

MODEL FOR SUSTAINABLE BUSINESS PERFORMANCE MEASURES FOR SUPPLY CHAIN
INTEGRATION

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by
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ABSTRACT

MODEL FOR SUSTAINABLE BUSINESS PERFORMANCE MEASURES FOR SUPPLY CHAIN INTEGRATION (May 2011)

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Many companies have made a commitment to sustainable business and compile annual sustainability reports. As they attempt to measure their performance in social and environmental efforts, each company develops their own measurement system, as standardized models currently do not exist. A standard model for sustainable business performance measurement will ease the way for companies to begin recording and reporting their sustainable goals. It should encourage many firms to enter the sustainable business arena. The standardization of measurement will guide companies to quantify actual impact. It will also greatly aid any company working to integrate sustainable business activities across companies in the supply chain.

In search of best practices in CSR reporting, along with similarity in process, this research methodology compares CSR reports for three high-profile companies from different industries. The reports are compared and analyzed for consistencies and differences. Consistencies are analyzed to determine if they constitute best practices. Differences are analyzed to ascertain if they relate to the differences in industries.

The data from the analysis are used to build a foundation model, one that can be built upon to create a standard model that crosses industries. The foundation model construct identifies a process, combines best practices, fills in gaps, and strives to reflect the true effect of sustainable business efforts.

The analysis of the CSR reports of the three diverse companies did uncover similarity in process. The companies share many of the same long-term goals and use similar strategies in pursuit of those goals. Their performance measurements have some variance, but best practices did seem to emerge.

The research is able to suggest a beginning process and best practices to follow. It is a very basic model construct, but lays the foundation for future research to build upon. It creates the base model for future work that may someday measure what is currently considered intangible.

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INTRODUCTION

Many companies have made a commitment to sustainable business and compile annual sustainability reports. They attempt to measure their performance in social and environmental efforts. Each company develops their own measurement system, as standardized models currently do not exist.

A standard model for sustainable business performance measurement may ease the way for companies to begin recording and reporting their sustainable goals. Such a model should encourage many companies to enter the sustainable business arena. The standardization of measurement will guide companies to quantify actual impact. That standardization will also greatly aid any company working to integrate sustainable business practices across companies in the supply chain.

Companies struggle to quantify decisions involving intangible and qualitative benefits. Sustainable business practices are high on the list of benefits that need a standardized performance measurement. As companies strive to maximize their Triple Bottom Line, they find difficulty in proper measurement and reporting of the gains they have made in both social and environmental efforts.

This exploratory study is aimed to help build a foundation for a standard model. The examination and analysis of CSR reports from respected companies with significant CSR backgrounds is geared to determine if a similar process in the implementation of sustainable business policies emerges. The research aims to identify best practices that can be applied in various industries. The hope is to encourage and give guidance to companies who wish to enter the business

world of sustainability. If a process can be uncovered for implementing sustainable business activities, and measurements identified to evaluate performance in the most common areas, then a standard platform emerges for future research to build upon.

LITERATURE REVIEW

Sustainable business is becoming a major strategic initiative of many companies. Implementation of such initiatives is followed by measurement of performance. Common performance measurements have not been set, but would greatly benefit the sustainable business movement (Olson, Haapala, and Okudan 2).

Consumers, environmental activists, and social responsibility policies, among other drivers, are all pressuring companies to become more sustainable. Finding best practices and building applicable models can help companies achieve this goal. The aim is to determine what activities will help companies achieve the triple bottom line, which positively affects environmental, social and economic performance for long-term economic benefit. This requires creativity and strategic company vision.

(Olson, Haapala, and Okudan 2)

Finding those best practices and building an applicable model is the goal of this exploratory research of performance measurements for sustainable business progress. It is beyond the scope of this project to build a complete model, but instead the study intends to create a platform model and a process for companies to follow in their sustainable endeavors.

A widely accepted, standardized measurement system for the impact that companies have on the environment is needed for consumers, as well. Customer preferences increasingly favor environmental responsibility and those customers wish to support environmental friendly products. Without an accurate measurement of how the products they purchase and the companies they support affect the environment, consumers have no real value on which to base their purchasing decisions. A standard measurement could help instill consumer trust in the messages they hear in marketing materials about the products they use and the firms they support. “Some companies that advertise

products as being ‘green’ do not even have an environmental policy or report,” Olson, Haapala, and Okudan report (Olson, Haapala, and Okudan 2). Reporting annual measurements in a consistent manner can go a long way to help build trust.

Olson, Haapala, and Okudan point to poor information sharing between departments, as well as between a company and the various participants in the supply chain and distribution network, for the difficulty in performance measurement. They argue that improved levels of trust and reputation between participants can be gained with sustainable business reporting (Olson, Haapala, and Okudan 2).

The Scope of Sustainable Business Addressed

The International Institute for Sustainable Development (IISD) defines sustainable business as “adopting business strategies and activities that meet the needs of the enterprise and its stakeholders today, while protecting, sustaining and enhancing the human and natural resources that will be needed in the future” (IISD). Ray Anderson of Interface uses a more strict definition: “taking nothing from the earth that is not rapidly and naturally renewable, and doing no harm to the biosphere” (Todd).

This research focuses on environmental responsibility, without delving into the realms of social responsibility. It is simply beyond the scope of the project and left for future study. The main question the research seeks to answer is: How do companies measure progress in today’s sustainable movement?

In order to use the information obtained in the process of answering this question to the benefit of firms’ sustainable efforts, the following additional questions are also addressed: How does a company begin an environmental program? How does a company know what environmental issues to focus on?

Approaches to Sustainable Business

Efficiency, control systems, and innovation are viable places for sustainable improvements to begin (Orti, Cavenaghi, and Albino 17). Efficiency eliminates waste and conserves energy. Control systems improve efficiency. Innovation can achieve product design for reuse or for recycle. Companies can further reach out to protect ecosystems and natural habitats. Goals can be set for length of time to reach zero consumption of nonrenewable resources (Olson, Haapala, and Okudan 3).

Orti, Cavenaghi, and Albino side knowledge and innovation against incompetence, destruction and waste in the battle for increased sustainability. Knowledge and innovation improve products and services, thus improving consumer satisfaction. Improved satisfaction, in turn, increases customer loyalty and market share. Higher market shares lead directly to higher profits and returns (Orti, Cavenaghi, and Albino 17). Therefore, if the antithesis of knowledge and innovation is incompetence, destruction and waste, then those are the things that must be done away with to improve sustainability.

Identifying areas in which to improve and working on them is over-simplifying. Arguments have been made that sustainability must be approached in a holistic manner. Olson, Haapala, and Okudan point to two necessary elements in sustainable strategy. First is a sustainable vision. Second is a plan to make the vision happen. The broad viewpoints, they point out, encompass several areas simultaneously. These areas include design, materials, the supply chain, and manufacturing processes (Olson, Haapala, and Okudan 3).

Additional argument for a holistic approach is the need for the sustainable efforts to include the entire supply chain. Integration of a sustainable business strategy throughout the supply chain is critical to the true success of a sustainability campaign. Various suppliers will have different levels of sustainability for manufacturing the same product, depending on their location, procurement and manufacturing procedures. Sustainable Supply Chain Management involves coordinating efforts, aimed at reaching an organization's sustainable business goals, with the key partners in the supply chain (Olson, Haapala, and Okudan 3).

The triple bottom line encompasses goals for profit and social and environmental responsibility. Companies that strive for all three are reported to measure higher profitability than those that focus on only profit or even on profit and just one area of responsibility (Olson, Haapala, and Okudan 2). Therefore, even though the scope of this research is limited to environmental efforts and progress, a company should not forget to include the social aspect of responsibility goals.

DESCRIPTION OF THE RESEARCH

Methodology

As companies take action to improve their triple bottom line, measurements are needed to evaluate performance. As profit measures economic growth, metrics are needed for social and environmental impact improvements. For the sustainability measures to have utility, they must be “relevant, comprehensive, meaningful, reliable, cost effective, timely and quantitatively measurable” (Olson, Haapala, and Okudan 3).

In search of best practices in CSR reporting, along with similarity in process, the research methodology compares CSR reports for three high-profile companies. The attributes desired in the companies studied include:

- 5+ years of CSR reporting, for experience in the practice
- Inclusion in different industries, for wider applicability
- Utilization of a holistic approach to sustainability, for an all-encompassing, broad perspective
- Express commitment to significant long-term goals, for dedication and high ideals
- Awards and press for sustainable business efforts, for evidence of success

Once the companies are identified and their most recent CSR reports printed, the reports are compared and analyzed. Comparison notes consistencies and differences. Consistencies are analyzed to determine if they constitute best practices. Do the measures represent “relevant, comprehensive, meaningful, reliable, cost effective, timely and quantitatively measurable” data (Olson, Haapala, and Okudan 3)? Differences are analyzed to ascertain if they relate to the differences in industries. Is one measurement better than the others, or should they be used in conjunction with one another?

Additional questions considered during analysis are: Are there additional measurements that could have been taken? Are the companies approaching this similarly? Is there a process that others can follow?

The data from the analysis are used to build a foundation model, one that can be built upon to create a standard model that crosses industries. The foundation model construct identifies a process, combines best practices, fills in gaps, and strives to reflect the true effect of Sustainable Business practices.

Companies Chosen

The companies whose CSR reports were chosen for analysis are Proctor & Gamble, Disney, and Interface. The three companies' CSR reports are very easy to find on their corporate website. In fact, the companies' individual websites all have easily identifiable CSR tabs for links to company sustainability information.

Proctor & Gamble

P&G, the largest consumer packaged goods company in the world, has filed 12 annual Sustainability Reports beginning in 1999. The *2010 Sustainability Report* is 82 pages of full color, filled with information, and very reader friendly. Len Sauers, P&G Vice President of Global Sustainability, refers to the company as having a “track record of taking a holistic, end-to-end approach to environmental sustainability” (P&G *2010 Sustainability Report*).

The P&G *2010 Sustainability Report* continues on the subject of the holistic approach saying, “Our sustainability work goes beyond the core of our manufacturing operations, extending to a

holistic end-to-end view of opportunities. We deliver strong results across the supply chain, ranging from manufacturing to finished product logistics—engaging our suppliers throughout the process.” The holistic approach incorporates five strategies: products, operations, social responsibility, employees, and stakeholders (P&G 2010 Sustainability Report).

The significant long-term goals written expressly in the report include:

- Using 100% renewable or recycled materials for all products and packaging
- Having zero consumer waste go to landfills
- Designing products to delight consumers while maximizing the conservation of resources
- Powering plants with 100% renewable energy
- Emitting no fossil-based CO₂ or toxic emissions
- Delivering effluent water quality that is as good as or better than influent water quality with no contribution to water scarcity
- Having zero manufacturing waste go to landfills (P&G 2010 Sustainability Report)

The multiple awards and recognition requirement was easily met. P&G has received the United Nations World Environment Center Gold Medal, the US EPA Energy Star Certification, the Ron Brown Award for Corporate Leadership, the European Business Award for corporate sustainability, the Stockholm Industry Water Prize, the Presidential Green Chemistry Award and was named to the Global 100 Most Sustainable Corporations in the World (P&G Heritage & Recognition). “P&G has been a member of the FTSE4Good and Dow Jones Sustainability Index (DJSI) since their inception” (P&G 2010 Sustainability Report). The company has joined the U.S. Department of Energy’s Save Energy Now LEADER Program. In 2010, P&G’s solid progress in diversity and inclusion was recognized in many global and U.S. surveys:

- FORTUNE’s World’s Most Admired Companies – ranked 6 overall and 1 in industry
- FORTUNE’s “Blue Ribbon Company” Top Companies for Leaders – ranked 2

- Diversity Inc. Top Companies for Diversity – ranked 18
- Diversity Inc. Top Global Diversity Companies – ranked 6
- Diversity Inc. Top 10 Companies for People with Disabilities – ranked 3
- Working mother “Working Mother Hall of Fame, 2005” – included in Top 10 Companies for Executive Women
- NAFE - Best Companies for Multicultural Females – ranked in top 5
- Black Enterprise Best Companies - included in Top 40 Companies for Diversity
- Human Rights Campaign - rated a “100” on Corporate Equality Index
- ABILITY magazine 2010 Best Practices Award (P&G *2010 Sustainability Report*)

Disney

Disney, a leader in the entertainment industry, has filed CSR reports since 2003, and annual environmental reports since 1989. The Walt Disney Company *2010 Corporate Citizenship Report* is 89 pages. In line with that of P&G, Disney’s CSR report is full color, filled with information, and very reader friendly (Walt Disney Co. *2010 Corp. Citizenship Report*).

Disney’s approach to sustainability is also holistic, with five areas of strategic focus: children and family, content and products, the environment, community, and workplaces. The company’s express written long-term goals have significant value. The goals are as follows:

- Realize zero net direct greenhouse gas emissions from burning fuels
- Decrease indirect greenhouse gas emissions from electric consumption
- Minimize water consumption
- Minimize product footprint
- Realize zero waste

- Inform, empower, activate employees, partners, & consumers to take positive action for the environment
- Realize a net positive impact on ecosystems (Walt Disney Co. *2008 Corp. Responsibility Report*)

Multiple awards and recognition for sustainable business activities for the Disney Corporation are extensive. The company has received several awards from the US EPA in the areas of energy and waste reduction, community involvement, and commuter programs. Multiple awards have been received from the California EPA, the Florida Department of Environmental Protection, and the Environmental Media Association (Walt Disney Co. *2008 Corp. Responsibility Report*). Disney is a member of the Dow Jones Sustainability Indexes, a constituent of the FTSE4Good Index Series, and a member of the Domini 400 Social Index (DS400) since its inception on May 1, 1990, and is a current member of KLD's Broad Market Social Index (BMSI), Large Cap Social Index (LCSI), Large-Mid Cap Social Index (LMSI) and the Catholic Values 400 (CV400) (Walt Disney Co. – *Corp. Citizenship*).

Interface

In *Inc. Magazine*, Richard Todd describes Interface as “the world's first industrial firm devoted to sustainability” (Todd). As a textile manufacturing company, Interface rounds off the requirement for the three companies to be members of different industries, for wider applicability. Interface has been reporting on their environmental footprint since 1994 (Interface).

Ray Anderson, founder of Interface, describes his holistic goal for the company to “be the first company that, by its deeds, shows the entire industrial world what sustainability is in all its dimensions: people, process, product, place, and profits – and in doing so, become restorative through the power of influence.” The strategy, presented in visual form as a climb up Mount Sustainability, is

simultaneously sketched out along three paths: innovative solutions to reduce the company footprint, new ways to design and make products, and the creation of an inspired and engaged corporate culture (Interface).

Interface's significant long-term goal is singular and is appropriately named Mission Zero. The goal is to have a zero footprint on the planet by year 2020. Interface was selected as One of the World's Top Sustainable Stocks and listed to the SB 20 by Sustainable Business.com. Ray Anderson was named one of the "Top 15 Green Business Leaders" globally by Microsoft. Sustainable business awards have been received from the US EPA, the State of California EPA, the California Integrated Waste Management Board, the *Los Angeles Business Journal*, the California Climate Action Registry, and the National Pollution Prevention Roundtable, just to name a few (Interface).

CONSISTENCIES FROM THE CSR REPORTS

The Implementation

Similarities in the beginnings of the sustainability movement in each company are first examined. The research attempts to ascertain who within the company implemented the program and the initial steps that were taken by each company.

P&G's Running Start

P&G actually published its first environmental report in the year 1956. The report was an environmental safety publication that measured surfactants in rivers. Although the scope of this research is environmental responsibility, it is worth noting here that prior to that, in 1952, P&G established the Procter & Gamble Fund, a philanthropic entity for the benefit of US charities (*P&G Heritage & Recognition*).

Prior to the formalization of the more contemporary Corporate Sustainability Department, P&G was already entrenched in what is now called sustainable business. The P&G Environmental Water Quality Laboratory was established in 1964, and in 1965 P&G published its tenth environmental safety paper to support new biodegradability test methods. In 1970 the company began environmental audits of manufacturing plants, and the following year formed the P&G Corporate Environmental Safety Department. P&G's Environmental Safety Organization was formed in 1977 (*P&G Heritage & Recognition*).

P&G announced its Company-wide environmental quality policy in 1990. Then CEO Durk Jager formed the Corporate Sustainability Department in 1999. P&G published their first annual

Sustainability Report that same year. The company was also assessed by a global environmental team in 1999, to help determine the areas in greatest need of environmental focus (*P&G Heritage & Recognition*).

P&G had in all actuality been working toward sustainability before the formation of a sustainability department. The creation of an official department, and the CSR report that it would prepare annually, mark the beginning of the formal, holistic movement for the company. In the 1999 Sustainability Report, P&G committed to focus on the two key sustainable areas of water, and health and hygiene (*P&G 1999 Sustainability Report*).

These two areas are applicable across both the Company's global business units and the interlocking drivers of sustainability; economic development, social equity and environmental protection. The Company's approach is to increase shareholder value by contributing solutions to problems, needs and concerns associated with these two areas (*P&G 1999 Sustainability Report*).

In addition to the two key areas of water, and health and hygiene, P&G listed in that 1999 report additional areas of environmental impact from their products. The issues listed were resource use (Materials and Energy), waste and emissions, and animal testing. The company reported the following measurements in that first report:

- Product & Packaging Volume Shipped in metric tons
- Raw Materials from Recycled Sources in metric tons
- Packaging Used in metric tons
- Packaging Material from Recycled Sources in metric tons
- Percentage of Recycled Material Used in Packaging
- Energy Use (Fuel & Electricity), indexed against prior years
- Generated Waste in metric tons
- Non-Hazardous Waste Disposed, indexed against prior years

- Percentage of Waste Recycled or Reused
- Hazardous Solid Waste Disposed, indexed against prior years
- Hazardous Waste Disposed, indexed against prior years
- Effluents (Excluding Water) disposed, in metric tons
- Air Emissions (TSP, VOCs, CO, NO_x, SO₂), indexed against prior years
- Greenhouse Gas (CO₂) Emissions, indexed against prior years
- Wastewater COD Disposed, indexed against prior years
- Energy Use (10⁵ GJ)
- SARA 313 (U.S. Only) Released or Transferred, indexed against prior years (*P&G 1999 Sustainability Report*)

The company also set out new animal testing rules and product design goals for greater sustainability. P&G created the product development tool, Design Manufacturing Waste Out. DMWO “uses a series of ‘think lists’ to help teams developing the product and manufacturing processes to eliminate waste up front. This saves both raw materials and money. Over the past year, over 100 new projects have undergone DMWO reviews. This year the program exceeded \$300 million in cumulative savings, one year ahead of schedule” (*P&G Heritage & Recognition*).

Disney’s History of Nature Protection

Disney’s first annual environmental report, *Enviroport*, was issued in 1989. The company’s commitment to environmental preservation began in the “company’s earliest days,” according to the *2008 Corporate Responsibility Report*. In the 1960s, Disney set aside almost 1/3 of the company’s Florida resort land for a dedicated nature preserve (Walt Disney Co. *2008 Corp. Responsibility Report*).

The 1990's were a banner decade for Disney. During that timeframe the term EnvironmentalTM was coined. EnvironmentalTM expresses the company's dedication to a corporate wide environmental mindset. Also in that decade, Disney began a program of Integrated Pest Management (IPM) to decrease use of pesticides. The company uses beneficial insects, insect growth regulators, soaps, oils, sprays, and bait. Disney has been a US EPA Energy Star Partner, also since the 1990s. Participating in the EPA's Green Lights Program saved enough energy to power the Animal Kingdom for its first operating year (Walt Disney Co. *2008 Corp. Responsibility Report*).

In 1993, Disney's \$45 million investment allowed the company to partner to purchase 8500 acres of Everglade land to create another wilderness preserve. Earth Day, 1995, the Disney Worldwide Conservation Fund was founded (Walt Disney Co. *2008 Corp. Responsibility Report*).

Disney Corporation, therefore, had early beginnings before the first *Enviroport* of 1989, and the *2008 Corporate Responsibility Report*. 2010's report is entitled *2010 Corporate Citizenship Report*. In search of the best strategy for minimizing Disney's environmental footprint, President and CEO Robert Iger appointed an Environmental Council of senior executives with varied backgrounds and responsibilities. The Environmental Council was formed in 2006 (Walt Disney Co. *Enviroport 2007*).

Interface

Founder Ray Anderson literally read a book and decided to change the world. Preparing for a presentation in 1994, Mr. Anderson read the book by Paul Hawken, *The Ecology of Commerce* (Interface Global). Interface started its sustainable pursuit with efforts in waste reduction. An Eco Dream Team of experts was hired to assess the company's environmental footprint and areas of greatest impact. Life Cycle Assessment was used to analyze the product to find its area of greatest

environmental impact. Simple waste reduction strategies turned into holistic corporate strategies in the effort to reach a zero footprint (Interface).

Commonalities in Implementation

Although P&G and Disney began their environmental efforts long before their first CSR reports, it does appear that all three companies experienced a moment when the CEO or founder decided to assess the company's environmental footprint, create a holistic strategy for decreasing that footprint, commit publicly to high goals for zero or near-zero environmental impact, and report annually on the company's progress. For environmental footprint assessment, the leaders of P&G and Interface both hired environmental experts (*P&G Heritage & Recognition*; Interface). Disney's CEO formed an environmental council of management within the company, though the council often sought outside advice (Walt Disney Co. *Enviroport 2007*).

The similarities found in this research analysis suggest entry into sustainable business through top-down implementation. The research further suggests the formation of a team of environmental experts and/or managers to analyze the company for areas of greatest environmental impact and to identify areas where the greatest changes can be made. Life Cycle Assessment should also be applied to the products to determine what type of design changes can have the greatest positive impact.

Common Long-Term Goals Committed to on Public Record

Comparison of the companies' long term goals points to many similarities. This exploratory research aims to find best practices. For the purpose of identifying the best long-term goal to benchmark against, this research suggests that those goals that are expressly committed to by two or three of the companies are considered to be worthy. That is to say that if at least two of the

companies are pursuing the same long-term goal, that goal is to be deemed a best practices goal. A list of best practices goals, as identified by this exploratory study, follows in the table below:

<u>Goals</u>	<u>P&G</u>	<u>Disney</u>	<u>Interface</u>
100% renewable or recycled materials for product & packaging	X		X
Zero waste to landfills	X	X	X
Zero consumer waste to landfills	X		X
Minimize product footprint	X	X	X
100% renewable energy	X		X
Zero direct greenhouse gas emissions	X	X	X
Water conservation	X	X	X
Create a corporate culture of CSR		X	X
Zero impact or better on ecosystems		X	X

Sources: P&G 2010 Sustainability Report; Walt Disney Co. 2008 Corp. Responsibility Report; Interface

The goals that were considered in this research to fit the above list come directly from the CSR reports that are under analysis. They are specifically the goals that are enumerated as the company's long-term goals in the CSR report. Many of the goals that are listed as being pursued by two of the three companies are in fact being pursued by the third; the goal was simply not highlighted in the long-term goal section of the CSR report. For the intent of identifying best practices, this research deems the goals of each company that are listed in the specific long-term goals section to be those of the greatest importance and focus to that company.

Similar Strategies

Further examination of the three CSR reports uncovers strategies that are being utilized by all three companies. This research suggests that those strategies should be considered best practices. They are strategies that sustainability entrants should consider in developing their own plans.

One example is that of employee engagement. Disney heavily engages their cast members (employees) in all of their sustainable efforts. P&G empowers their employees for daily sustainability and encourages “green teams.” Green teams are groups of employees who want to make a difference and work together to make environmental improvements in their workplace. Interface works hard to keep employees engaged. At Interface, management asks for ideas, celebrates successes, and gives the employees permission to fail.

Supply chain integration is a part of all three companies’ holistic strategies. As was referred to in the Approaches to Sustainable Business section of this paper, integrating the sustainability strategy throughout the supply chain is critical to improving a company’s footprint. A company cannot achieve zero impact if their suppliers are harming the environment (Olson, Haapala, and Okudan 3).

Proctor & Gamble has established a Supplier Environmental Sustainability Scorecard, with hopes that it will be adopted by the industry as a standard. The scorecard assesses each supplier’s environmental footprint, measuring energy use, water use, waste disposal, and greenhouse gas emissions. Scorecards are updated annually and the supplier’s footprint is expected to improve with each annual measurement.

All three companies’ strategies incorporate the activities of optimizing logistics, building more sustainable facilities, and developing more efficient processes. These are all part of the broad view of sustainability that integrates sustainable improvement throughout the company, between departments, up and down the supply chain, and often with other key business partners.

Based upon the symmetry of the three companies in the strategies listed above, this research suggests that these similar strategies be considered best practices. They are reiterated as follows:

- Employee engagement
- Supply chain integration
- Optimizing logistics
- Building more sustainable facilities
- Developing more efficient processes

PERFORMANCE MEASURES

Waste Reduction

Interface began its sustainable journey with waste reduction. The company was aiming to take responsibility for the environment, and ended up significantly decreasing costs. Savings amounted to more than \$60 million in the first three years (Todd), and more than \$433 million to date. Interface set goals that the company did not know how to accomplish, so the company started the sustainable efforts with waste reduction. Interface made small changes, or big ones, every place that the company could. Employees were encouraged to be innovative. Some ideas worked. Others did not. Interface admits that they still do not know how exactly the company will reach their goals, but the company knows that the goals will be met (Interface).

All three corporate reports talk in length about waste reduction. Interface started there because it was a quick way to begin the sustainable quest (Interface). The Interface experience also points out the significant economic benefit of waste reduction. Therefore, this research study suggests that the first action to take is to reduce waste. This can be achieved through more efficient operations, processes, and product design. Reduce, reuse, and recycle.

The specific goals that the three companies list are zero company and consumer waste to landfill. Two of the companies measure the number of metric tons total waste (P&G *2010 Sustainability Report*; Walt Disney Co. *2008 Corp. Responsibility Report*). The advantage of this measurement is that it shows the total amount of cleanup that is necessary to reach the goal of zero. However, the stated goal is to decrease total waste to landfill. Disney, therefore, measures the total number of metric tons to landfill. The advantage is that this measurement declares the total amount to clean up before waste sent to the landfill equals zero. These measurements of total metric tons on an

annual basis are necessary, but fail to measure progress. Interface measures the percentage decrease in waste to landfill. Waste reduction is important, but why did the reduction happen? Did the company simply produce less that year? In order for measurements to delineate how the decrease relates to the volume of business, this research suggests that an additional measurement of the number of metric tons of waste to landfill per unit of production be reported, along with the measurement recorded currently by P&G of percentage decrease in waste to landfill per unit of production. Businesses are only sustainable if they are profitable, so costs are always important to report. Interface recognizes the cost savings by reporting the total amount of money saved through waste reduction.

For ease of reporting the findings, the research restates the suggested measurements as follows:

- # metric tons total waste
- # metric tons total waste to landfill
- % decrease in waste to landfill
- # metric tons total waste to landfill per unit of production
- % decrease waste to landfill per unit of production
- Total \$ saved

Water and Energy Conservation

All three companies have strategies and measurements for the conservation of energy and water. The conservation of energy and water is determined by this research project to be a good next step for a company beginning their pursuit of sustainability. Conservation can be achieved through more efficient operations and design (P&G 2010 *Sustainability Report*). Therefore, this research suggests that when efficiencies are examined for waste reduction, water and energy conservation also be factored in.

The specific goals listed are to decrease the use of both energy and water. Two of the companies measure the percentage decrease in energy or water consumed per unit of production (P&G 2010 Sustainability Report; Interface). This measurement has the advantage of showing the usage of water or energy as it relates to the volume of business. The measurement does not, however, show the total impact of the conservation efforts. P&G takes total impact into account and measures the total amount of energy or water consumed. A measurement is needed to show progress. This research, therefore, suggest a measurement of the reduction in the total amount of energy or water consumed. Costs, again, are always important, so a measurement and reporting of the total dollar amount of costs saved is also suggested by this research.

For ease of reading, the measurements suggested by this research are reiterated here:

- % ↓ energy/water consumed per unit of production
- total amt energy/water consumed
- ↓ total energy/water consumed
- Total \$ saved

Reducing Emissions

Consistent in the three CSR reports are strategies for reducing emissions. Emissions, including greenhouse gases, can be reduced through efficiencies and measured as Metric tons CO₂ equivalent (Interface). This research study, therefore, recommends that emissions are taken into account during the efficiency study already mentioned for waste reduction and energy and water conservation.

Two of the companies currently measure and report the total metric tons CO₂ equivalent of their emissions (P&G 2010 Sustainability Report; Walt Disney Co. 2008 Corp. Responsibility Report). This research suggests the addition of the measurement of total metric tons CO₂ equivalent of emissions per unit of production. The advantage of this measurement suggestion is that it relates

the amount of the emissions to the volume of business. This research also suggests the measurement and reporting of the decrease in total metric tons CO₂ equivalent of emissions. The advantage is the reporting of total progress, or the total amount of emissions that were saved from the atmosphere.

P&G also reports the decrease in total metric tons CO₂ equivalent of emissions per unit of production.

This measurement is great for relating the decrease to the level of business output for the same year.

Reiterating the findings, this study suggests that a new entrant to sustainability consider emissions during the efficiency study. The recommended emissions measurements follow:

- Total metric tons CO₂ equivalent emissions
- Total metric tons CO₂ equivalent emissions per unit production
- ↓ total metric tons CO₂ equivalent emissions
- ↓ total metric tons CO₂ equivalent emissions per unit production

Product Footprint

All three companies included goals in their CSR reports to minimize or eliminate product footprint. It is, therefore, recommended by this report that minimizing or eliminating product footprint is a best practice that should be followed. P&G, however, was the only company that reported measurements. P&G reported the total dollar amount of sales of sustainable products, and the company measures the percentage decrease in indicators by product. The indicators are P&G's measurements of a product's environmental profile (*P&G 2010 Sustainability Report*).

P&G indicators for Product Sustainability are listed below:

- Energy used to make the product
- Energy used by the consumer
- Water used by the company
- Water used by the consumer

- Transportation in manufacture
- Transportation in distribution
- Amount of material in packaging
- Amount of material in product
- Substitution of renewable energy
- Substitution of renewable materials
- waste created in production
- waste created by consumer use
- product weight (P&G 2010 Sustainability Report)

A sustainable product is a product with a decrease of more than ten percent in one or more indicators, as long as there is not a negative impact on overall sustainability. A sustainable product can also be a product with a decrease of more than ten percent in its environmental footprint as compared to previous or alternative products (P&G 2010 Sustainability Report).

This research project suggests that P&G's indicator system to measure product footprint is a best practice. The research further suggests that an indexing system similar to the one used by P&G be implemented by companies who are new to sustainability and also to veterans of sustainability who have not been measuring product footprint. The following measurements, as previously discussed, are also recommended as a best practice.

- \$ sales of sustainable products
- % ↓ in indicators by product

Packaging

As products are analyzed for sustainability, so too should be the packaging. P&G is the one company of the three that measures packaging improvements, but that can be expected since they are a packaged goods company. P&G measures:

- ↓ in total materials used for packaging in metric tons
- % ↓ in amount of plastics used for packaging
- ↓ in tons of paper
- ↓ in # of truck trips
- % ↓ in ink used for packaging

This report considers packaging as an extension of product and considers the measurement and reporting of the above measures to be considered best practices.

Raw Materials from Recycled Sources

All three companies purchase raw materials of recycled sources. The companies would like for all purchases to be of-or-including post-consumer waste material. P&G measures total metric tons purchased. This measurement does not give any indication of progress or even proportion. Disney measures the percentage increase of purchases of-or-including post-consumer waste material. This measurement has the benefit of reporting progress. Interface measures the percent of raw materials used from recycled sources. This measurement's advantage is the representation of proportion of materials that come from recycled sources.

This research considers the purchase and reporting of materials from recycled sources to be a best practice. The research also suggests the measurements that follow be utilized and reported as best practices:

- % ↑ of purchases of-or-including post-consumer waste material
- % of raw materials used from recycled sources

Interface needed recycled nylon, but did not have the sources. The company created a program of recycling. The program created the ability for customers to lease carpet tile installations, instead of purchasing them. Individual tiles are replaced when they need to be, with the worn tiles

being returned to Interface. Interface picks up the carpet tiles when the entire installation is replaced and recycles everything (Interface).

Interface also takes responsibility for Ray Anderson's frequent flyer miles. He gave 151 speeches last year, all around the United States. A tree is planted for every 2000 miles Mr. Anderson flies. The program has planted 62,000 trees (Todd).

THE BENEFITS OF SUSTAINABILITY

Samy, Odemilin, and Bampton point out that, CSR investments are essential in today's competitive business world. Large companies who try to isolate themselves from the issues of social and environmental responsibility are not likely to survive for long (Samy, Odemilin, and Bampton 1). Vijfvinkel, Bouman, and Hessels argue that the benefits go beyond mere survival. They consider environmental sustainability to be a method of differentiation and, therefore, a source of greater revenues. They further state that cost savings are available from the decreased resource consumption and regulatory costs (Vijfvinkel, Bouman, and Hessels 10).

This research has been concerned with environmental responsibility that goes beyond mere philanthropy, and directly addresses decreasing a company's environmental impact. Corporate philanthropy alone can help boost a company's profits, according to Samy, Odemilin, and Bampton. Increased name recognition, more productive employees, and lower costs for R&D are all added benefits from corporate philanthropy (Samy, Odemilin and Bampton 2).

Disney enumerates some of the benefits of CSR in its Corporate Responsibility Report. CEO and President Robert Iger states that, "A strong commitment to corporate responsibility makes our brands and products more attractive. It strengthens our bonds with consumers. It makes our Company a more desirable place to work. And it builds goodwill in the communities in which we operate. All of this adds shareholder value" (Walt Disney Co. *2008 Corp. Responsibility Report*).

RECOMMENDED PROCESS

The analysis of the three CSR reports developed a recommended process for companies who are ready to enter the world of sustainable business. The process is reiterated here for clarity:

- Top-down implementation
- Use of Life Cycle Assessment to find areas of greatest impact
- Assessment by a team of experts
- Big goals that are made part of the company culture
- Inspiration and empowerment of employees in innovation to reach the goals
- A holistic approach to sustainability
- Integration of goals into the supply chain
- Optimization of logistics
- Sustainability built into the entire facility, into all of operations
- A beginning similar to Interface, attack waste 1st
- Conservation of water and electricity
- Reduction of greenhouse gases and other emissions, both direct (from fuel combustion) and indirect (through use of electricity)
- Improved product footprint through R&D and innovative design

- Reduction and redesign of packaging
- Purchase of recycled products

Future Research

It is the intent of this exploratory study to build a base model for measuring a company's performance toward greater sustainability. The research seeks to create the foundation for future work that may someday measure what is currently considered intangible. In the interest of collaboration, the following recommendations are added for CSR reports. These recommendations are meant to make CSR reporting more comprehensible for stakeholders and to lead to cooperative efforts to finish the model.

- Shorter reports that are heavier on the numbers
- Easier to locate CSR information
- Sharing of information on intangible benefits so that future research can be completed

The proposed model should provide the building blocks that companies can utilize for placing value on the impact of their Sustainable Business practices. The model developed should be standardized for the use of all companies and should be widely applicable to a variety of industries. The model should be a basic platform that can be customized by companies to fit their specific needs, yet the model should be applicable enough that it truly represents a standard for measurement.

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VITA

Glenda Barber Cobb was born in Washington, Indiana, on December 21, 1964. She attended grades 2 through 12 in that town, and graduated from Washington High School in May of 1983. That fall, she enrolled in Indiana University, in Bloomington, Indiana. She graduated from the Indiana University Kelley School of Business in 1987 with a B.S. degree in Marketing. She was hired by Burdine's Department Stores where she worked as a merchandise manager and then as an associate buyer. Glenda has been self-employed for most of the twenty years since then. In the summer of 2010, she began taking courses at Appalachian State University's Walker College of Business and will graduate with an M.B.A. in May of 2011. She is a member of Phi Kappa Phi, and Beta Gamma Sigma.

Glenda has three sons, Daniel (21), Joshua (26), and Orville Schoenfield (27). She also has two granddaughters, Kahlan and Hailey, and one grandson, Trent.