines in the world. Aside from using the wind, GE is also investigating how to use photovoltaic in order to harness the power of the sun. GE is manufacturing a solar electric power system by building roof tile solar panels and installing them in private homes and in businesses. Installing these panels can reduce monthly energy bills by up to 60% each month.

2. In the arena of alternative fuels, GE is researching several different alternative fuel sources. For example, GE scientists are developing technologies for its turbines and engines that will burn a wide variety of bio-fuels, which will make it more flexible. Aside from these bio-fuel technologies, GE is also researching and investing capital on increasing the production of hydrogen and it storage. Once the infrastructure for hydrogen production and storage is developed, GE will utilize this carbon free fuel for transportation and other purpose that require fuel.

3. Cleaner Coal Technology- Currently GE is working on technology to convert coal into a clean burning fuel. For example, GE scientist is trying to improve the existing technology of the Integrated Gasification
Combined Cycle System (IGCC). By improving the IGCC, GE can increase process efficiency while reducing capital costs and atmospheric emissions.

4. Energy Efficiency- In its energy efficiency initiatives, GE researchers are undertaking numerous projects: 1) GE scientist is developing new membrane materials and energy recovery devices which would reduce the cost and energy consumption of a desalination plant up to 30% in the next couple of years; 2) GE is working to bring the organic light emitting diode (OLED) lighting applications to customers which will not only be mercury free by also deliver a dramatic improvement in the level of efficiency.

FOOTNOTE- For a complete list of GE’s research initiatives follow the work cited below.

Social Investment

In this section of the corporate case study, the thesis took an in-depth looked at what activities and investments GE has undertaken to improve not only the surrounding communities in which it resides, but also the rest of the world. GE’s social investment initiatives can be broken down into the following:

1. Promotion of Education Initiatives
2. Promotion of Volunteerism
3. Promotion of Service and Product Donations
4. Workers Rights

Education Initiatives

In GE’s philanthropy programs, one of the most well publicized programs is GE’s College Bound Program. The College Bound Program aims to strengthen the college readiness skills for 5-targeted school area. For example, GE donated $25 million to the Jefferson County public school district in Louisville, Kentucky, in order to improve the school system, particularly the students’ mathematics and science skills, so they can be ready for college and later compete in the global economy. Since the inception of this
program in 1989, GE has broadened the reach of the program from more than 20 high schools to the current five targeted school districts. In 2005 alone, GE made donations of more than $71 million to try and promote and strength education. Aside from aiming to improve the college bound rate of U.S. students, GE is also promoting and practicing its social citizenship activities in emergent markets. For example, GE supports the China Youth Development Foundation. GE holds seminars in both Shanghai and Beijing, China, for teachers and administrators in rural areas and teaches them the basics of educational theories, disciplinary reforms, school administration and hands-on training skills. It is the hope that, by better educating and train the school’s teachers and administrators, the students will benefit as well. Another of GE’s education projects in the emergent market is the donation of a $600,000 grant to the International Medical Services for Health (INMED) in Brazil. The goal of this grant is to improve the school’s readiness by developing the skills of the teachers and principal in order to help students in these slums to improve basic literacy skills, math skills and overall life skills.

(GE Citizenship Report, 66)

**Volunteerism**

With GE’s philanthropy programs, GE employees and retirees are encouraged to volunteer their time to community service. To date GE has over 200 volunteer councils in over 36 countries around the world. In 2005, its employees and retirees volunteered more than one million community hours to local communities. For example each year, GE’s employees around the world participate in Global Community Days. In Global Community Days, GE employees help communities with needs such as renovating shelters for babies born with HIV in Portugal, looking after socially disadvantage kids in Germany or establishing a drug education and counseling facility in Cape Town, Africa. Whatever the cause, thousands of GE employees take an active role in its Global Community Days.

(GE Citizenship Report, 67)
Service and Product Donation

Even though GE in its citizenship report has reported it donates not only money and time, the corporation also claims that in times of nature disasters GE will take an active leadership role in helping communities around the world that have been struck by unforeseen and natural disasters. For example in the United States Gulf Coast of Louisiana, when the state was devastated by hurricane Katrina, GE donated more than $24 million in cash, products and services such as power generators, water purification and medical services in order to try and restore some of the state’s services. (GE, Citizenship Report, 68)

Worker’s Right and Benefits

From the sections above, GE in its citizenship report claims that it takes an active part in helping the communities in which it resides. However, aside from helping its communities, part of GE’s social investment and donation program is invested in its employee rights and benefits. In an era where workers change careers and employers more often, GE is trying to combat this trend by promoting its worker’s right and benefit programs. For example in recent years, corporations have been cutting worker’s benefits such as the medical services and retirement benefits. In order to properly manage its retirement investments, GE has tried to effectively manage its pension assets. GE benefits investment committee meet twice a year with its chief financial officers and four of its senior leaders. The management meeting is used to evaluate its current investments and also assess potential investment opportunities by not only looking at the bottom line of the corporations in which GE is interested, but also looking at the corporation’s labor relations, shareholder relations and environmental policies. (GE, Citizenship Report, 81)

Ombudsperson Process

Aside from managing its retirement benefits, GE also takes an active part in working with its employees in addressing any integrity issues through its ombudsperson process. The ombudsperson process is a mechanism where the employees can ask questions and report problems without the fear of retaliation from management. The
ombudsperson is available in all of GE’s facilities, which cover all of GE’s business units. The ombudsperson process has resulted in some great result as proclaim by GE. For example, the process led directly to 293 disciplinary actions being taken, which included 111 employee separations, 20 vendor disqualifications, 135 warnings, 9 job changes and 18 financially impacted employees.

(World Wide Web, 

Supplier Chain Audit

In this last section of GE’s corporate case study, the thesis looked at the corporation’s relationship with it suppliers. The thesis in particular, looked at the current criteria GE is mandating its supplier to follow in order to do business with the General Electric Corporation and also what steps GE is implementing in order to ensure that its suppliers are following the corporate criteria.

Supplier Certification

In order to do business with GE, the corporation requires all its supplier to certified in the following areas:

1. Do not employ workers below the applicable minimum requirement.
2. Do not utilize forced, prison or indentured labor, or workers subject to any form of compulsion or coercion.
3. Comply with laws and regulations governing minimum wages, hours of service and overtime wages for employees.
4. Comply with laws and regulations protecting the environment and do not adversely affect the local community.
5. Provide their workers a safe and healthy workplace.

These certification requirements are mandatory for GE suppliers in order to maintain business relations with the corporation. For suppliers that reside in developing countries, GE inspects the suppliers’ facilities prior to placing its order with the facility and periodically afterwards.

(GE Citizenship Report, 87)
Supplier Verification Process

With any compliance initiatives, the goal of the corporation is to develop a process to ensure that its suppliers are abiding by the mandates GE is requiring of its suppliers. Because of this, GE has developed a Corporate Audits Staff (CAS) team and the Corporate Environmental Program team (CEP). Together these teams have joined; this is done in order to perform spot checks of its suppliers on a rolling one-to-three-year schedule pending past performance on previous audits. This audit program developed by GE has yielded great results. GE has audited more than 4,475 suppliers between 2002 and 2005, which generated more than 12,045 findings and resulted in 272 supplier contract terminations. To date, GE has closed more than 93% of its supplier audit findings. Figure 12 and 13 below show the results of GE’s supplier audit findings by regions and categories.

Figure 12- GE Audit Finding By Regions

![Figure 12 - GE Audit Finding By Regions](image)

Figure 13- GE Audit Finding By Categories

![Figure 13 - GE Audit Finding By Categories](image)

(GE Citizenship Report, 87, 89)
Verification Process

To ensure that GE is currently implementing these activities that it has reported in its citizenship report, this thesis have attempted to verify some of the corporation’s activities. However due to the nature of the activities and the limited amount of information available (because GE has only published two corporate wide citizenship reports, and the activities proposed are research based and information presented was very limited), the thesis recognizes it is not a direct verification of all activities proposed. The thesis also researched whether the Pacific Sustainability Index has analyzed GE’s Corporate Citizenship Report in order to have third party verification. The verification process attempted to verify GE’s philanthropy such as the College Bound Program, the Global Community Days and the Ecomagination projects.

College Bound Program

An article published by the American Youth Policy Forum looks at GE’s College Bound Program’s effect on rural and urban areas on the eastern seaboard of the United States. The article first introduced the College Bound Program of GE by providing data such as donations given and the criteria GE requires of the College Bound Program school boards for the receipt of the corporations grant.

In 1989, GE funds began the College Bound Program as an initiative to reform the high school districts near GE’s facilities. The initiative began by giving five-year grants of $250,000 to $1,000,000 in the hopes of significantly improving or doubling the college attendance rates. For the school districts that have received GE’s grants, the school system has to not only reform its curriculum but also establish professional development and service. Even so, GE does not specify what changes need to be made; the only requirements are that GE employees be involved with the new implementation of the school programs and also allow the employees to volunteer in its implementation.

By active participation in its programs, the results of GE’s College Bound Programs have met with great success. Of the 10 schools the evaluator for the Youth Policy Forum looked at, four schools have more than doubled their college enrollment within five years of participating in the College Bound Program. For example, the Valley High School in Albuquerque, New Mexico, increased its college-bound rate from 26% to
Aside from this one example of improvement, the Youth Policy Forum article also discovered that overall the high schools that participated in GE’s program have a higher college enrollment rate than the national average. The enrollment rates are 76% vs. the national average of 70.8%. Overall, from this article, the thesis has verified that GE is actively participating in the College Bound Program as reported in its Citizenship Report.


**Community Day**

Beside from its philanthropic donations in the College Bound Program, another one of GE’s popular social initiatives is its Global Community Day. By doing additional research, this thesis has found additional sources to confirm GE’s claim that it is participating in its Global Community Day. For example in the Charlotte Mecklenburg School, the GE Advance Material Division spent a day rejuvenating Long Creek-Elementary School and Hopewell High School. During the Global Community Days, GE employees help renovate small and large playgrounds, painting a mural in the media center, building benches and installing picnic tables for the children and cleaning unsightly areas in front of the schools.


**Ecomagination Project**

In its citizenship report, General Electric has numerous times mentioned its Ecomagination Initiatives. During the verification process, the thesis has discovered and verified GE’s Ecomagination Projects. In an online article of Water World Online, the article discussed GE’s partnership with the Algerian government to build the largest seawater desalination plant in Hamma, Algeria. The water plant is part of GE’s Ecomagination efforts and aims to deliver drinkable water to 25% of the population in Algeria’s capital. The plant was slated to begin construction in July 2005 and is scheduled to be complete within 24 months. This desalination plant will bring over 53
million U.S. gallons and will also reduce dramatically the overall energy use and overall cost.


Verification Conclusion

During the verification process, the thesis has confirmed some of GE’s activities it has reported in its citizenship report. However, the activities verified are very much in the social investment categories and technical solution projects that GE is solving for its customers. The reasons these activities were chosen rather than activities that GE is currently doing in its own facilities worldwide is because the corporation has failed to give specific information for these activities. GE as a whole claims that it has only started to collect corporate wide numbers in areas such as waste generation and its disposal methodology, and these numbers will not be available till 2007. Due to this lack of specific information on these activities, it is difficult for the thesis to rate GE on its claim of specific citizenship activities it is performing within its own facilities and therefore cannot prove or disprove GE’s claims. This notion was further substantiated by the fact that the Pacific Sustainability Index that was used by the previous case study (Pfizer) does not include a sustainability analysis for GE’s Citizenship Report.
6.3 Minnesota Mining Company

Corporate Overview

The Minnesota Mining Company (3M) is a diversified company that was founded in 1902 in a town called Two Harbors, Minnesota. At first, the corporation focused on mineral deposits within the town that were used as a grinding-wheel abrasive. However, as the original founding fathers of the company discovered, the minerals that the corporation was mining for had little value as a business commodity. Because of this discovery, 3M had wisely decided to pursue other avenues of business and moved the company to the nearby town of Duluth, Minnesota, to concentrate on producing sandpaper products. Even with this change of product line, 3M struggled for years. It wasn’t until, the corporation had mastered the quality of its production and supplier chain that new investors began to take interest in the corporation, and 3M moved to its current headquarters in St. Paul, Minnesota in 1910.

(World Wide Web,
http://solutions.3m.com/wps/portal/3M/en_US/our/company/information/history/,
“History”)

From this humble beginning in the grinding-wheel abrasive and sandpaper markets, 3M have vastly expanded its presence into other consumer and business arenas. Currently the corporation has a business presence in the following markets: consumer and office; display and graphics; electro and communications; health care; industrial and transportation; and safety, security and protection services. As a result of these market presences, 3M has more than 69,000 employees and over 139 plants worldwide. 3M products are sold in 200 countries and have grossed more than $21.0 billion.

(World Wide Web,

Corporate-Wide Value

After analyzing 3M’s corporate website, the corporation had discussed that much of 3M’s sustainability policies and practices are tied to its fundamental corporate values. These corporate-wide values were reported and are as follows:
1. 3M is dedicated to acting with uncompromising honesty and integrity in everything it does.

2. The corporation is also dedicated to satisfying its customers with innovative technology and superior quality, value and service.

3. 3M is committed to providing the corporation’s investors with an attractive return through sustainable, global growth.

4. 3M is respectful of its social and physical environment around the world.

5. The corporation values and develops its employees’ diverse talents, initiative and leadership.

6. The corporation wants to earn the admiration of all those associated with 3M worldwide.


3M Sustainability Objectives

As discussed in the above section, the corporation’s sustainability objectives, policies and activities are closely linked to its corporate-wide values. The corporation publishes their sustainability objectives annually and re-evaluates and/or identifies new objectives in order to continuously improve and move toward sustainability. This process occurs through 3M’s various management system such as its ISO 14001, Six Sigma methodology, and feedback from its stakeholders. The following are some key sustainability objectives that the corporation has published through its corporate website:

1. Reduce the corporation’s environmental footprint.

2. Assure that the corporation’s products are safe for their intended use through their entire life cycle.

3. Assure the appropriate management of 3M health and safety issues that may touch the corporation’s customers, neighbors and the public.
4. Maintain a safe and healthy workplace.

5. Satisfy the corporation’s customers with superior quality and value.

6. Provide the corporation’s employees with a supportive, flexible work environment.

7. Support the local needs and promote education within the communities where 3M employees and retirees live and work.


Key Sustainability Strategies

In order to achieve 3M’s sustainability objectives, 3M claims that its pursuit for sustainability encompasses the pursuit of customer satisfaction and commercial success within a framework of environmental, social and economic values, (i.e., the pursuit of the Triple Bottom Line). The following are some of the key sustainability strategies that the corporation had discussed as essential for the corporation’s continuous improvement toward sustainability.

For example, regarding 3M’s environmental sustainability expectations, the corporation is using the following strategies to lessen its environmental footprint:

1. Utilizing its Environmental, Health and Safety Management System to help the corporation’s business units identify key issues and long-term solutions.

2. Utilizing its Life Cycle Management to continuously improve the environmental, health and safety impact of its product and processes.


4. Setting and meeting aggressive environmental goals.

In the area of being a community and employee Conscious Corporation (the social aspect of the Triple Bottom Line), 3M’s corporate sustainability strategies are the following:
1. “Attracting and retaining a diverse and talented work force and sustaining a workplace where individual initiative is rewarded, employee health and safety is safeguarded, and innovation is a way of life.

2. Supporting continuous learning and knowledge sharing to increase personal satisfaction, organizational effectiveness and business results.

3. Investing in communities where 3M operates; providing jobs for local residents; and supporting education, the environment, social and economic development.”


**Governance, Management System and Policies**

3M claims in its corporate website that the corporation is dedicated to the pursuit of sustainability. However, in order to understand how 3M as a corporation makes its sustainability policies, this thesis will examine how the governance structure of the corporation is organized. This is essential in order to understand how 3M as an international conglomerate makes and implements corporate policies and decisions. Figure 14 below shows the organization structure of 3M and the board’s responsibilities on the public issue of sustainability.
The 3M Board of Directors, through its Public Issues Committee, addresses sustainability by performing the following tasks:

1. “Reviewing public policy and social trends affecting 3M”.

2. “Monitoring the company's corporate citizenship activities.”

3. “Evaluating company policies and programs to enable 3M to respond appropriately to its social responsibilities and the public interest in the conduct of its businesses, including activities related to the improvement of the environment and community relations.”

(World Wide Web,

Aside from its management structure in making corporate sustainability policies, 3M has variety of resources that the corporation has made accessible to its employees worldwide in order to ensure that its corporate-wide policies are followed and understood.
Centralized Policy Management Center and Global Business Manual

3M recently launched a centralized, electronic corporate policy center. The center housed all the corporation’s policies; procedures and guidelines regarding all aspect of its business conduct and are available to all employees and on-site contractors through the company’s intranet. Aside from its Policy Management Center, 3M have also created a single business conduct manual for all its employees worldwide. The Business Conduct manual is available in electronic and print form.


Environmental Health and Safety (EHS) Progress

As discussed in the above section, 3M have publicized its dedication to achieving sustainability by improving its environmental efficiency in its business operation (i.e., lessen the corporation’s environmental footprint) and becoming a more socially conscious worldwide corporation (i.e., by being fair and honest to its employees and investing within its organization and communities). In the following sections, this thesis will look at what 3M has accomplished in these particular areas. In the area of environmental performance, this thesis looked at what activities 3M are currently implementing in its waste management, emission and energy usage and conservation. In the area of being a socially conscious corporation, this thesis looked at 3M’s corporate donation, social investments and supplier relations.

Environmental Performance-Goal Achievement

In order to properly track its corporate environmental performance, the 3M Corporation has developed an EHS scorecard within its EHS management system. The scorecard covers the corporation’s facilities worldwide and is applicable to all its divisions and all aspect of the corporation’s operations regarding it environmental performance. In table 9 below, the past results of 3M’s environmental performance are
shown. Table 10 lists the next generation of environmental goals the corporation is pledging to meet. The environmental goals listed in table 2 below are the new five-year environmental goals that will cover the time span from 2005 (when it was initially set) to 2010.

Table 9-Past Environmental Performance

<table>
<thead>
<tr>
<th></th>
<th>2000 Base Year</th>
<th>Goal (2005)</th>
<th>2005 Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy (million BTU/$million sales)</td>
<td>1,830</td>
<td>1,460</td>
<td>1,330</td>
</tr>
<tr>
<td>Waste (lbs/$million sales)</td>
<td>27,000</td>
<td>20,300</td>
<td>18,900</td>
</tr>
<tr>
<td>VOC (lbs/$million sales)</td>
<td>1,660</td>
<td>1250</td>
<td>646</td>
</tr>
<tr>
<td>TRI Releases (lbs/$million sales) (U.S. only, TRI Releases based on year reported and sales based on year released)</td>
<td>627</td>
<td>314</td>
<td>224</td>
</tr>
<tr>
<td>3P Projects</td>
<td>194*</td>
<td>400**</td>
<td>1262**</td>
</tr>
<tr>
<td>3P Savings</td>
<td>$22,400,000</td>
<td>NA</td>
<td>$181,900,000**</td>
</tr>
<tr>
<td>3P Pollution Prevented (tons)</td>
<td>4,859</td>
<td>NA</td>
<td>516,019**</td>
</tr>
</tbody>
</table>

Note: Energy, Waste, VOC, and TRI Releases data are normalized to $1 million of net sales.

Note: 1 pound (lb) = .454 kilograms

* Five-year total for 1996-2000
** Five-year total for 2001-2005
3P=3M’s Pollution pay program
Table 10-2010 Goals

<table>
<thead>
<tr>
<th>Proposal Reduction</th>
<th>25%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduce Volatile Air Emission</td>
<td></td>
</tr>
<tr>
<td>Improve Energy Efficiency</td>
<td>20%</td>
</tr>
<tr>
<td>Reduce Waste (Non Product Output) by</td>
<td>20%</td>
</tr>
<tr>
<td>Completed Pollution Prevention Pay Projects.</td>
<td>800</td>
</tr>
</tbody>
</table>


Waste Reduction

As claimed by the corporation, 3M recognize an important environmental sustainability strategy is to eliminate or reduce its waste emissions in daily operations. 3M is specifically focused on eliminating or reducing its releases into air and water and the generation of solid waste. Because of this belief of waste emission reduction/elimination as an important corporate strategy, 3M were especially focused on the strategy of waste minimization to achieve this goal. The corporation believes that waste minimization not only can help reduce its environmental impact in its communities, but is also a very viable financial saving option.

Solid Waste Reduction

In this section of the case study, this thesis looked at 3M’s initiatives in reducing its solid waste generation. 3M defined waste as unused raw material. Therefore, the reduction of waste generation means less raw material purchases and can add to the corporation’s bottom line. Due to this possible financial and environmental implication
on 3M's bottom line, the corporation's employees are always consciously pursuing activities to reduce the generation of waste. For example, 3M's employees are always looking for ways to reuse the waste that the corporation generates back into its operations (recycling) and/or finding other manufacturers who might want to use those wastes in their operations. While recycling will remain an important mechanism for 3M to reduce its solid waste generation, the corporation believes that preventing the generation of waste is a more sustainable approach. Therefore 3M's future progress will rely primarily on pollution prevention such as design changes in products and processes and on internal recycling/reuse programs. Even though these programs will be longer and more expensive to accomplish, according to 3M it can have a more dramatic impact not only on the corporation's bottom line but also can enhance the corporate reputation as an environmentally friendly corporation.


Air and Green House Gas Emission Reduction

Aside from its solid waste minimization strategy, 3M had made the reduction of air emission of volatile organic compounds and Green House Gas (GHG) one of its top emission reduction/elimination priorities. The reason for this commitment was because most of the corporation's releases of volatile organic compounds (VOCs) were through air emission. Eighty percent of 3M's Environmental Protection Agency's [EPA] Toxic Release Inventory release was through air emission in 2004. In Figure 15 though 17, 3M's emission of VOC, TRI releases and GHG emission are shown.
Figure 15-3M’s VOC Emissions

![VOC Emissions Chart]

Figure 16-3M’s TRI Releases

![TRI Releases Chart]

(World Wide Web,
Figure 17- 3M’s GHG Emissions


From the graphs above, the result of 3M’s air emission reduction/elimination programs achieved an overall decrease in the corporation’s air emission. These reductions in gas emission have been mainly attained by implementing the following programs:

1. Development of a solventless technology. (3M have been making advances in solventless technologies since 1990.)

2. Implementation of a Pollution Prevention Programs (3P Program).

3. Installation of pollution control equipment.

4. Development of a worldwide GHG Inventory Strategy in order to identify GHG emission sources. (The inventory was developed by using the World Resource Institute/World Business Council for Sustainable Development GHG Protocol and is third party verified.)

5. Partnership with the EPA in the agency’s Climate Leader Programs.
6. Development of a Strong Energy Conservation Programs (will exam further in sections below)

**3M’s Pollution Pays Program**

3M’s Pollution Pays Program was arguably the first corporate pollution prevention program. The program was launched in 1975, and 3M and was perhaps one of the first corporation to believe that the most effective way to prevent pollution within its business operation was to “prevent pollution at the source wherever and whenever possible.” In order to achieve this goal, the majority of the 3P program seeks to eliminate the source of pollution in its products and manufacturing processes through the following activities:

1. Product reformulation.
3. Equipment redesign.
4. Recycle and reuse waste materials.

A great example of 3M’s pollution prevention program is its Life Cycle Management (LCM). The LCM is now used (according to 3M) in the corporation’s New Product Introduction System in which environmental, health and safety issues are taken into account for every stage of a product’s life cycle. As a result of 3M’s innovated 3P program, the corporation has prevented over 2.5 billion pounds of pollutant from its products and manufacturing process, which equates to a rough estimate savings of over $1 billion since the inception of this corporate-wide program.


**3M’s GHG Inventory**

As a result of 3M’s development of a GHG Inventory (for tracking the progress of set environmental goals), the following were identified as GHG emission sources:
1. A direct emission of CO$_2$ from stationary combustion of fossil fuels, waste and solvents.

2. An indirect emission of CO$_2$ from the use of electricity and steam.

3. A direct emission of CH$_4$ from wastewater treatment.

4. A direct emission of CO$_2$ from 3M-owned and leased mobile sources.

5. A direct and process-related emission of other greenhouse gases.


**Energy Conservation**

Beside from 3M’s Pollution Prevention Program, 3M recognized that energy conservation would play a significant part in reaching the corporation’s goal in GHG emission. In order to accomplish this strategy, the 3M Corporation has developed a corporate wide energy policy and the strategies that are needed in order to achieve this policy. The Corporate Wide Energy Policy of 3M is listed as the following: 3M are dedicated to promote the efficient use of energy to produce and deliver products and services to its customers.

The following are the strategies that 3M listed as necessary to support the corporate Energy Policy:

1. “Improve energy efficiency by establishing and implementing effective energy management programs worldwide that support manufacturing capabilities while providing a safe and comfortable work environment.”

2. “Emphasize energy efficiency as a factor in product development and in process and facility design.”

3. “Secure adequate and reliable energy supplies at the most economical prices and implement contingency plans to protect operations from energy supply interruptions.”
4. “Encourage continuous energy conservation by employees in their work and personal activities.”

5. “Drive further development of internal and external energy efficient and innovative technologies.”

6. “Cooperate with governmental agencies and utility companies on energy programs.”

7. “Support national governmental energy efficiency policies.”


In order to follow the strategies that are listed above, the following are some example of these energy strategies being implemented in 3M’s business operations:

1. The new product development teams of 3M use the Life Cycle Management tool to improve the energy efficiency of all 3M products by considering the energy efficiency of the raw materials, product formulations and manufacturing processes.

2. 3M reduce the energy requirement of its solventless manufacturing process.

3. The corporation replaced 280 conventional electric motors with high-efficiency motors and also installed 50 adjustable-speed drives at its headquarters.

4. 3M partnered with the United States EPA’s Energy Star Program.

5. In 3M’s Austin Center, Texas, the corporation’s employees identified more than 20 energy efficiency actions from using compressed air for environmental chamber temperature control to optimizing heating and air conditioning equipment and controls.
From the corporation’s energy conservation programs, 3M have achieved a 29% overall energy reduction worldwide since 1998. Figure 18 below shows the result of its energy-saving activities.

**Figure 18-3M’s Worldwide Energy Uses**

![Worldwide Energy Use](image)


**Social Investments**

According to 3M’s website, the corporation is committed to a sustainable strategy. As part of this strategy, 3M is not only looking for ways to improve its operations environmentally, but is also dedicated to investing in its people and communities. 3M believes that by being honest and fair with its employees and promoting community donations and employee volunteerism, the corporation can foster an environment of innovation, integrity and fairness, which 3M believes has been a large part of the corporation’s success over the years.

**Human Resources Principles**

As part of treating its employees fairly and honestly, 3M has adopted a corporate Human Resources Principle statement, which it uses as part of its sustainable strategy. The following are 3M’s Human Resource Principles:

1. Respect the dignity and worth of individuals.
2. Encourage the initiative of each employee.

3. Challenge individual capabilities.

4. Provide equal opportunity.

**Compensation**

Aside from the Human Resources Principles, 3M is committed to providing competitive market pay and to developing pay structures that adhere to policies and requirements in the countries in which it operates. Also, beside from being competitive in its pay, 3M, especially in the U.S., offers a comprehensive and flexible benefits program which includes medical, retirement, dental and life insurance and savings and investment programs to help employees build a strong financial future.


**Community Investing**

As discussed in the above section, 3M believe that an important part of its sustainability strategy is to give back to the community in which it resides. It is because of this belief that 3M is extremely active in its community. The corporation’s philanthropic activities combine its foundation cash gifts, donated products and volunteerism by employees and retirees. The following are some of the activities in which 3M’s employees and retirees can participate through 3M’s community investing programs:

1. A Matching Gift Program for higher education and public broadcasting.

2. A Volunteer Match Program which contributes to a nonprofit organization and in which the employees and retirees volunteer 25 hours or more per year.
3. A volunteer program in which its employees and retirees volunteer their service for non-profit boards or community projects.

From the activities listed above, 3M's corporate philanthropy donation can be broken down into six areas, which are listed below:

1. K-12 Education Program
2. Higher Education Program
3. Health and Human Services
4. Arts and Culture
5. Environment
6. Volunteerism

In Tables 11 and 12 below was the 2005 contribution of 3M's philanthropic activities in the United States.

**Table 11-2005 U.S. Results**

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foundation Cash</td>
<td>$19.6 million</td>
</tr>
<tr>
<td>Corporate Cash</td>
<td>$2.6 million</td>
</tr>
<tr>
<td>Total:</td>
<td>$22.2 million</td>
</tr>
<tr>
<td>Product Donations</td>
<td>$16.9 million</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td><strong>$39.1 million</strong></td>
</tr>
</tbody>
</table>
Table 12-2005 U.S. Product and Cash Contributions by Program Area

<table>
<thead>
<tr>
<th>Program Area</th>
<th>Contributions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td>$9.5 million</td>
</tr>
<tr>
<td>Health &amp; Human Services</td>
<td>$7.0 million</td>
</tr>
<tr>
<td>Environmental</td>
<td>$2.2 million</td>
</tr>
<tr>
<td>Arts &amp; Culture</td>
<td>$2.2 million</td>
</tr>
<tr>
<td>Community</td>
<td>$1.2 million</td>
</tr>
</tbody>
</table>

Footnote-The corporate-wide donation by 3M varies depending on the priorities of each individual country.


For the following sections of this case study, this thesis took an in-depth look at each of 3M’s donation areas listed above.

**Environmental Donation**

Aside for its environmental activities, 3M’s environmental sustainability extends beyond eliminating wastes from its daily operations. The corporation also supports programs that contribute significantly to the improvement of the earth’s ecosystem. For example, the corporation looks for programs that preserve biodiversity, positively impact climate change, provide access to natural areas and offer opportunities for volunteer involvement.

**Environmental Donation Examples**

An example of 3M’s environmental donation program is the corporation’s partnership with the United State Natural Conservancy Projects. 3M began the partnership by donating a grant of $5.1 million for land acquisition and wildlife preservation in Minnesota and Texas. In another project, 3M donated roughly $1.5 million from its foundation to help restore riverbanks and hardwood forests to protect
and buffer the Paint Rock River in Alabama. The corporation was excited about participating in this project, because several species of fish and birds live only in this region. The final example of a Natural Conservancy Project that 3M highlighted in its corporate website is a $1.5 million grant that 3M gave to help safeguard the many important streams that are key to central New Jersey's water supply.

(World Wide Web, http://solutions.3m.com/wps/portal/lut/p/kcxml/04_Sj9SPykssy0xPLMnMz0vM0Q9KzYsPDdaP0I8yizeID_bXL8hwVAQA_Yvysw!! , “Environmental Donation”)

**Education Donation**

In 3M's education donation activities, 3M looks for programs that significantly help prepare students from various grades from kindergarten through 12th grade (K-12) and beyond (higher education donation) by looking for programs that help advance teaching and learning at schools for subjects such as sciences, engineering and business and encourage increased participation by underrepresented groups in these disciplines. In the following sections, this thesis will look specifically at 3M's K-12 donation and its higher education donations.


**K-12 Donation**

For its K-12 donation programs, 3M's program focuses on helping the students to improve achievement in the subjects of math, science and economics, because the corporation recognizes that these disciplines are essential to 3M's future success. In order to help achieve those goals, the corporation's donations are spent in various areas of the K-12 education programs such as investing in teachers in its Ingenuity Program and providing opportunities that introduce new methods of learning into classrooms. (In the follow sections, this thesis provided an in-depth look at each of these programs mentioned. Beside from providing essential funds, the K-12 programs also encourage 3M
employees and retirees to volunteer their time in becoming tutors, mentors and classroom
speakers with the hope of inspiring students to pursue higher education and also to make
learning relevant through connection with everyday life and future careers.

(World Wide Web,
http://solutions.3m.com/wps/portal!ut/p/kctxm/04_Sj9SPykssy0xPLMnPz0vM0Q9KzY
SPDaaP0I8yizeIDzbXL8hwVAQAUQSDV!!, “K-12”)

K-12 Donation Example

3M’s Ingenuity program is a grant initiative in which the corporation provides
funds for public school teachers who teaches grades three through eight. The program
aims to help teachers bring new resources into their classroom and help them develop
creative methods of teaching in the hope of raising student interest and achievement in
math, science and economics. 3M believes that the Ingenuity Grant programs impact not
just one classroom, but hundreds of kids over time. In 2006, 3M donated a total of 84
Ingenuity grants to teachers in 13 states, worth a total of $225,000. Since the inception of
the Ingenuity program in 2003, the program has donated $760,000 of grants, which are
estimated to have benefited 86,000 students in 3,500 classrooms in 14 states.

Among the 2006 grant recipients, 3M has highlighted some of the
accomplishments and creative methodologies of teaching in its corporate website. For
example, a junior high school mathematics teacher named Jennifer Pirrera from
Humboldt Junior High (an inner-city school in St. Paul, Minnesota) developed a class
project, called “A Design-Build Presentation.” The project is intended to help the
students understand how mathematics and business are applied in real-world situation by
covering mathematical reasoning, algebra, measurement and budgeting. The students in
her class have to design a home and sell it to an audience of student owners and
contractors. By creating enjoyable projects such as the Design-Build Presentation, 3M
and its partnering teachers believe it makes it easier to win the student’s mind for serious
learning.
Higher Education Donation

Beside from its donation to the K-12 programs, 3M also takes an active role in partnering with various colleges and universities to help create academic programs that prepare the students to make a difference in an increasingly complex and technical world. In its Higher Education Donation programs, 3M looks for programs that have the following attributes:

1. Programs that helps to advance teaching and learning in the areas of science, engineering and business.

2. Programs that help increase the participation of under-represented people in the fields of science, engineering and business.

3. Programs that help encourage innovation in private colleges.

4. Programs that help establish a link with K-12 education through professional development for teachers and college readiness for students.

Higher Education Donation Example

Upon reviewing 3M’s corporate website, the corporation has highlighted a few examples of its higher education donation activities. For example, at Mississippi State University, 3M and its foundation gave over $500,000 to its college of engineering to help develop a Six-Sigma Certificate program. Beside from helping to develop this program, the students who obtained the certificate will enter the work force trained in this new process improvement methodology used by many companies. Another example of 3M’s higher education donation programs is the corporation’s commitment to the
University of Minnesota; the 3M foundation recently gave the University a $9.6 million, multi-year pledge to help fund programs for undergraduates and graduates in the areas of science, engineering, business and entrepreneurship studies.

(World Wide Web, http://solutions.3m.com/wps/portal/iut/p/kcxml/04_Sj9SPykssy0xPLMnMz0vM0O9KzYsPDdaP0I8yizeID3bSL8hwVAQAI5hsDw!!, “Higher Education”)

Health and Human Service Donation

Beside from the corporation’s philanthropic programs in the areas of education and the environment, the 3M Foundation also gives generously to the United Ways programs in communities where there is a 3M presence. 3M believes that by participating in these programs, the corporation’s hope is that its contribution will help increase resiliency in youth and families through prevention and intervention efforts, increase employment readiness of the communities by providing access and job training and, most important of all, build and sustain healthy communities. In the last two years of participation in these local programs, 3M had reported that its employees and foundation had pledge more than $7.9 million to the different local chapters of the United Way.

Examples of Health and Human Service donation

As discussed in the above section, 3M’s Health and Human Service donations look for programs that help to build and sustain healthy communities. According to 3M nothing magnifies the spirit of what the corporation is trying to achieve like participating in Habitat for Humanities and helping communities that are hit by natural disasters.

Communities in Need

When the disaster Hurricane Katrina struck the Southeast coast of the United States, 3M quickly reacted and donated money and products to try and help with the relief effort. The corporation’s donation in funds and products to date has reached a value of roughly $2.5 million. From this $2.5 million, 3M gave approximately $1.0 million in products such as 3M Particulate Respirators, 3M Ultrathon Insect Repellent,
Nexcare Bandages and other medical products. Beside from these donated products, 3M also matched the contribution by its employees and retirees, worth a total of $1.5 million. (World Wide Web, http://solutions.3m.com/wps/portal/!ut/p/kcxml/04_Sj9SPykJxy0xPLMnMz0vM0Q9KzYspDdaP0I8yizeID3bXI8hwVAQAkAmhxw!!, “Communities in Disaster)

Habitat for Humanities around the World

In 3M’s Habitat for Humanities program, 3M volunteers in U.S. communities, the Philippines and sites around the world to help build homes with Habitat for Humanity for a family with a disabled family member. For example, in 2003 the 3M Foundation donated $25,000 to partners with Courage Center and Habitat for Humanity to help build assistive technology in homes to help people whom are disabled to participate in family and community lives. (World Wide Web, http://solutions.3m.com/wps/portal/!ut/p/kcxml/04_Sj9SPykJxy0xPLMnMz0vM0Q9KzYspDdaP0I8yizeID_bUL8hwVAQA4GirZQ!!, “Habitat”)

Arts and Culture

Even though the 3M foundation claims in its website that it gives generously to educate its community in the areas of science, engineering and business, the corporation also reports that a strong programming of arts and culture is a vital part of building a healthy community. 3M declares, “The corporation support arts and culture to help open minds to the world around us, leading the way to creativity, new understanding and insights.” Because of this, 3M hopes that the corporation’s support will encourage arts organizations to develop strong education and community outreach programs, promote artistic and cultural diversity and support premier arts organizations in 3M communities. (World Wide Web, http://solutions.3m.com/wps/portal/3M/en_US/global/sustainability/s/performanc- indicators/community/arts-culture-giving/., “Arts and Culture general”
Example of Arts and Culture Donation

As an example of 3M’s support of the arts and culture and education, the corporation donated $250,000 in grants to a traveling exhibit of “Strange Matter.” This was a national traveling exhibit that helped bring material science to life for middle school kids. For example, children can play with magnetic liquids to discover if the magnetic liquid is a solid, a liquid or both or enjoy playing on a xylophone made of different materials to see what tunes it will play.

(World Wide Web, http://solutions.3m.com/wps/portal/iut/p/kcxml/04_Sj9SPykssy0xPLMnMz0vM0Q9KzYsPDdaP0I8yizeID_bRL8hwVAQAU_LmNQ!!, “Traveling Exhibit”)

Beside from being one of the six corporate sponsors to support this traveling exhibit of Strange Matter, 3M and its foundation have donated more than $1 million in cash and products to the nation’s first National Museum of the American Indian in Washington, D.C. For this worthy cause, 3M are helping to build the very first national museum dedicated to the portrayal of Native American life, history, arts and culture. (The National American Indian Museum [NMAI] is the 16th museum of the Smithsonian Institution and was opened on September 2004.) According to 3M’s council that helps its foundation to evaluate the requests for the support of the museum, it learned that the collection to be gathered in this national museum will contain virtually all tribes of the United States, the majority of those in Canada, and many from Mexico and Central and South America, as well as the Caribbean artifacts and cultural items (estimated at over 800,000 pieces) spanning a time period of 10,000 years. 3M believes that, “This donation is an investment in the preservation of a culture and a connection with people around the world.”

(World Wide Web, http://solutions.3m.com/wps/portal/iut/p/kcxml/04_Sj9SPykssy0xPLMnMz0vM0Q9KzYsPDdaP0I8yizeID_bVL8hwVAQA9io6_g!!, “NMAI”)
Volunteerism

Beside from the donation of funds and 3M products, the successes of 3M’s philanthropic projects are due to the volunteerism of the corporation’s employees and retirees. The corporation encourages its employees and retirees to volunteers for long commitment programs that promote education and community partnership. This philosophy of long-term commitment was demonstrated when 3M was awarded the prestigious Points of Light Foundation Award for Excellence in Corporate Community Service. This is an award, which honors and acknowledges the long-term commitment to volunteerism year round.

(World Wide Web, http://solutions.3m.com/wps/portal/lut/p/kcxmI/04_Sj9SPykssy0xPLMnMz0vM0O9KzYsPDdaP0I8yizeIDw7QL8hwVAQAusztyQQ!!, “Volunteerism”)

Supply Chain

In this section of the case study, this thesis looked at the Triple Bottom Line element of supply chain initiative. According to 3M, the corporation is committed to proactively identifying small, minority-owned and woman-owned business as sources for the goods and services that 3M needs. The corporation believes that by proactively soliciting small, minority-owned and woman-owned companies, it is a positive method of fostering diversity within the 3M Corporation. The corporation judge, by promoting diversity within, will help to grow 3M for the future, because the minority population is the fastest growing segment in the United States and will account for a significant share of future consumer growth. The corporation recognizes that having diverse suppliers will help 3M to achieve the following:

1. Access emerging diversity market segments through its diverse supplier.

2. It helps reenergize 3M’s business, because it helps the corporation to keep an open mind to innovative ideas and new ways of doing business, which includes offering unique strategies for reaching diverse markets.
3. Diverse suppliers help 3M lower its costs and can respond faster to 3M’s changing corporate needs, which in the long run help 3M’s bottom line.


Verification Process

In order to properly assure that 3M is performing the Triple Bottom Line element it is reporting, this thesis will verify some of the claims it has made by confirming it through other sources. The thesis specifically will look at the corporation’s initiatives of Pollution Prevention Program and its social donations.

Pollution Prevention Program

Through all of 3M’s Triple Bottom Line initiatives, the corporation’s most widely known program is its Pollution Prevention Programs. In this section of the case study, this thesis will confirm 3M’s performance in pollution prevention programs through other sources such as the U.S. EPA website or state-specific Department of Environmental Management Websites.

U.S. EPA

While researching to confirm 3M’s performance in its 3P program through separate sources, the U.S. EPA confirms the corporation’s performance on the department’s website. For example, in 2003 the EPA recognized and awarded the 3M plant in Springfield, Missouri, for its Environmental Excellence by awarding the department’s Pollution Prevention Environmental Award. The 3M plant was given the award for the corporation’s 3 Pollution Prevent Project in Cleaning Solvent Reduction. The Springfield plant has two 3P projects that the EPA deemed worthy of special recognition, because they have greatly reduced volatile organic compound (VOC) usage during mixer cleaning. By improving and standardizing solvent cleaning procedures across the facility, the plant was able to significantly reduce the purchase of raw materials
and associated waste materials that required disposal, providing the Missouri site with the following environmental benefits:

1. The project has eliminated 150 tons of VOC, which contained cleaning solvent.

2. It helped reduce 960 55-gallon drums of waste that would have been incinerated.

3. 3M was able to reduce ten truck’s worth of raw material purchase, which helped remove 22 semi-trucks from the highway and also eliminated the associated vehicle emission.

Because of these 3P projects, the Missouri plant was able to enjoy the economic benefits of these programs, which included a cost savings from improved manufacturing efficiency worth $64,000 and saved $35,000 in waste disposal costs. From these projects, the EPA believed that 3M have demonstrated that “pollution prevention does pay.”


**State Department**

Beside from being recognized by the U.S. EPA, the 3M Corporation was also recognized and awarded the Director's Award in Pollution Prevention for its 3P projects in its Decatur plant in Alabama. The Decatur facility is operated by 3M's Specialty Chemicals and Film Divisions. The state’s Environmental Management website, the website listed the following result of the Decatur plant’s 3P projects.

1. The plant was able to eliminate 12.5 tons of ethanol usage and reduce solid waste generation by 15 tons by modifying its internal mixing and dispensing stations.

2. The 3P project that was undertaken in the last 25 years has prevented 10.5 million pounds in air pollution, 3.2 million pounds of water pollution discharge and 65 million pounds of solid waste disposed.
3. The plant is ISO 14001 certified and is also committed to continuous improvement in pollution prevention.

(World Wide Web, http://www.adem.state.al.us/Education%20Div/P2%20Program/P2Winners.htm, 3P-2)

University of Minnesota

In the University’s of Minnesota’s technical newsletter of the Minnesota Technical Assistant Program, the newsletter introduced 3M’s Pollution Prevention Program and its 30 years of 3P history by listing a few examples of its 3P projects. For example, the corporation’s Scotch Magic Tape was reformulated in the 1970s; the tape after the reformulation is now made using a water-based adhesive process rather than a solvent-based one, which eliminates pollution. Another example that the newsletter listed is the corporation’s method of making surgical gloves through its hot-melting process. Through this process, the corporation was able to eliminate 2.3 Million pounds of solvents each year and reduce the energy consumption of the process by 77%.


Social Donation

Similar to confirming 3M’s social donation claim, this thesis will verify the corporation’s community donation claim through separate sources. In this section, this thesis verified 3M’s Ingenuity Program donation. For example, the Business Education Network profiled its partnership with 3M and its Ingenuity Program. The following was the profile the Business Education Network posted:
Company Name: 3M

Education Partner: Individual educators/teachers

Name of Program: 3M Ingenuity Grants

The History of the Partnership

The 3M Foundation awards Ingenuity Grants to individual public school teachers. The grant recognizes excellent public school teachers of 3rd through 8th grades. The program is targeted at schools in communities where 3M has business facilities.

The goal of the program is to help public school teachers bring new resources into their classroom.

The objective is to raise student interest and achievement in math, science, and economics.

The Structure of the Partnership

Applications can be made to nominate teachers who have shown excellence in teaching and have new ideas for the classroom and beyond.

Individual grants of up to $3,500 are awarded to teachers to help purchase materials, such as microscopes, calculators and books, or develop creative teaching methods.

In 2005, 3M awarded 85 Ingenuity Grants valued at almost $200,000 to teachers across nine states.

Metrics and Accomplishments

Among this year's recipients are:
• Alissa Kuseske, 5th grade teacher, Crossroads Elementary School, St. Paul, Minn., received $3,500 for "Read Any Good Science Lately?" and "Lights, Camera, Action It's Science." These are programs that will utilize scientific inquiry, nonfiction reading, and technology to improve students' science knowledge.

• Ann Harris, science teacher, Auten Road Intermediate School, Hillsborough, N.J., received $3,488 for "Let It Stick Together! Project L.I.S.T.," a program that will incorporate math concepts in the 5th grade ecosystems and micro-worlds curriculum and 6th grade landforms and animal life curriculum.

• Mark Thompson, Como Elementary School, St. Paul, Minn., received $650 for "Hmong Designs: Applied Math and Economics," which will help Hmong refugee students who recently arrived in St. Paul from a refugee camp in Thailand, develop a marketing and business plan to create and sell CDs and paj ntaub (Hmong Story Cloths) at the school carnival.


Minnesota Council on Foundation (MCF)

On MCF’s news archive, the foundation published the first ever recipients of 3M’s Ingenuity Grants. On June 10, 2003, 28 teachers in the St. Paul and North St. Paul school districts were among the recipients of the first annual 3M Ingenuity Grants. These teachers were given the Ingenuity Grants for developing classroom programs that increased student interest and achievement such as a project for eighth graders who were building model trains to learn about the interrelationship of economics and transportation systems, and another that brought exciting new science textbooks to a third-grade classroom.

This thesis has verified from additional sources on 3M’s reported Triple Bottom Line activities claims. Based on the research, this thesis has concluded that 3M is performing these elements that it has published on its corporate website. Beside from confirming these activities, this thesis looked at what the results of other research have concluded about 3M’s sustainability through the Claremont McKenna College Pacific Sustainability Index. The result of 3M’s PSI score is listed in Table 13 below:

**Table 13 3M’s Overall PSI Score**

<table>
<thead>
<tr>
<th>Category</th>
<th>Percent Coverage</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intent</td>
<td>74.19%</td>
<td>A+</td>
</tr>
<tr>
<td>Reporting</td>
<td>56.94%</td>
<td>A+</td>
</tr>
<tr>
<td>Performance *</td>
<td>2.08%</td>
<td>C-</td>
</tr>
<tr>
<td>Overall</td>
<td>48.35%</td>
<td>A+</td>
</tr>
<tr>
<td>Social</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intent</td>
<td>57.69%</td>
<td>A+</td>
</tr>
<tr>
<td>Reporting</td>
<td>66.67%</td>
<td>A+</td>
</tr>
<tr>
<td>Performance *</td>
<td>7.69%</td>
<td>A+</td>
</tr>
<tr>
<td>Overall</td>
<td>49.57%</td>
<td>A+</td>
</tr>
<tr>
<td>Overall PSI Score</td>
<td>43.98%</td>
<td>A+</td>
</tr>
</tbody>
</table>

Aside from the overall score and the table listed above, the analyst makes the following comments regarding 3M’s sustainability activities: “Admirable for their extensive content but falls short when it comes to organization and printability. The information provided great benefit from inclusion in one comprehensive printer friendly (pdf) annual report. 3M does well at describing its toxic emissions, providing examples of improvement projects and stating general policy, however, they fail to adequately describe
stakeholders, explain the identification of environmental and socioeconomic aspects, quantify most improvements and compare themselves with industry standards.”


From the research and the analyst comments, this thesis agrees with what the analyst has said about 3M’s sustainability website. The corporation overall has a very significant amount of information; however, it is not well organized, and the corporation doesn’t do a significant amount of benchmarking its results against other competitors in its industry
6.4 Baxter International

Baxter Company Profile

Baxter International is a global medical service and product company that was founded in 1931. At the time, Baxter was the distributor of products of another company in Los Angeles owned by Dr. Don Baxter. However within two years of time, the demand for Baxter’s product grew and it was apparent that a central manufacturing facility was needed. It was because of this Baxter open its first manufacturing facility in Glenview, Illinois with a total of six employees in its manufacturing floor. (World Wide Web, www.baxter.com/about_baxter/company_profile/sub/history.html, “History”)

From this humble beginning, Baxter today is one of the leaders in providing medical solutions to a variety of ailments such as hemophilia, immune disorders, kidney disease, cancer and traumas. Its business can be divided into three sections and they are:

1. Bio-Science Sector-In this sector of the business, Baxter scientist and engineer manufacture products such as the automated blood and blood-component separation and collection systems. For 2005, Baxter had an annual sale of $3.8 billion in this sector of the business alone.

2. Medical-Delivery Sector-For the Medical Delivery sector of the business, the corporation focuses on products such as pre-filled vials and syringes for injectable drugs, electronic infusion pumps, and other products used to deliver fluids and drugs to patients. In 2005, Baxter had a $4.0 billion dollar worth of sales in this sector.

3. Renal Sector-In this sector of Baxter’s business, the corporation is the leading manufacture for products that is used for peritoneal dialysis (PD). These products are for patients that have end stage renal disease or kidney failures. In 2005, Baxter recorded a sale of $2.0 billion dollars in the renal sector of its business.
In Figure 19 and table 14 below, the table will give a break-down of its 2005 sales and the break-down of the number of employees Baxter currently employ in each individual regions.

**Figure 19- Baxter 2005 Sales by Regions**

![Pie chart showing sales distribution by region](image)

**Table 14-Baxter Employee Break-Down by Region**

<table>
<thead>
<tr>
<th>Regional Employee Breakdown</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>24,000*</td>
<td>22,400*</td>
<td>20,500</td>
</tr>
<tr>
<td>Europe</td>
<td>14,300</td>
<td>13,600</td>
<td>13,000</td>
</tr>
<tr>
<td>Latin America</td>
<td>7,900</td>
<td>7,100</td>
<td>7,000</td>
</tr>
<tr>
<td>Asia/other</td>
<td>4,300</td>
<td>4,400</td>
<td>4,600</td>
</tr>
<tr>
<td>Canada</td>
<td>*</td>
<td>*</td>
<td>1,050</td>
</tr>
<tr>
<td>Japan</td>
<td>800</td>
<td>800</td>
<td>800</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>51,300</strong>*</td>
<td><strong>48,300</strong>*</td>
<td><strong>47,000</strong></td>
</tr>
</tbody>
</table>

* United States data for 2003 and 2004 includes Canada
*** Reflects restructuring reductions effective during 2004.

(World Wide Web,

[www.baxter.com/about_baxter/company_profile/sub/corporate_overview.html](http://www.baxter.com/about_baxter/company_profile/sub/corporate_overview.html),

“Overview”)
Baxter Sustainability

After analyzing and research of Baxter’s corporate website and sustainability report, the corporation’s focus on sustainability is broken down into the following long-term issues/areas. These issues/areas as defined in its 2005 Corporate Sustainability Reports are:

1. Operating in a sound and ethical manner
2. Using financial resources wisely to ensure continued commercial success
3. Providing a rewarding, safe and healthy workplace for employees
4. Contributing to communities in need worldwide
5. Supporting those impacted by disasters
6. Ensuring patient safety
7. Expanding access to healthcare
8. Reducing the company's environmental impact


Even thought Baxter has a long history (self proclaimed) of sustainability activities, it has freely acknowledges that corporation has not yet developed a comprehensive sustainability strategy linked to its core business. In its 2005 Sustainability Report, Baxter claim that has taken stride to remedy this problem of a comprehensive sustainability strategy by first developing a clear sustainability objectives and priorities.

In order to accomplish this, Baxter has engaged a sustainability think tank called SustainAbility. From there, SustainAbility and Baxter analyzes various sustainability issues, stakeholder concerns in which that will affect the long-term health of Baxter’s business. After analyzing the results of these surveys, SustainAbility and Baxter came up with the following dimensions, which Baxter claims will assist them in developing a sustainable strategy in the future:
1. Impact on Baxter: potential impact on the company over the next three to five years based on financial, operational and reputation aspects.
2. Degree of societal concern: level of media coverage, non-governmental organization (NGO) activity and standards addressing the issue.
3. Baxter's degree of control: company's ability to impact the issue, ranging from complete control to little or no influence.
4. Trend: relative change in importance of the issue, including change in societal concern and/or impact on Baxter, over the next three to five years.

After obtaining this useful information as mentioned above, the next step in which the senior management of Baxter approved to help the corporation in developing a sustainable business strategy is the formation of a Sustainability Steering Committee (SSC). Baxter’s SSC is made up of representatives from the various division of Baxter’s business is the body within Baxter which is responsible for the following:

1. Assesses sustainability issues and opportunities for the company
2. Defines Baxter's sustainability strategies
3. Establishes performance targets and implements initiatives to achieve a leadership position
4. Tracks progress on key sustainability activities, drives organizational accountability and recognizes accomplishments
5. Reports status and engages senior management on appropriate actions and direction
6. Guides and informs company sustainability reporting
7. Provides a sounding board for stakeholder inquiries and recommends necessary actions

Footnote: As one of its first responsibility, the Sustainability Steering Committee is responsible for defining Baxter’s sustainability strategies. This strategy according to Baxter will be publishing in its 2006 Sustainability Report.
Baxter Corporate Partnership

Beside from its own corporate activities and the current development of its own corporate sustainability strategies, Baxter also has formed partnerships with groups that deal with various sustainability issues. Table 15 below will shows, a list of Baxter’s sustainability partners and a brief description of what each group does.

Table 15-Baxter’s Alliance

<table>
<thead>
<tr>
<th>Partnership Organization</th>
<th>Description of Partnership</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Alliance for Work Life Progress</td>
<td>The Alliance for Work Life Progress is a membership organization committed to the development of the integration of work and family life.</td>
</tr>
<tr>
<td>2 The Auditing Roundtable</td>
<td>The Auditing Roundtable is an organization that helps in the development and professional practice of environmental, health and safety auditing. Baxter was one of the founding member of this organization.</td>
</tr>
<tr>
<td>3 The Center for Corporate Citizenship at Boston College</td>
<td>A leading resource on corporate citizenship by providing research, executive education, consultation and meetings on citizenship topics. The Center’s mission is to help</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td></td>
<td><strong>The Center for Work and Family at Boston College</strong></td>
</tr>
<tr>
<td><strong>4</strong></td>
<td></td>
</tr>
<tr>
<td><strong>5</strong></td>
<td><strong>Ceres</strong></td>
</tr>
<tr>
<td><strong>6</strong></td>
<td><strong>Chicago Climate Exchange</strong></td>
</tr>
<tr>
<td><strong>7</strong></td>
<td><strong>Companies that Cares</strong></td>
</tr>
<tr>
<td>8</td>
<td>Corporate Voices for Working Families</td>
</tr>
<tr>
<td>9</td>
<td>Ethics &amp; Compliance Officer Association (ECOA)</td>
</tr>
<tr>
<td>10</td>
<td>Global Reporting Initiatives (GRI)</td>
</tr>
<tr>
<td>11</td>
<td>Hospital for Healthy Environment</td>
</tr>
<tr>
<td>12</td>
<td>International Chamber of Commerce for Sustainable Development</td>
</tr>
<tr>
<td>13</td>
<td><strong>National Association for Environmental Management</strong></td>
</tr>
<tr>
<td>----</td>
<td>---------------------------------------------------</td>
</tr>
<tr>
<td>14</td>
<td><strong>National Safety Council (NSC)</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Organizational Resources Counselors (ORC)</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Organizational Resources Counselors (ORC)</strong></td>
</tr>
<tr>
<td></td>
<td>Organization Name</td>
</tr>
<tr>
<td>---</td>
<td>------------------------------------------------</td>
</tr>
<tr>
<td>16</td>
<td><strong>Pew Center on Climate Changes</strong></td>
</tr>
<tr>
<td>17</td>
<td><strong>United State America Environmental Protection Agency (EPA)-Climate Leaders</strong></td>
</tr>
<tr>
<td>18</td>
<td><strong>United State EPA-The Green Supplier Network (GSN)</strong></td>
</tr>
</tbody>
</table>
on process improvement and waste minimization.

| 19 | National Environmental Performance Track | A partnership between the US EPA and the private sectors that recognizes top environmental performance among participating U.S. facilities of all types. |

(World Wide Web,
http://sustainabilitv.baxter.com/baxter/affiliation.html?dd=elrootmenu03, “Partnership”)

**Baxter Corporate Governance**

In order to understand how Baxter implement its corporate policies such as its various business strategic planning, succession, diversification, qualification and composition, this thesis will also be looking at Baxter’s board of governance. The board of governance is responsible for various duties such as reviewing corporate bylaws and governance practices, changing practices when it deems necessary, identify areas of improvements needed by Baxter and its benchmarking activities of comparing its corporate practices to the criteria used by outside entities to evaluate corporate performances. Its board of governance also created Baxter’s Corporate Responsibility Office (CRO) in 1993, which oversees all its ethical practices. The main missions of the CRO are the following:

1. Assures the development and communication of appropriate business policies and initiatives.
2. Develops and maintains independent, corporate-level resources and processes for employees and key constituencies to provide guidance on the company's business practice policies and for reporting potential violations of business practice policy.
3. Ensures that each business unit has adequate processes for:
   a) providing guidance on the company's business practice policies,
b) the reporting and investigation of business practice issues, and
c) notifying the CRO of significant business practice issues.

4. Verifies the adequacy of and compliance with the company’s business
practices, application of those policies and responses to non-compliance.

(World Wide Web,
www.baxter.com/about_baxter/sustainability/our_values_and_standards/cro/cro.html,
“CRO”)

Figure 20 below will show the Global Business Reporting Structures for its governance.

Figure 20-Reporting Structure

(World Wide Web,
Structure”)

Beside from its main mission above, Baxter’s CRO also developed the corporation’s
Global Business Standards, which embodies the corporate wide values it has publishes in
its corporate website. These standards and values are applicable to all Baxter employees
and in which its management expects its employees to abide by. These corporate wide
values are:

1. **Integrity**- By building long-term, trusting relationships with our
customers, our shareholders, our suppliers, and each other, by being
honest, open and fair, and by keeping our promises. Baxter’s conduct us
always ethical and legal because the corporation lives up to the highest professional standards.

2. **Respects for Individuals**- By treating every individual with dignity and respect, openly sharing information, providing feedback, and listening to each other. Baxter’s environment is one of continuous learning in which all employees, regardless of cultural background, gender, level or position, can develop their full potential. The corporation values the unique contributions of all individuals, recognizing the diversity of our work force as a competitive advantage.

3. **Quality**- Baxter will constantly strive to understand and exceed the requirements of our customers. The corporation’s commitment to quality builds customer trust and loyalty, which leads to outstanding results for our shareholders. This is done by providing world-class products and services and enhances customer satisfaction every day.

4. **Teamwork**- Baxter work openly and supportively in teams, aiming toward common goals. Baxter forms teams with its customers and suppliers to respond quickly to changing customer needs. We have fun working with each other, and we take pride in our joint accomplishments.

5. **Empowerment**- At Baxter, individuals and teams have the responsibility, authority, resources, and support to make decisions and take actions. Decisions are made as close to the customer as possible so that we can act quickly to assure total customer satisfaction. We are accountable for our decisions and actions. Each of us accepts responsibility for meet the needs of our customers, our shareholders, and our fellow employees.

6. **Innovation**- Innovation is the key to creating new source of value for our customers and shareholders. We must quickly transform new technologies
and new ideas into products and services that exceed customer expectations and improve our effectiveness. We do this by valuing and rewarding creativity, diverse thinking styles, and intelligent risk-taking. We act to maximize potential success, rather than to minimize potential failure.

7. Creating Value- Baxter keeps all its commitments by establishing efficient and effective processes that consistently produce excellent returns for our shareholders and which assure total customer satisfaction. We continuously hold one another accountable for living the share values.


Consistent with its corporate wide business values as mentioned above, Baxter is currently participating in a variety of activities that it claims is beneficial not only to the corporation’s bottom line, but society and the environment as well. This thesis took an in-depth look at each of these activities as related to the elements proposed in the thesis proposal.

Environmental Health and Safety Policies

This thesis first looked at Baxter’s vision and policies, and also how these corporate wide visions and policies translate into the activities that Baxter is currently implementing in its daily operations.

Vision

Baxter’s Environmental Vision as published in its corporate website is: “To be a critical business partner providing value and enhancing competitive advantage.”
Policies

EHS Management

Baxter is committed to continuous improvement in its Environmental, Health and Safety (EHS) performance by setting goals, measure progress and communicates its results to its stakeholders. The corporation believes compliance with this corporate wide policy is the responsibility of every employee and therefore Baxter is committed to the following:

1. **Sustainable Development**- to conserve resources and minimize or eliminate adverse EHS effects and risks that may be associated with Baxter’s products, services and operations.

2. **Employees**- Baxter will provide a safe and healthy workplace, striving to prevent injuries and illnesses, promoting healthy lifestyles and encouraging respect for the environment. The corporation will ensure that our employees have the awareness, skills and knowledge to carry out this policy.

3. **Compliance**- Baxter will meet all applicable EHS laws and Baxter EHS requirements, including its own EHS management standards.

4. **Business Integration**- Baxter will integrate EHS considerations into its business activities.

5. **Customers**- Baxter will work with its customers to help them address their EHS needs.

6. **Suppliers and Contractor**- Baxter will work with its suppliers and contractors to enhance EHS performance.

7. **Community and Government**- Baxter will participate in community and government EHS initiatives.
As stated in its corporate website, these commitments are the basis in which Baxter develops its self claimed Corporate Sustainable Activities. This thesis looked at the past performance of its EHS goals that it had set for itself for the period of 1996 through 2004. Afterwards, this thesis looked at Baxter’s next generation of corporate wide EHS goals and its activities that it had plan to implement or are actively implementing in order to achieve these goals. Table 16 and Table 17 below show the EHS performance of Baxter from 1996-2004. From the tables below and its published information, Baxter had reported that it met most of its EHS goals that it had set. However there were certain areas in which Baxter had struggled, for example the corporation had difficult time in meeting its energy use and Green House Gas emission along with the occurrence of environmental releases in the area of wastewater. It is because of these struggles, Baxter had freely admitted that it needs to improve in these particular areas and therefore for its next generation of EHS goals, the corporation is especially concentrating in improving its corporate performance for those weaknesses.

Footnote-Please sees below section for a more in-depth discussion on Baxter’s next generation of EHS goals.
Table 16-Baxter Environmental Performance

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Goal of 80% reduced air toxics</td>
<td>26%</td>
<td>22%</td>
<td>3%</td>
</tr>
<tr>
<td>Performance (86%)</td>
<td>26%</td>
<td>22%</td>
<td>3%</td>
</tr>
<tr>
<td>Savings ($ Millions)</td>
<td>35.0</td>
<td>35.0</td>
<td>1.4%</td>
</tr>
<tr>
<td>Target</td>
<td>3%</td>
<td>6%</td>
<td></td>
</tr>
<tr>
<td>vs. 2003</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. Total savings and cost avoidance realized in 2004 from prior years' efforts.
2. Per unit of production value.
4. Performance reflects the increase in percentage of Baxter's waste recycling rate since 1996.
5. 1996-2002 goal.

Table 17-Health and Safety Performance

Health And Safety Performance At-A-Glance

<table>
<thead>
<tr>
<th>Occupational Injury and Illness Performance Per 100 Full-Time Employees (FTEs)</th>
<th>1996</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cases With Days Lost Per 100 FTEs</td>
<td>0.64</td>
<td>0.63</td>
<td>0.51</td>
<td>0.39</td>
</tr>
<tr>
<td>Days Lost Per 100 FTEs</td>
<td>27.01</td>
<td>16.64</td>
<td>14.77</td>
<td>11.63</td>
</tr>
<tr>
<td>Recordable Cases Per 100 FTEs</td>
<td>2.88</td>
<td>2.14</td>
<td>1.55</td>
<td>2.52</td>
</tr>
<tr>
<td>Compensation for Work-Related Injuries (U.S.) ($ million)</td>
<td>76.7</td>
<td>76.7</td>
<td>76.7</td>
<td>76.7</td>
</tr>
<tr>
<td>Compensation Estimate ($ million)</td>
<td>2.18</td>
<td>2.18</td>
<td>2.18</td>
<td>2.18</td>
</tr>
</tbody>
</table>

Performance to Targets Per 100 FTEs

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Goal of 60%</td>
<td>53%</td>
<td>65%*</td>
<td>5%</td>
</tr>
<tr>
<td>Performance</td>
<td>4%</td>
<td>5%</td>
<td></td>
</tr>
<tr>
<td>Savings ($ million)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. 100 FTEs = 100 employee work weeks = 200,000 work hours. Baxter applies U.S. Occupational Safety and Health Administration recordkeeping practice worldwide.
3. Recordable Case = A work-related injury or illness case requiring medical treatment beyond first aid.
5. 4% favorable.
Next Generation EHS Goals

Much like its previous generation of long-term goals (1996-2005), this new generation of EHS goals is being developed during Baxter’s annual strategic planning session. In these strategic planning sessions, the EHS management team often uses the Strength, Weakness, Opportunities and Threat (SWOT) analysis tools to look at what is the current strength, obstacles, opportunities and threats that are currently present in their business sections. From the SWOT results and its stakeholder feedback, the EHS team had proposed some of its Environmental, Health and Safety Goals.

(World Wide Web,
www.baxter.com/about_baxter/sustainability/our_environment/programs/sub/goals.html,
“EHS Next Generation”)

Environmental Goals

The following are the next generation of Baxter environmental goals for the period of 2006-2010 with 2005 as the baseline:

Environmental

1. Reduce to the total waste generated by 30 percent indexed to revenue
2. Reduce water usage 20 percent indexed to revenue
3. Reduce energy use 20 percent indexed to revenue
4. Reduce GHG emission 20 percent indexed to revenue
5. Reduce environmental incidents by 50 percent.

Product Stewardship Goals

1. Apply Baxter’s Sustainability Review Gates for its medical devices that are develop from 2006-2010.
2. Baxter is implementing its electronic product take-back program to meet the more stringent global requirement.
3. Develop a plan to eliminate certain hazardous substance in the corporation’s packaging and products in order to comply with the new European Union (EU) Directives of restriction of Hazardous Substances.
Occupational Health and Safety Goals

1. Reduce work related day lost rate to 6.0
2. Reduce days lost case rate to 0.23
3. Reduce recordable case rate 1.27
4. Implement a case management program in 75 percent of facilities with 25 employees or more.
5. Implement at least one health and one safety leading indicators in 90 percent of facilities with 100 or more employees

Industrial Hygiene Goals

1. Ensure that 95 percent of manufacturing and research and development sites have the current industrial hygiene risk assessments and monitoring plans.
2. Reduce the need for employees to use hearing protection by 25 percent
3. Reduce the need for employees to use respiratory protection by 25 percent


From these visions and goals, this thesis will look at the various activities it is currently implementing in order to reach its EHS goals.

Environmental

Waste Generation

In accordance with Baxter’s 2010 EHS goals, the corporation is actively pursuing activities in which it will reduce its waste production in its manufacturing plants (both regulated and non-hazardous). For example, Baxter is a big proponent of lean manufacturing and it attributes part of the corporation past success in waste reduction to this activity. Baxter define lean manufacturing as, “The process of dissecting current practices, identifying waste and redesigning processes to eliminate that waste, or any
steps that do not add value.” A great example of lean manufacturing at work is at Baxter’s plant is in Los Angeles, California, which achieved one of the largest decreases in non-hazardous waste generation. This facility achieved this goal by installing a large-capacity and high-efficiency distillation that dramatically increases reuse of production-related waste alcohol. In 2005, the facility refined the use of the distilled, which resulted in capturing more alcohol and reducing overall waste by 1,500 metric tons. Beside from using lean manufacturing, Baxter claims it is also an advocate of recycling. According to its reporting, Baxter is recycling about 60 percent of its non-hazardous waste in its manufacturing facilities.

However in the arena of regulated waste, Baxter did not have as much as success in controlling the generation of regulated waste as its non-hazardous waste. Even though, it was not as successful, the corporation did reduce the generation of hazardous waste in some of its activities by performing the following activities (activities discuss below is facility specific):

1. In its plasma-collection operations, standardization of processes and clarification of what constitute medical waste reduced the center’s medical waste by 60 metric tons.

2. At the corporation’s Bloomington, Indiana facility, a review process on the segregation and proper classification of a regulated-waste stream decreased regulated waste by 80 metric tons.

3. In Baxter’s Thetford, England, facility the used of new chemical-dispensing equipment has reduce regulated-waste generation by nearly 23 metric tons.


Footnote-As noted, Baxter had difficulty in the generation of regulated waste for 2005. Baxter gave the follow reasons for the increase in regulated waste: 1) “The Guayama, Puerto Rico, facility stopped redirecting a production by-product back into the manufacturing process due to operational factors, which
increased waste by 360 metric tons 2) A plane crash at the Cali, Colombia, warehouse in December which resulted in the disposal of 58 metric tons of material as regulated waste."


Packaging Reduction

Aside for the activities discussed in the above section, Baxter recognizes that by improving its packaging process, the corporation could also reduce the amount of materials generated in its manufacturing plants around the world. In 2005, Baxter not only met its 1996-2005 packaging initiatives of reducing 9700 metric tons of packaging materials, but it also implemented some of its most significant packaging reduction initiatives which resulted in a corporate wide savings of $3.5 millions. The following was some of the corporation’s significant packaging reduction initiatives implemented in 2005:

1. In its Singapore manufacturing facility, Baxter was able to reduce its package size for two of its product lines and also reduced corrugated use by 238 metric tons. The packaging material reduction resulted in a facility saving of approximately $176,000 per year.

2. In its Shanghai, China manufacturing facility, the Baxter facility was able to increase the number of products per package, but reduced the material use by 83 metric tons and saving $50,000 per year.


Product Stewardship

Even though, Baxter had reported a variety of waste reduction activities such as lean manufacturing, recycling processes and it packaging material reduction initiatives.
In 2005, Baxter implemented a new process called the product development process (PDP). The PDP is a process in which, Baxter’s expert employees will provide technical supports throughout the life cycle of a medical device products from the initial concept development of the product to the post launch support of the product. Throughout this whole PDP process, Baxter will utilize what the corporation dubbed a product sustainability review (PSR), in which a thorough sustainable assessment of the product will be analyzed for its environmental, health and safety and social impact from the initial design to the end of its life cycle. Baxter believe by implementing the PSR process through the entire design of an product, the corporation and its customers will reap many benefits from this whole process such as:

1. Compliance and Customers – The PSR will help assesses current and future regulatory concerns to ensure market access. This can be accomplished by optimizing the environmental attributes of a product and facilitates in response to environmentally preferable purchasing guidelines in customer requests.
2. Operational improvement – The PSR will also help in identifying cost-cutting opportunities such as a through decreased of energy use and packaging reduction.
3. Environment - minimizes adverse life cycle environmental impacts and risks of a product.

(World Wide Web, 

Material Use

In the area of hazardous chemical usage, Baxter is taking a very proactive approach for reducing or eliminating the usage of hazardous chemicals in its medical device products. Baxter is taking this proactive approach due to the EU directive of Restriction on Hazardous Substances (RoHS), which took effect on July 1, 2006. This directive by the European Union calls for the phasing out of lead, mercury and cadmium
in order to eliminate the environmental impact of these chemicals after the life cycle of a product. Even though, the directive currently does not including medical equipments, Baxter is reporting that it is taking a proactive approach in phasing out the chemicals on the RoHS list. By developing a corporate wide strategy early, Baxter believes that it is following its commitment of being sustainable.


**Climate Change and Green House Gas Emission**

As published in its corporate website, Baxter believed that “if a company is serious about sustainability, then it must act responsibly to address the environmental issue of this generation.” It is because of this, an essential part of Baxter’s sustainable activity is to address the issue of climate change. Baxter is addressing the issue of climate change by reducing the emission of Green House Gases within its facilities. In order to accomplish this, Baxter has implemented a multi dimensional approaches such as methodology of conserving energy use, finding cleaner and renewable energy sources, emission trading and partnership with various organizations (see Baxter’s Partnership in above section) that is actively engaging in the issue of climate change. This thesis will look at each of Baxter’s activities that it claims will help to reduce the emission of GHG within the corporation’s worldwide facilities.


**Green House Gas Trading and Carbon Neutrality**

As claimed by Baxter, the corporation is actively taking multi-dimensional approaches to reduce its GHG emission. In this section of this thesis, the research will discuss some of Baxter’s unique activities. For example in the corporation’s Sherbrooke,
Canada manufacturing facility, Baxter reported that it achieved a status of carbon neutrality by planting trees to offset the facility’s GHG emissions. The facility had reached this milestone in 2005 and had this result verified by an independent party.

Another example of Baxter’s claim of being serious about reducing the corporation’s GHG emission is its participation of GHG trading. In 2003, Baxter had claim that it was one of the founding member of the Chicago Climate Exchange (as discussed in the partnership section above), but also was the first corporation to transfer its emission credit between the EU trading emission trading scheme and the Chicago Climate Exchange.

(World Wide Web,

**Energy Conservation and Renewable Energy Sources**

Beside from the activities of carbon neutrality and emission trading, Baxter is also reducing its GHG emission through activities such as energy conservation and discovering of renewable and clean energy sources. For example between 2004 and 2005, Baxter had a 5 percent increase in its energy efficiency usage due to various facilities initiatives such as:

1. Replacing its existing lamps such as its metal halide and high-pressure sodium lamps with energy-efficient lighting systems.
2. Update out of date equipments by installing improved control technologies such as intelligent controls for motors, which improves the motor efficiency, and optimize the generation and distribution of compressed air in manufacturing processes.
3. Conduct lighting surveys and improved lighting reflectors

In the area of renewable energy source, Baxter has committed its facility to the purchase of 14,000 MWH of renewable electricity for its energy needs. Also, the corporation is considering on-site renewable energy technologies. For example, Baxter is discussing the possibility of using 100 percent renewable wind energy for the production of its future medical products.


Social Improvement and Investment

In this section of the corporate case study, the research analyzed what Baxter is currently doing to improve the communities in which the corporation resides. In particular, this thesis looked at the social elements that were approved in the thesis proposal.

Employee Training

According to Baxter’s sustainability report, the corporation claims that in order for Baxter to be continuously successful, it recognizes that it depends on the ongoing learning and development of all its employees worldwide. Because of this recognition, the corporation developed a global learning management system called Baxterlearning.com, which encompasses 426 e-Learning programs, which are available to employees in eight different languages. These online learning programs contain a variety of subjects from PC skills, project management, quality, and essentials of Six Sigma.

Employees at Baxter not only take courses for professional development, but also to meet its regulatory requirements. At 45 of Baxter’s global facilities, Baxter has a program called ISOtrain, which tracks regulatory requirements related to training documentation.
Baxter’s Community Support Program

After analyzing the Baxter’s corporate website and sustainability report, Baxter’s Community Support Program can be broken down into three categories. These three categories are:

1. Access to Healthcare
2. Critical Community Needs
3. Employee Involvement

Access to Healthcare

For Baxter’s Access to Health Care program, the main focus of the program is to use the corporation’s technological expertise to create products and services to provide unmet medical needs for people around the world. For example in developing countries around the world, thousands of people with end-stage renal disease or irreversible kidney failure, go untreated because of inadequate healthcare resources. For these situations, Baxter has made available to many that lack the access to treat these end-stage renal disease and irreversible kidney failure with one of the corporation’s medical product and service to treat these diseases called peritoneal dialysis. The peritoneal dialysis is an ambulatory therapy that does not require an extensive medical infrastructure such as a medical clinic. Because of this, this treatment offers potential cost benefits as well as an improved way of life for patients.

Beside from providing technological expertise in medical treatment, Baxter also helps address healthcare needs through product donations. In 2005, Baxter donated more than $17 million worth of critical healthcare products to more than 50 countries around the world and approved an additional $4.2 million in new grants to 69 organizations in 19 countries. The corporation primarily donates its product through the international
disaster-relief and humanitarian aid organization AmeriCares and its grants program through the corporation’s own Baxter’s International Foundation.


**Critical Community Needs/Employee Involvement**

For Baxter, the other two community support programs are its Critical Community Needs program and Employee Involvement program. In its Critical Community Needs program, the goal is to not only help millions of populations in third world countries from getting access to healthcare (see previous section), but also engaging in other civic duties such as reducing medical errors, increasing patient safety, improving education, enhancing transportation, offering youth services and protecting the environment. In order to achieve these goals, corporate wide Baxter donated roughly $14 million dollars to various organization and causes.

Aside from donating money, Baxter also encourages its employees to get involved within the communities and is the basis of its third community support programs of Employee Involvement. Its Employee Involvement program takes a variety of forms such as employee’s volunteer of time and personal resources to improve their own communities. For example, Employee’s often volunteer their own time to start or work on blood drive, service food bank or hospital or join on the board of non-profit organizations. Also, employee can contribute its own money donations and through Baxter’s International Foundation will receive Matching Grants up to $5000. In 2005, Baxter’s International Foundation donated total of $647,000 to qualifying matching organization. In Table 18 and Table 19 below, the table shows a breakdown of Baxter’s recent donation activities.

### Table 18-Baxter’s Donation Program

<table>
<thead>
<tr>
<th></th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Product Donations</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AmeriCares</td>
<td>$2,230,000</td>
<td>$5,740,000</td>
<td>$7,650,000</td>
<td>$16,720,000</td>
</tr>
<tr>
<td>Other Aid Organizations</td>
<td>n/a</td>
<td>n/a</td>
<td>$220,000</td>
<td>$1,110,000</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>$2,230,000</td>
<td>$5,740,000</td>
<td>$7,870,000</td>
<td>$17,820,000</td>
</tr>
<tr>
<td><strong>Business and Facility Cash Contributions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>U.S.</td>
<td>$880,000</td>
<td>$1,970,000</td>
<td>$2,940,000</td>
<td>$6,400,000</td>
</tr>
<tr>
<td>Non-U.S.</td>
<td>n/a</td>
<td>$3,130,000</td>
<td>$1,630,000</td>
<td>$7,610,000</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>$880,000</td>
<td>$5,100,000</td>
<td>$4,570,000</td>
<td>$14,010,000</td>
</tr>
<tr>
<td><strong>The Baxter International Foundation Contributions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>U.S. Grants</td>
<td>$1,220,000</td>
<td>$1,020,000</td>
<td>$630,000</td>
<td>$1,350,000</td>
</tr>
<tr>
<td>Non-U.S. Grants</td>
<td>$1,190,000</td>
<td>$1,290,000</td>
<td>$670,000</td>
<td>$1,120,000</td>
</tr>
<tr>
<td>Matching Gifts &amp; Dollars for Doers</td>
<td>$ 660,000</td>
<td>$ 720,000</td>
<td>$ 680,000</td>
<td>$ 680,000</td>
</tr>
<tr>
<td>Prize Programs</td>
<td>$ 270,000</td>
<td>$ 290,000</td>
<td>$ 280,000</td>
<td>$ 180,000</td>
</tr>
<tr>
<td>Scholarship Program</td>
<td>$ 340,000</td>
<td>$ 340,000</td>
<td>$ 320,000</td>
<td>$ 270,000</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>$3,680,000</td>
<td>$3,650,000</td>
<td>$2,580,000</td>
<td>$3,590,000</td>
</tr>
<tr>
<td><strong>Total Charitable Giving</strong></td>
<td>$6,790,000</td>
<td>$14,490,000</td>
<td>$15,020,000</td>
<td>$35,420,000</td>
</tr>
<tr>
<td>Contributions as % of Profits</td>
<td>0.66%</td>
<td>1.60%</td>
<td>3.92%</td>
<td>3.70%</td>
</tr>
</tbody>
</table>
1 Some subtotals vary slightly from sum of items in category, due to rounding.

2 Value of product donations for 2002-2004 is average wholesale price (equals catalogue list price). Value for 2005 is a combination of average wholesale price and average sales price. Variations in Baxter’s annual product donations are due to fluctuations in community needs, the regulatory environment, manufacturing processes and marketing and sales initiatives. The company identifies opportunities to donate and responds to community requests as appropriate.

3 Does not include additional grants approved in 2005 for future payment.

(World Wide Web,

Table 19-Baxter’s Recent Grants

<table>
<thead>
<tr>
<th>Organization</th>
<th>Location</th>
<th>Amount</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Disaster Response Grants</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project Concern International</td>
<td>San Diego, CA</td>
<td>$117,734</td>
<td>Final year of support to expand and strengthen healthcare services/mobile health clinic in Nagapattinam District in India for tsunami survivors.</td>
</tr>
<tr>
<td>Project Hope</td>
<td>Millwood, VA</td>
<td>$97,970</td>
<td>Final year of implementation to restore and improve health of citizens in Indonesia, particularly mothers and children affected by the tsunami.</td>
</tr>
<tr>
<td><strong>International Grants</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Charities Aid Foundation</td>
<td>New Delhi, India</td>
<td>$260,000 (2 years)</td>
<td>To establish a chronic care initiative to increase awareness and improve access and availability of treatment options</td>
</tr>
</tbody>
</table>
among high-risk populations in India.

<table>
<thead>
<tr>
<th>Organization</th>
<th>Location</th>
<th>Amount</th>
<th>Duration</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eurordis</td>
<td>Paris, France</td>
<td>$121,918</td>
<td>(2 years)</td>
<td>To improve access to and quality of healthcare services for patients with rare diseases and their families.</td>
</tr>
</tbody>
</table>

**Domestic Grants**

<table>
<thead>
<tr>
<th>Organization</th>
<th>Location</th>
<th>Amount</th>
<th>Duration</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Center for Grief and Loss for Children</td>
<td>Pasadena, CA</td>
<td>$57,300</td>
<td></td>
<td>Expanded grief counseling services for children in South Central Los Angeles</td>
</tr>
<tr>
<td>Chenney Troupe, Inc.</td>
<td>Chicago, IL</td>
<td>$40,600</td>
<td>(3 years)</td>
<td>To expand volunteer base serving patients in Chicago healthcare institutions</td>
</tr>
<tr>
<td>Chippewa Valley Technical College</td>
<td>Eau Claire, WI</td>
<td>$61,166</td>
<td>(3 years)</td>
<td>Expansion of dental services to the underserved in Western Wisconsin.</td>
</tr>
<tr>
<td>Hospice of the Conejo</td>
<td>Thousand Oaks, CA</td>
<td>$31,700</td>
<td>(2 years)</td>
<td>To expand the Special Caring program to support terminally ill clients and family members receiving hospice services in Westlake Village and Thousand Oaks, CA.</td>
</tr>
<tr>
<td>The Women's Treatment Center</td>
<td>Chicago, IL</td>
<td>$22,500</td>
<td></td>
<td>Support of a pediatric nurse for children residing at the Center while their mothers are in treatment.</td>
</tr>
</tbody>
</table>
Supply Chain

Due to the nature of its business, Baxter’s manufacturing facilities requires an efficient delivery of raw materials from its supply chain in order to produce the medical service products it needs. In 2005, Baxter spent $4 billion in supplies and deals with 50,000 suppliers in 100 countries. Because of this purchasing volume, the corporation recognizes it has the opportunity to influence its suppliers on improving its sustainability performance. Baxter is committed to increasing its focus on its core group of suppliers regarding these and other areas of social, economic and environmental performance. It was because of this; Baxter in 2002 developed and launched two EHS supply-chain management initiatives in the United States: a supplier EHS questionnaire and a series of supplier EHS workshops.

EHS questionnaire

The EHS questionnaire that Baxter developed is used by the corporation to gather information about Baxter’s key supplier’s environmental programs and performance and to educate suppliers about Baxter’s expectations. The corporation plans to update the questionnaire in 2006. Since the inception of Baxter’s questionnaire in 2002, 94 suppliers representing 20 percent of Baxter’s key suppliers have completed the survey. In 2003, Baxter extended the questionnaire to high-priority European suppliers in order to help Baxter evaluate supplier compliance to new European Directives, such as the Restriction of Hazardous Substances. Beside from being able to evaluate the corporation’s supplier EHS performance, the information gathered will also help shape Baxter’s its product-stewardship strategies.
EHS workshop and partnership

Between 2002 through 2004, Baxter developed and held four sustainable-development workshops, with the purpose to help educate suppliers and to improve the global supplier EHS questionnaire response rate. However in 2005, Baxter discontinued these workshops and turned its focus on activities with the Green Suppliers Network (a collaboration of partnership between private industry, the U.S. Environmental Protection Agency and the U.S. Department of Commerce's Manufacturing Extension Partnership (MEP)). During the first half of 2005, Baxter was able to recruit its suppliers to participate in the Green Suppliers Network. The corporation accomplished this by holding invitational meetings with eight key Midwestern suppliers and by March 2006, five suppliers within the healthcare sector had completed the Green Suppliers Network review process, in which four of the suppliers were recruited by Baxter. The result of the review process identified EHS opportunities to reduce water use by 5.7 million liters, waste generation by 91 metric tons and energy by 189 gigajoules per year. The potential annual cost savings were estimated to exceed $8 million. Because of the result yielded for these initial suppliers that participated, three other Baxter suppliers plan to participate and their reviews are underway. Baxter is always actively encouraging more suppliers to join.


Verification Process

As performed in previous corporate case studies, this thesis attempted to verify the validity of some of the reported activities by Baxter in its 2005 sustainability report through additional sources. For this verification section, this thesis attempted to verify the following activities:

1. Various Reported Activities: Greening the Supply Chain and Climate Management and Reducing Medical Errors and Baxter’s Performance Track Program
2. Charitable Contribution through Baxter International Foundation.

Other than verifying the validity of these activities by Baxter, this thesis also looked at how the Pacific Sustainability Index has evaluated Baxter’s sustainability report.

Footnote- In this corporate case study, the information that was gathered had both 2004 and 2005 information included. Baxter had updated its corporate website with its 2005 information on October 12, 2006.

Reported Activities

Community in Needs

As stated in the Community Support section, Baxter had reported that in its Community in Needs Program, one of the main problems that the corporation is trying to solve is to reduce medical error and ensure patient safety. On 12/3/2003, the Hospital Network.com reported in an article the result of the Northwestern Medical Center shows in the improvements of patient safety after first year of use of Baxter's Patient Care System. “We now have tangible data that identifies where the errors are occurring. We can now use this information to make adjustments to our medication delivery process and correct the problems at their root cause. Results to date confirm our belief that this is the right technology for improving the process of medication management at Northwestern Medical Center," said Peter Hofstetter, CEO of Northwestern Medical Center.


Greening the Supply Chain and Climate Management

In 2003, the Business Resource for Climate Management reported that Business Ethics Magazine gave Environmental Reporting Award to Baxter International. This Award is given to corporations for rigorous, transparency, and leadership in environmental accounting and reporting. In the article, it reported that Baxter has been issuing Environmental Reporting at least five or six year ahead of other corporations. The article also reported that Baxter is actively engaging in variety of environmental
activities such as reducing its air toxic and chlorofluorocarbons (CFC) emission. Baxter was so successful in reducing its air emissions; the corporation reached its air toxic and CFC reduction goals in 2001, which was four years ahead of schedule. Baxter is also a founding member of the Chicago Climate Exchange. The Exchange’s purpose is establishing a cap-and-trade system for member organizations to reduce or offset emissions of carbon dioxide. However, Baxter currently is concentrating on working to green its supply chain. The corporation has met with about 100 suppliers over the past two years to identify ways to integrate sustainable development into their operations.


**Baxter’s Climate Leadership Award**

In a press released by Corporate Social Responsibility on 4/13/2006, the EPA recognized Baxter for Achieving ClimateLeaders Greenhouse Gas Emissions Target. Baxter met its voluntary greenhouse gas reduction goal (through the EPA’s Climate Leader program) Climate Leaders program, which is to reduce greenhouse gas emissions by 16 percent per unit of production value by 2005.


**Performance Track**

In 2005, EPA designated Baxter as one of its Corporate Leader in its National Performance Track Program based on the company's performance in several areas. The following are a list of what Baxter received high marks from:

1. Ten of Baxter's 17 major U.S. facilities are Performance Track members.
2. Baxter’s pioneering of a corporate environmental “financial statement”
3. The development of Baxter's Product Sustainability Review process, “in which product development and environmental staff work together to review new products from a lifecycle and sustainability perspective.”
Charitable Donation

On September 29, 2006, The National Hemophilia Foundation (NHF) has announced the awards of two-year fellowships for two recipients for the 2006 and 2007 year. The fellowships are through the NHF Clinical Fellowship Program in Bleeding Disorders Research, which sponsored by Baxter Healthcare Corporation. The program’s main goal is to support the new future leaders specializing in coagulation disorders. Peter O'Malley, vice president of national accounts and advocacy, Baxter's BioScience business in North America says, “We're proud to have a role in supporting these outstanding clinicians as part of our ongoing commitment to the hemophilia community.”

Grants

In an article published by globeinvestor.com published that, Baxter International Foundation (the philanthropic unit of Baxter), announced its grant awards of nearly $600,000 aim to support initiatives that improve global access to quality and cost-effective healthcare in five different countries. These grants will help improve access to healthcare for children, the uninsured and the elderly, prevent child abuse and neglect, promote health education, expand training opportunities for healthcare providers and aid victims of global disasters.

Pacific Sustainability Index

The result given by the Pacific Sustainability Index on Baxter Corporation was performed on 2/2/2006 and from the corporation’s 2004 Sustainability Report. As stated
above, the 2005 information was not updated in Baxter’s corporate website until 10/12/2006. This thesis will use the analysis given by the Pacific Sustainability Index due to the fact that some of the research presented in this case study was also from Baxter’s 2004 Sustainability Report.

**PSI Result**

According to the PSI analyst, the Baxter 2004 Sustainability Summery is a thorough summary of its environmental and social activities. “Baxter has shown itself to be a leader in transparent and thorough reporting of its social and environmental activities for both its sector and reporting across sectors.” Baxter Corporation was rated the best corporation in the Medical Device Section with the overall PSI scores of 59. Table 20 below shows the overall score of Baxter Corporation.

**Table 20 Baxter Overall PSI Score**

<table>
<thead>
<tr>
<th>Category</th>
<th>Percent Coverage</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Environmental</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intent</td>
<td>84%</td>
<td>A+</td>
</tr>
<tr>
<td>Reporting</td>
<td>53.33%</td>
<td>A-</td>
</tr>
<tr>
<td>Performance</td>
<td>10.00%</td>
<td>B</td>
</tr>
<tr>
<td>Overall</td>
<td>52.00%</td>
<td>A+</td>
</tr>
<tr>
<td><strong>Social</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intent</td>
<td>72.22%</td>
<td>A+</td>
</tr>
<tr>
<td>Reporting</td>
<td>79.91%</td>
<td>A+</td>
</tr>
<tr>
<td>Performance</td>
<td>28.26%</td>
<td>A+</td>
</tr>
<tr>
<td>Overall</td>
<td>62.25%</td>
<td>A+</td>
</tr>
<tr>
<td><strong>Overall PSI Score</strong></td>
<td>58.90%</td>
<td>A+</td>
</tr>
</tbody>
</table>

From the research, this thesis does recognize that the information presented by Baxter is thorough and is very in-depth. This thesis agrees with the analyst performed by the Pacific Sustainability Index.
6.4 Nike

Corporate Overview

The Nike Corporation is a multi-billion dollar international Sports Apparel, Equipment and Shoe Corporation from which its origin can be traced back to 1971 to a fledging sports company called Blue Ribbon Sports Inc. At that time, the future Nike founder Phil Knight was trying to supplement his income from the sports company by teaching at Portland State University. It was because of this, the future of Nike and its famous swoosh logo was born. Phil Knight met a young graphic design student named Carolyn Davidson in the hallway of the university and hired her to do some logo work his small company. It was during this business relationship, Phil Knight chose Carolyn Davidson’s swoosh logo for his shoe inventory. From there, the famous Nike swoosh was born and later, Phil Knight changed the company from Blue Ribbon Sports Inc. to Nike.


Corporate Responsibility Mission

Similar to the previous corporate case studies, this thesis took an in-depth look into Nike’s corporate website in order to discover Nike’s position on the Sustainability elements that were presented in the thesis proposal. After analyzing Nike’s corporate website, this thesis realized that the corporation talks in detail about its Corporate Responsibility (CR) Missions and the strategies it is claiming to implement in order to achieve the CR Missions. The Nike CR Mission Statements are as follows:

1. The corporation and its employees must help Nike to achieve profitable and sustainable growth.

2. Nike must also protect and enhance the brand and company.

After presenting the Corporate Responsibility Mission Statements, the corporation elaborated on the intent of these statements. For Nike, the corporation believed that the very definition of sustainable growth means that the corporation plans to be around for the long haul (generation after generation). In order to achieve this goal, Nike believes that it must find ways to generate profit and the growth of the company while minimizing
the potentially negative impact on the communities or the environment. With this mission of sustainable growth, the corporation understood in order to achieve sustainable growth, another aspect that the corporation must do is to protect and enhance the Nike brand (as stated in the corporation’s second corporate mission statement) (World Wide Web, www.nike.com/nikebiz/nikebiz.jhtml?page=54, “CR Statements”)

CR Strategies

In order to achieve these CR statement goals, the management at Nike developed several strategies, which it believes will help the corporation to reach these goals. These strategies are as follows:

1. Become a leader in the footwear, apparel, and equipment industries, so that Nike can play a significant role in effecting positive, systemic change in working conditions.
2. Create innovated and sustainable products.
3. Use sports as a tool for positive social change, and campaign to turn sports and physical activity into a fundamental right for every young person.


For the following sections of this corporate case study, this thesis took a comprehensive look into what activities Nike is implementing in order to achieve these listed strategies in order to eventually achieve the published Corporate Responsibility Statements on its corporate website.

Innovated Sustainable Products

For this section of the corporate case study, this thesis analyzed what is Nike’s strategy to create innovated sustainable products. According to the corporation, the essence of Nike’s plan for achieving this (creating innovated sustainable products) is all about lessen the environmental impact that Nike’s daily operations has on the
environment. The corporation has several approaches in achieving this strategy, such as eliminating waste and toxics and creating the Life Cycle Matrix (LCM). (World Wide Web, www.nike.com/nikebiz/nikebiz.jhtml?page=27&cat=strategy, "Environmental General")

The LCM helps Nike identify its major sustainability initiatives and shows whether or not the initiative is currently being applied at various stages in a product's life cycle (Figure 21 below shows an example of Nike's Life Cycle Matrix).

**Figure 21-Life Cycle Matrix**


The corporation believes that by reducing its environmental impact, it is moving towards sustainability and therefore producing innovated sustainable products. Figure 22 below is a graphical representation of Nike’s production cycle. The corporation claims that by following the strategies of eliminating wastes and toxics and by directly influencing its
own facilities, suppliers and contractors, it will be one step closer in achieving the production of innovated sustainable products.

Figure 22- Nike's Production Cycle

![Figure 22- Nike's Production Cycle](World Wide Web, www.nike.com/nikebiz/nikebiz.jhtml?page=27&cat=lifecycle#,
"Production Cycle")

Eliminating Waste

In the area of eliminating waste, Nike focuses on eliminating or reducing solid wastes that are generated from its products, eliminating waste in water use and tracking, and reducing or eliminating Green House Gas (GHG) from its operations. This corporate case study looked at each one of these initiatives and analyzed what activities the corporation is undertaking to try and eliminate waste from its operation.

Product Waste Reduction

As discussed in the above section, Nike recognizes that in order to produce innovated sustainable products, it is necessary to eliminate waste from all facets of its operations; hence, the corporation has published the three facets as discussed above. In this section, this corporate case study looked at the challenges of solid waste management that Nike faces (especially within a contracted supply chain). For example, in the corporation's footwear division, the corporation began a concerted effort in developing a
system to effectively manage the waste generated from its production manufacturing centers around the world. As a first effort, Nike banned the use of on-site incinerators in its own manufacturing facilities and negotiated the successful removal of incinerators from its contracted footwear factories. The corporation recognizes that this was an important first attempt because the incinerators that were used were extremely inefficient in their operation and were a major pollution source to the environment. Along with eliminating incinerators, Nike also helped develop various recycling infrastructures and waste management centers around the world. An example of Nike’s recycling and waste management programs can be seen in the use of the rubber scrap wastes. The rubber scrap waste that was used as a fuel source in the incinerators is now re-introduced into the corporation’s outsoles and/or its Grind licensing program. Also, footwear products that have come to its produce life are treated in our Reuse-A-Shoe program. A more in-depth analysis of Nike’s Reuse-A-Shoe program will be discussed in the section below.


**Reuse-A-Shoe Program**

Nike’s Reuse-A Shoe program was originally created in 1993 as one of the corporation’s answers in closing its used shoe life cycle. By closing this product’s life cycle, Nike is claiming that it is making great strides in eliminating solid waste. In this program, the used footwear is separated into three main materials – upper fabric, midsole foam and outsole rubber. After the shoe is separated and then ground up, the corporation uses these materials for constructive uses such as in the surfaces of athletic fields, weight rooms, playgrounds and golf products.


Eliminating Waste in Water Use

Aside from eliminating or managing its solid waste production, Nike also recognizes that it is vital to help protect water resources; roughly one third of the world's population lives in countries suffering from moderate-to-high water stress, and Nike recognizes that the use of water and the discharge of waste water is the corporation's largest environmental and community impact. By recognizing that the protection of its water resources is important, the corporation has developed several water programs such as helping textile manufacturing facilities create water-efficient production methods. The corporation also helps these facilities bring their wastewater into compliance with the global water quality guidelines that were developed through the Business for Social Responsibility consortium. In the area of water conservation, Nike is working with its textile suppliers to minimize the use of precious water resources and promote better water management practices in process operations. In Nike's footwear facilities, the corporation is tracking water use and directing its contract factories to meet local wastewater discharge standards. For some facilities, Nike has required factories to install wastewater treatment facilities, where local capabilities did not exist.


Tracking and Reducing GHG Emission

The final activity of Nike's waste elimination and reduction strategy is the reduction and tracking of GHG emission. According to Nike's corporate website, the corporation is actively engaging in looking for methods to reduce its GHG, especially carbon dioxide (CO₂), because the emission of these gases contributes to climate changes. In order to reduce its GHG emission, Nike will support the objective of the Kyoto Treaty as part of its 2001 voluntary agreement with the World Wildlife Fund's Climate Savers program. In order to reduce the GHG emissions, Nike has consciously installed energy efficient lighting or use fuel-efficient boilers. Nike is committed to additional work to address the Climate Savers program goals through more action in all of these areas.
Aside from these internal activities within Nike’s own facilities, the corporation recognizes that its contracted footwear manufacturing and product transportation are the areas of greatest impact of GHG emissions and will be a growing focus of Nike’s CO2 reduction activities. The corporation’s global logistics’ staff has created a CO2 model that calculates the emissions for every leg of all international shipments of Nike products from the factory, the distribution facilities, and various transportation mechanisms such as the emissions from sea freight.


**Eliminating Toxics**

Along with eliminating waste as part of Nike’s environmental strategy, Nike also recognizes that another important aspect of the corporation’s environmental impact is to eliminate toxic materials in its products because these substances are known or suspected to be harmful to the health of humans and the environment. For example, similar to Nike’s initiatives of eliminating GHG emission, the corporation has also published its dedication in eliminating toxics such as Volatile Organic Compounds (VOCs), Poly-Vinyl-Chloride (PVC) and the corporation’s global restricted substance list (The global lists of substances are a list of substances that are restricted or prohibited in Nike brand footwear, apparel, and equipment. The lists are predominantly based on the most stringent worldwide legislation). In the below sections of this corporate case study, this thesis will look at what activities Nike claims to be implementing in order to achieve its strategy of eliminating toxics from its products.


**Eliminating Volatile Organic Compounds**

In the area of eliminating VOCs, Nike recognizes that by eliminating VOCs, the corporation is helping to achieve an important element of the corporation’s strategy of
creating innovated sustainable products, because VOCs are the major culprit in the cause of air pollution/smog within communities. In order to achieve this strategy, Nike is focusing its priorities in working with its contracted manufacturing facilities. The corporation, with the help of its contract manufacturers, is focusing on creating systems to collect solvent use data, monitor use, and look for water- and detergent-based alternatives to solvent-based adhesives in the corporation’s footwear manufacturing processes. Due to this effort, Nike has made dramatic reduction in the presence of VOC in its athletic shoes. For example, according to Nike, the corporation has reduced the amount of VOC from 340 grams of VOCs per pair of shoes (1995 levels) to its current level of 16 grams of VOCs per pair of shoes.


Phasing out of Poly-Vinyl-Chloride

Aside from phasing out VOCs in its daily manufacturing operations, Nike, in its corporate website, has also published its dedication to a gradual phasing out of the substance Poly-Vinyl-Chloride (PVC) from its apparel product lines and from Nike’s office uses, worldwide (PVC is often used in ink in printers). According to Nike, the reason that the corporation is voluntarily trying to phase out the substance is because the substance is harmful to the environment. In order to achieve this goal, Nike has worked closely with its apparel design team and suppliers to find an alternative substitute to replace PVC at a suitable expense level. For example, Nike had five-year collaboration with an ink and base supplier in finding a new printing technology that might replace the PVC base printing technology. To this date, Nike has claimed that it has found a viable substitute; however, the cost involved with this new technology is still above the PVC; therefore, the new task that is facing the corporation is to find a way to reduce the price to a manageable level.

Organic Cotton

As another part of the corporation’s effort in eliminating toxic materials, Nike has found substitutes that are environmentally friendly. For example, the corporation has published in its corporate website, that Nike is striving and dedicated to the use of organic cottons. The corporation argues, that by using cotton that is third-party verified as organic (the corporation is using third party verifier that is credited by the United States Department of Agriculture (USDA) or the International Federation of Organic Agriculture Movements (IFOAM)), Nike is helping to eliminate toxic materials to the environment. In order for the cotton to be considered organic, the cotton has to be grown in soil without synthetic pesticides, fertilizers, and defoliants for at least three years. The Nike Corporation first purchased its order of organic cotton in 1997 to be used in its 1998 fall apparel line. Ever since, Nike has grown reliant in the use of organic cotton. The corporation has set a goal of blending a minimum of 5 percent organic cotton into all of the corporation’s cotton-containing materials by 2010, while growing its product line that offers 100 percent certified organic cotton products.


Community-Sustainable Growth

Nike’s Corporate Responsibility Strategies not only focus on the corporation’s operations and the effect it has on the environment, the corporation also concentrates its CR strategies on building strong community relationships. Nike had stated in its corporate website that by building strong community relationships, it will not only enhance the corporation’s image but help grow the company in a sustainable manner (Nike’s CR Mission). In the following sections of this corporate case study, this thesis looked at the activities that Nike is undertaking in order to build strong community relationships.
Community- Charitable Contribution/Donation

In this section of the corporate case study, this thesis looked at the charitable contribution/donation program that Nike is currently implementing. This research analyzed information such as charitable donation guidelines, specific programs, overall monetary/product donations, and employee/retiree volunteerism.

Charitable Donation Guidelines

Being an athletic apparel and footwear corporation, Nike mainly focuses its charitable donations to support and promote youth and physical activities. According to Nike, the corporation specifically seeks to achieve the following in its charitable programs:

1. “Get kids more physically active
2. Get kids involved in the teamwork of sports
3. Have a real and positive and measure impacts”

Besides maintaining these above goals, the organizations that are seeking charitable contributions from Nike must be tax-exempt, non-profit organizations (as defined by the Internal Revenue Service). Also, for donations within the United States, the corporation only focuses its donations in communities in which there is a strong Nike presence (such as significant Nike facilities and employees).

According to Nike’s website, the corporation does not donate or contribute to the following activities:

1. “Individuals (scholarships, stipends, fellowships, personal assistance)
2. Individual sports teams
3. For-profit ventures
4. Religious groups for religious purposes
5. Capital campaigns, endowment funds or memorials
6. Lobbying, political or fraternal activities
7. Team sponsorships
8. Individual study, research or travel grants
9. Awards that require Nike and/or its employees to raise monies on behalf of an organization bestowing the award

Based on the above criteria, Nike reported a total charitable donation of $46.1 Million dollars for Fiscal year 2005.


**Charitable Programs**

With donations guidelines established, the following section of this research will look at what charitable programs Nike has implemented. This research especially looked at the corporation’s Air to Earth Program, Jordan Fundamentals, and Nike Foundations. After analyzing these programs, this section of the corporate case study then examined its publicized grants programs such as the Case Martin Awards, the Bowerman Track Program, and its Employee Volunteer Grant Matching Programs.

**Air to Earth Program**

Established in 1998, Nike’s Air to Earth Program is an environmental education program that teaches kids in grades 4-9 about the value of Sustainability. The Air to Earth program is established to help and encourage students to think about the Earth’s life cycles and relate them to materials that humans use every day. In the program, the students are tasked to create the most environmentally effective recycle products from used materials made from recycled athlete shoes. By tasking students with this assignment, the students can learn about the 3-R’s: reduce, reuse, and recycle, thus, hoping to teach the students the benefits and necessity of working to create a sustainable world. Figure 23 below is Nike’s Air to Earth curriculum as published in its website.
**Figure 23-Air to Earth Curriculum**

<table>
<thead>
<tr>
<th>Pre-Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesson 1</td>
</tr>
<tr>
<td>Lesson 2</td>
</tr>
<tr>
<td>Lesson 3</td>
</tr>
<tr>
<td>Lesson 4</td>
</tr>
<tr>
<td>Lesson 5</td>
</tr>
<tr>
<td>Lesson 6</td>
</tr>
<tr>
<td>Post-Assessment</td>
</tr>
</tbody>
</table>


**Jordan Fundamentals**

Much like the above program, the Jordan Fundamentals Program is a community grant program created by Michael Jordan to help teachers purchase resource materials, supplies, software, equipment, and other items needed to fulfill their lessons. Now, in its fifth year since conception, the Jordan Fundamentals Program grants are available to
teachers and help educate students from grades 1 through 12. Each year, there are a total of 400 grants given. The grants are split evenly. Grades 1 through 6 will receive 200 grants, and grades 7-12 will also receive 200 grants. Each grant will be worth $2500 for a total of $1.0 Million that Michael Jordan and Nike have ear marked for education initiatives (The money comes from a portion of sales from Jordan Products).


**Nike Foundation**

Aside from the educational initiatives mentioned above, the Nike Corporation and its foundation (The Nike Foundation) also help and promote the empowerment of girls (especially in developing countries). The corporation recognizes that in order to make the most effective impact, Nike’s participation in this program must take a multi-faceted approach. For example, the program aims to effectively empower girls/women in multiple areas such as providing/enhancing economic opportunities, social and educational opportunities, health and security, and girls’ leadership and basic human rights.


**Casey Martin Award**

Besides donating to the educational and social programs mentioned above, Nike also has several awards and grant programs that promote athlete achievements and basic sports. One of the awards that Nike has published on its website is the Casey Martin Award. The Case Martin Award is a recognition award that Nike bestows on an individual that excels in athletics while overcoming major difficulties such as mental, physical, and cultural handicaps. (World Wide Web, www.nike.com/nikebiz/nikebiz.jhtml?page=26&item=award&subitem=recipients, “Casey Martin Award”)

In order to qualify for the awards, the individual must meet the following criteria:

1. “Individual of any age with a disability as defined by the Department of Justice.
2. Individual has pursued his or her sport of choice to a level of success despite challenges/barriers, whether physical, psychological, societal or cultural.
3. Individual has taken a personal and public stand to support and inspire other individuals with disabilities to pursue and excel in sports.
4. If selected, nominee must be available the first week of November, 2006 to travel to Nike's World Headquarters in Beaverton, Oregon (award recipient will be notified of specific date).”


This award was first created in celebration of the Pro Golf player Casey Martin who battles a circulatory disease. Because of his disease, Casey needed the use of a motorized vehicle while participating in Pro Golf Association (PGA) tournaments. However at that time, the PGA didn’t allow the use of motorized vehicle during tournament play, Case Martin didn’t give in. He won an landmark case (in the U.S. Supreme Court) that allowed him to use motorize vehicle during tournament play. (World Wide Web, www.nike.com/nikebiz/nikebiz.jhtml?page=26&item=award&subitem=recipients, “Casey Martin Award”) Because of his determination to obtained fair play in-spite of physical disability, Nike created the Casey Martin Award.

The Bowerman Track Program

In order to honor one of its long time co-founders, the Nike Corporation established The Bowerman Track Program. Bill Bowerman was the legendary University of Oregon Track-and-Field coach that coached Phil Knight (one of the founders of Nike) at the University of Oregon and was a co-founder with him in establishing the Nike
Corporation. The Track Renovation Program provides/donates matching grants to community organizations that are youth oriented and helps them refurbish/construct running tracks. This charitable program is administered by Nike’s Corporate Responsibility department and provides matching funds of up to $50,000 and annually distributes grants worth approximately $200,000 (to any community organization that meets Nike’s criteria (see below)). In order to qualify for the Bowerman Track Renovation Program, the recipients of the funds must meet the following criteria:

1. “Grant recipients will provide track access to neighboring communities.
2. Bowerman Track Renovation Program funds must be matched in some amount by other contributors by an agreed upon deadline.”

Not only does Nike provide matching funds to help renovate tracks, the corporation also encourages the use of Nike-Grind technology to resurface the track (encourage but not required as published in Nike’s website). According to the corporation, to date, thirteen of the track renovation projects have used the Grind technology, which consists of approximately 75,000 recycled athletic shoes.


**Employee Volunteer Grant Matching Program**

The last Nike charitable donation program that this case study looked at is the corporation’s Employee Volunteer Grant Matching Program. In this program, the employees of Nike are encouraged (by the corporation) to take an active part in their community. For example, if a U.S. based employee donates to a qualified non-profit organization, Nike will match the employee’s contribution, dollar-for-dollar, up to $5,000 per employee per year; also, when the employee volunteers his or her time, the corporation will donate $10 for every qualifying hour of volunteer work. For the fiscal year of 2005, the Nike Corporation matching contribution totaled more than $2.8 million in the U.S.
Supply Chain

As discussed in the previous sections above, the majority of Nike’s public relation issues concern the working conditions and the diversity of Nike’s supply chain. In the following section of this corporate case study, this thesis will examine what supply chain initiatives Nike currently has in place.

Supplier Diversity

In Nike’s supplier chain diversity program, the corporation has published on its website that it is dedicated to create as diverse of a supply chain as possible. According to Nike, the corporation is committed to creating such a supply chain because it believes that it will help the corporation in several ways:

1. By having a diverse supply chain, the corporation is creating more competition; therefore, it will lower the cost of goods and services that will affect Nike’s bottom line.
2. By having a diverse supply chain, it will help Nike to maintain a connection to the broad consumer base that is ever populated with increasing numbers of minorities, women, and the physically challenged.
3. With a diverse supply chain, Nike is providing economic stimulus to the communities in which it resides because it is doing business with a wide range of suppliers.
4. Finally, Nike believes that by having a diverse supply chain, it not only contributes to the enhancement of the Nike brand, but it also helps strengthens the corporation’s relationship with its customers who also value diversity.

Supply Chain Monitoring and Assessment Program

As mentioned above, Nike has published its claim that it is dedicated to have a diverse supply chain. However, according to the corporation, it recognizes that with a diverse supply chain and its ever changing corporate needs, Nike has implemented a strategic supply chain monitoring and assessment program. For example, Nike has two compliance and assessment programs that it uses when it wants to introduce a new factory to its supply source or when the factory is asked to exit Nike’s supply source when the corporation’s need has changed.

New Source Approval Process (NSAP)

The NSAP is a multi-step process that Nike employs when a Nike business unit is looking to add a new factory for its supply chain. Nike implements this process because it helps the corporation to eliminate unnecessary addition to its supply base and/or abolish contract factories that do not have a compliance level that satisfies Nike’s requirements. Below are the NSAP steps that Nike employs:

1. The factory profile is generated and analyzed
2. The factor is also inspected for quality
3. An environmental health and safety and labor inspection is performed
4. A third party audit need a verb
5. A review of Nike’s needs for the new factory need a verb
6. Approval is required by the Nike’s compliance department

Note: According to Nike, “In fiscal year 2004, 57 percent of factories that had the basic inspections performed were approved for production. The disapproval rate of 43 percent, and the fact that almost every factory required significant remediation before approval, underscores the fundamental challenges of working conditions in the industry.”

Monitoring and Remediation

Once the compliance department approves the new factory, the factory will undergo several monitoring assessments. The factory will undergo an initial environmental, safety, health, and labor audit and also a third-party labor audit (according
to Nike these are the minimum requirements). However, as indicated on its website, a factory might be subjected to a new and more in-depth audit call; the M-Audit (M-Audit stands for Management Audit). (World Wide Web, www.nike.com/nikebiz/nikebiz.jhtml?page=25&cat=monitoring, “Monitoring”) The M-Audit, according to Nike, will give the corporation a more in-depth look/analysis of the factories’ working conditions. The factories that Nike is targeting for its M-Audits are factories that might have more of a bias toward non-compliance; they might exhibit the following traits:

1. “The country of manufacture, to account for countries with poor standards or lax enforcement;
2. The size of the worker population, because larger factories mean more people affected by potential non-compliance;
3. The nature of manufacturing, because non-compliance in factories using more solvents or heavy machinery puts workers at a greater potential risk;
4. The past compliance performance of the factory or its ownership team, which tends to be better in factories where we have had long-term business relationships.”

Note: Nike’s goal for M-Audit is to cover roughly 25 to 33 percent of its active factories each year. (World Wide Web, www.nike.com/nikebiz/nikebiz.jhtml?page=25&cat=monitoring&subcat=maudit, “M-Audits”)

Training and Education

As factories go through these assessments, and non-compliance is discovered, the corporation has several remediation processes and procedures that it might employ to correct the non-compliance issues. However, as published in its website, Nike believes that training and education enable the corporation to build its capacity and sustain the improvements it has made. The following are areas in which the corporation had the most significant impact through its training and education program:
1. “A global effort to raise factory awareness of labor law and Nike standards, often involving local labor experts;
2. A parallel global effort to raise factory awareness of environment, safety and health (ESH) management, focusing on ESH committees; and
3. Building our own staff competencies to assist contract factories with remediation.”


**Factory Exit**

The final assessment process that Nike has to monitor its supply chain is its factory exit strategy, when, the corporation deems that a particular factory no longer serves the business needs of Nike and stops ordering from the factory. Nike has developed a standard factory exit strategy in order to protect the workers that might be affected. The following represents Nike’s factory exit strategy:

1. Nike will help support the workers by ensuring that they received all entitlements from the factory as set out in the labor law.
2. The corporation will also advocate to the contract factory owners to fulfill all severance requirements as set out in the labor laws.
3. Nike will also leverage a wide range of contacts to help move a factory owner toward fulfillment of legal obligations.
4. If the factory owner fails to meet legal obligations, Nike will explore the possibility of worker support programs.

Verification Process

After researching all the various Nike corporate responsibility initiatives, this thesis attempted to verified the validity of these activities by cross referencing what was published on Nike’s corporate website with alternate sources. In the following sections, this corporate case study will attempt to verify Nike’s environmental initiatives and charitable donation programs. Along with cross-referencing these activities, this corporate case study examined how the Pacific Sustainability Index evaluated Nike’s Corporate Responsibility Report.

Environmental Verification

As discussed in the above section, Nike has created a recycled program of old athletic shoes called the Reuse-A-Shoe program. This thesis has verified this program by crosschecking this published initiative from additional sources.

Denver-Runner’s Roost

In Denver and Aurora Colorado, the Runner’s Roost has published that Nike is actively participating in its Reuse-A-Shoe program. “The Nike Corporation is collecting old athletic shoes recycled into material used to build new athletic playing surfaces, such as basketball courts and soccer fields. Through participation in the Reuse-A-Shoe program, communities are eligible to apply for National Recycling Coalition, Inc. & Nike's sports resurfacing grant. The collection takes place year round at our Aurora & Denver store locations.”


Portland Trailblazers

The professional National Basket do you mean basketball? Association (NBA) team, the Portland Trailblazers, has published that it is currently collecting old used athletic shoes of any brand at the home games of the Trailblazers. The team has a goal of
collecting 2,500 athletic shoes (According to the website, 2,500 pair of athletic shoes is what it takes to resurface a basketball court) and donating them to Nike’s Reuse-A-Shoe program which will grind them up and use the recycled shoe material to make new sports surfaces that will be donated to communities around the world. The Portland Trailblazers is collecting these shoes at the entrance of the Rose Garden and will be enter to win a pair of athletic shoes that will be autograph by a Trailblazers player.


City of Milwaukee

On the City of Milwaukee public work website, the city has also confirmed the validity of Nike’s Reuse-a-Shoe program. The city has published that it has been participating in the program with Nike since the summer of 2004 by collecting old athletic shoes in various collection locations throughout the metro area of Milwaukee.

“The City of Milwaukee has already been utilizing recycled rubber products in its playgrounds and tot lots for years and will continue to use these recycled materials. Recycled shoe material from the Milwaukee area will end up in athletic and play surfaces in communities all throughout the nation. From August 2004, when Milwaukee started its shoe recycling program, through the end of 2005, over 20,700 pairs of used athletic shoes were collected for recycling from Milwaukee area residents!”

(World Wide Web, www.mpw.net/Pages/reuseashoe.html, “Reuse-Verified 3”)

Commitment to Eliminate Waste

Per the discussion above, Nike has published that one of its environmental initiatives is to eliminate waste and reduce GHG emission. Below are two Greenbiz Newsletters that verified Nike’s claim:
GreenBiz.com-November 9, 2000

“Sports apparel giant Nike has signed on with the Coalition for Environmentally Responsible Economies to endorse the group's code of voluntary, "beyond-compliance" environmental conduct. According to Joan Bavaria, CERES board chair and president of Trillium Asset Management, Nike's endorsement means that the firm has taken ‘a major step forward’ in its efforts to achieve sustainability throughout its environmental and labor practices. Under the terms of the endorsement, Nike will submit to the coalition annual reports and engage in dialogue with special interest groups and individuals concerned about its performance.”


GreenBiz.com-October 3, 2001

“Through a new Climate Savers memorandum of understanding with World Wildlife Fund and the Center for Energy & Climate Solutions, Nike Inc. has committed to reducing greenhouse gas emissions across its operations worldwide. Nike also said it will measure greenhouse gas emissions from contracted manufacturing and shipping operations with an eye toward reducing those emissions. Under the new agreement, World Wildlife Fund and the Center for Energy & Climate Solutions will work with Nike to achieve the following climate-saving targets:

- Reduce carbon dioxide (CO2) emissions from business travel and Nike owned facilities and services 13% below 1998 levels by the end of 2005. Nike intends to achieve this goal by pursuing energy conservation projects, purchasing green power and investing in community energy efficiency projects. As the earliest year for which reliable data and information exists regarding Nike's greenhouse gas (GHG) emissions, 1998 will serve as the baseline for reductions.

- Create baselines for Nike's major subcontracted footwear and apparel manufacturing facilities by year-end 2003. Extending reduction efforts to its
global network of business partners, Nike will investigate, evaluate, and distribute best practices to its major subcontracted manufacturing facilities. A GHG emissions reduction strategy for these facilities will be determined in 2005.

- Examine Nike's supply chain, from packaging to mode of transportation, for opportunities to improve logistics efficiency and reduce GHG from supply chain activities. By 2005, Nike will determine how to proceed with a GHG reduction strategy for logistics.

In addition, Nike said it would continue its progress to eliminate sulfur hexafluoride (SF6), and has committed to complete elimination of SF6 by June of 2003.”


Charitable Program Verification

Bowerman Track Renovation Program

In this section of the corporate case study, this thesis verified the validity of Nike’s Bowerman Track Renovation Program as published on its corporate website. This research was able to verify Nike’s claim through additional sources other than the Nike’s corporate website.

Philanthropy News Digest (PND)

In the October 21, 2005 issue of the Philanthropy News Digests, an article was published that verified the validity of Nike’s Bowerman Track Renovation Program. The article that was published is printed below:

“Nike Accepting Applications for Bowerman Track Renovation Program

A philanthropic initiative of Nike, Inc., the Bowerman Track Renovation Program provides matching cash grants to community-based, youth-oriented organizations that seek to refurbish or construct running tracks. Administered by Nike's Community Affairs
Department of Human Services in the State of Illinois

In the Department of Human Services’ (for the state of Illinois) website, the state’s Grant Alert System (GAS) published the existences of Nike’s Bowerman Track Renovation Program. The website published what the Grant was, the eligibility requirement for application, the funding amount, the deadline of the grant, and the Nike’s point of contact for the grant.
Verification Conclusion

During the verification process, this thesis was able to verify the validity of certain Nike Corporate Responsibility activities. However, the activities verified in nature were mostly charitable contributions or very limited technical activities (Reuse-A-Shoe program). Furthermore, the information that was available on the corporate website failed to specify targets, goals, and results; this thesis was only able to find information that Nike had claimed that it is committed to being a corporate citizenship. Besides the above, Nike has not updated the responsibility sections of its corporate website, and its last published corporate report is its 2004 report. Due to this lack of specific information on these activities, it is difficult for the thesis to rate Nike on its claim of specific corporate responsibility activities it is performing within its own facilities and, therefore, can not prove or disprove Nike’s claims. This notion was further substantiated by the fact that the Pacific Sustainability Index that was used by the previous case studies does not include a sustainability analysis for Nike Corporate Responsibility Report.
7.0 Thesis Conclusion

After performing the research for each individual corporate case study (as listed in the approved thesis proposal), this thesis has reached the following conclusion:

1. In each of the corporate case studies, the individual corporation is performing the activities, which it claims to be implementing. This thesis was able to verify the activities that were published, by cross-referencing the activities mentioned in each corporate website and sustainability/corporate responsibility/corporate citizenship reports with other sources that were independent from the corporation. Also, the corporations were careful in the definition of what they considered sustainability/corporate citizenship/corporate responsibility. The reason the corporations had carefully defined these phrases was because the corporations tailored the activities that they published in their reports and websites to what they considered sustainable, corporately responsible, and good corporate citizenship.

2. Each individual corporation does have activities in each element of the Triple Bottom Line, i.e., economic, environmental and social activities.

3. Each individual corporation's activities are similar in nature. For example, in the environmental sections, each one of the corporations is reducing/eliminating waste by improving some part of its process; all are targeting to reduce the emission of Green House Gas by being more efficient (such as replacing more energy efficient lighting), and all are attempting to recycle in some form. For the social activities, all of the corporations that were analyzed in this thesis participated in a grant program, encouraged volunteerism and some kind of award for special achievement. For the economic part of the Triple Bottom Line, all of the corporations that were presented in this thesis do recognize that it is important for them to participate in some kind of relationship building or waste elimination activity because it ultimately will help their bottom line. However, this thesis cannot definitively state that these sustainability/triple bottom line activities that are being performed by the corporations presented are done because of
some genuine motivation to do the altruistic thing. The reason this thesis is stating this because there is not enough information available to come to that conclusion. For example, in the corporate case of Nike, the information that is currently published (as of December of 2006) is still for the year 2004. The Nike Corporation’s latest corporate responsibility report is 2004. The corporation had failed to update a majority of its website since April of 2005. Upon further research of Nike’s corporate website, the corporation had published its first responsibility report in 2001, and has since then only updated its information to 2004. Due to this lack of information and lack of transparency, it is difficult for this thesis to conclude definitively that the corporation had a genuine interest in being corporately responsible or a mere attempt in building a public relationship to appease for past transgression. Aside from this lack of detailed information and true transparency from Nike, this thesis has experienced similar situations for some of the other corporate case studies in this thesis. For example, in the case of General Electric, the corporation had failed to state the standards in which it takes care of the waste generated by its facilities. However GE does state in its corporate website, that it is “dedicated to reducing the waste it generates by sending the waste to the proper recycling and treatment facilities that meet the company’s standards, which GE claims are protective of its workers and the environment (However, the corporation does not go into more detailed). In another example of ambiguity of data that was presented in the corporations responsibility/citizenship/sustainability reports and website, a majority of the time when this thesis performed an analysis of the waste reduction/elimination data for the corporate case studies, the majority of the corporations had explained that when there was an increasing trend in the amount of waste generated, the corporations attributed these increases to the growth of its business units and no other explanation was given.

However, with that stated, this thesis does not want to give the impression that these corporations are not doing the right thing by the activities they are implementing. This thesis believes that most of the activities that are being performed are beneficial to the communities and the environment of where these corporations resides. However these activities are relatively easily performed with no risk or expenses to the corporations, and it is a great public relation tool for the corporations to enhance their
market brand. Perhaps the best analysis this thesis can make about what it has discovered in its research is that the majority of corporations are slowly moving out of the pollution prevention stage and starting to be part of the product stewardship stage of being sustainable. As defined in the thesis proposal, most of the corporations that were looked at are starting to take a hard look at the life cycle of their products; however, none of the corporations had thought out of the box by looking at innovated ways to eliminate and not just reduce waste or look for clean technology. This thesis believes more information is needed and is beyond the scope of this research in order to discover what is the true intent of the corporations are while it performed these activities.
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