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Case Study in the Evolution of Sustainability: Baxter International Inc.

K. Kathy Dhanda

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Abstract Baxter International Inc. (Baxter) is a global, diversified healthcare company based in Deerfield, IL. In 2011, Baxter had sales of \$13.9 billion and employed approximately 48,500 people worldwide (Baxter's 2011 Sustainability Report). Baxter is also recognized for its efforts toward environmental/sustainability performance and reporting. The company defines sustainability as 'a long-term approach to including our social, economic and environmental responsibilities among our business priorities. Baxter's efforts in this area align with and support our mission of saving and sustaining lives.' This case study attempts to analyze the progress of the company on its journey along the path toward sustainability. The formal environmental initiatives at Baxter were started in the 1970s. The acquisition of American Hospital Supply Corporation intensified the environmental challenges for the company. A new environmental course was set in the 1990s that led to the development of the State-of-the-Art (SOA) Environmental Standards. At this time, the company started measuring its efforts and began publishing an Environmental Financial Statement in its annual public Environmental Report. In 2005, an executive level Sustainability Steering Committee was proposed and subsequently created in 2006 to accelerate the integration of sustainability within all facets of the organization. This case study articulates the evolution of Sustainability at Baxter Inc. As a result of its efforts, Baxter has received numerous awards and accolades for its efforts in sustainability performance and reporting. For example, in 2011 *Newsweek Magazine* ranked Baxter the 4th greenest

company in the United States (*Newsweek Magazine*, October 17, 2011, accessed online at http://www.baxter.com/press_room/features/2011/newsweek_green_rankings.html). Going forward, it would be noteworthy to see whether Baxter can keep up its momentum and continue to be a sustainability leader.

Keywords Corporate sustainability · Environmental performance · Reporting · Standards

Introduction

On October 19, 1931 a small company, Don Baxter Intravenous Products, Inc., was incorporated in Delaware. Located in Glenview, Illinois north of Chicago the company's initial capitalization was 1,000 shares of preferred stock at a price of \$100 per share, 1,000 shares of no par common stock and a reported initial workforce of nine individuals (Cody 1994). The company is now known as Baxter International Inc. (Baxter).

In the early 1930s, Baxter was the first manufacturer of commercially prepared intravenous solutions. By 1939, Baxter had created a new medical product that would help put the company on the map: the Transfuso-Vac Container. This container made the long-term process of blood-banking a reality. The company's timely start and focused business strategy saw a solid growth in business. This changed with the onset of World War II. With the imminent increase in demand for products that war brought to the health care and pharmaceutical industry, Baxter quickly grew and by 1947 had moved from its small initial operations in Glenview to a much larger facility in Morton Grove, Illinois. Three years later, the company opened its first manufacturing facility outside Illinois in Cleveland,

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Mississippi, and 4 years after that, the company opened an office in Belgium.

The 1950s proved to be an important period for Baxter, not only because of its continued international expansion but also because of its acquisitions, which included Fenwal and Hyland Laboratories. In the 1960s, Baxter created its own sales team so that it no longer had to rely on outside sources. In 1961, Baxter stock was introduced to the New York Stock Exchange. Later in 1961, Baxter opened a research and pilot manufacturing facility in Round Lake, Illinois. In 1971, *Fortune Magazine* listed Baxter as one of the 500 largest American Corporations. With substantial growth, Baxter established a separate executive and administrative office north of Morton Grove, and in February 1975, Baxter moved to its new and current corporate headquarters in Deerfield, Illinois.¹

The next 35 years proved to be a time of continuing business growth for Baxter. The corporation opened a plant in Singapore and eventually five manufacturing plants in China and three manufacturing facilities in India to manufacture goods for recipient Asia markets. Baxter also developed extensive manufacturing and support operations in Europe, Eastern Europe, and North Africa. In 2000, Baxter created Edwards Lifesciences as a separate publicly traded entity focused solely on cardiovascular technologies. In the same year, Baxter created the Global Healthcare Exchange along with four other healthcare companies. Global Healthcare Exchange is an independent company that facilitates the exchange of relevant healthcare-related information. One year later, Baxter acquired Cook Pharmaceutical Solutions.² During these decades of corporate change and development, Baxter was also developing some of the most innovative healthcare-related technologies of its time. Baxter did not only commercialize the artificial kidney machine but also created many home-based alternatives to hemodialysis, automated blood–cell separators and the first needleless system for IV therapy among others (Baxter History 2010).

By year-end 2011, Baxter had grown to \$US 13.9 billion in sales and about 48,500 employees. Today Baxter manufactures health care products, primarily for patients with acute medical conditions, in 27 countries and sells products in more than 100 countries. Approximately 60 % of its sales come from outside the United States (Baxter Sustainability Report 2009).

Methodology

A qualitative case study is an approach to research that facilitates exploration of phenomenon within its context using a variety of data sources (Baxter and Jack 2008). This method is recommended for exploratory research (Yin 1989, 1993, 1994) and is applicable in analyzing phenomenon within a contemporary context. Furthermore, a variety of data sources, interviews, archival data, etc., can be accommodated in research methodology of case studies (Yin 1989, 1993, 1994). The case study method is based on constructive paradigm. This paradigm claims that truth is relative and that it is dependent on one's perspective. Built on the premise of social construction of reality (Searle 1995), the case study approach allows for close collaboration between the researcher and the participant, while enabling the participants to tell their stories (Crabtree and Miller 1999). It is through these stories that the participants can describe their views of reality and this enables the researcher to better understand the participants' actions (Lather 1992; Robottom and Hart 1993).

According to Yin (1989, 1993, 1994), the case study design ought to be utilized when

- the focus of the study is to answer 'how' and 'why' questions
- the behavior of those involved in the study cannot be manipulated
- the contextual conditions relevant to the phenomenon under study need to be covered, and
- the boundaries between the phenomenon and context are not clear.

Case studies can be categorized as explanatory, exploratory, or descriptive (Yin 1989, 1993, 1994). These can also be identified as intrinsic, instrumental, or collective (Stake 1995). A descriptive case study describes some natural phenomenon. McDonough and McDonough (1997) suggest that descriptive case studies may be written in a narrative form. In an intrinsic case study, a researcher examines the case for its own sake.

Grounded theory is an inductive method of qualitative analysis designed to develop theory about a phenomenon (Locke 2002). This research method operates in a reverse approach from the traditional model of research. The first step in grounded theory is data collection using a variety of methods. This data guides the research toward categories that, in turn, form the basis for a theory.

Case studies can employ multiple data sources, a strategy that can enhance data credibility (Patton 1990; Yin 1989, 1993, 1994). Potential data sources may include: documentation, archival records, interviews, physical artifacts, direct observations, and participant observations.

¹ For additional company-related historical, business, financial, environmental, and sustainability information for Baxter International Inc. (Baxter), please refer to Baxter's Website, Annual Reports and Sustainability Reports.

² Baxter International (2009). Baxter Company Profile History. Retrieved from http://www.baxter.com/about_baxter/company_profile/sub/history.html.

Due to the complex nature of a case, reporting a case study might be a tedious task. There is no correct way to report a case study. However, some suggested ways are by telling the reader a story, by providing a chronological report, or by addressing a proposition. In this article, we provide a linear, chronological report.

Case study research has the potential to deal with simple to complex situations. It lets the researcher ask “how” and “why” questions, while taking into account how a phenomenon is influenced by the context within which it is situated. For the novice research, a case study is an excellent opportunity to gain insight into a case. It enables the researcher to gather data from a variety of sources and to converge the data to illuminate the case.

The research on Baxter Inc. that sources this study began in early 2010. Professor Patricia Werhane, Director of the Institute of Business and Professional Ethics, informed the author that Baxter was making strides toward sustainability and that their company headquarters were carbon neutral. Dr. Werhane introduced the author to Dr. Ronald Meissen, Sr. Director of Sustainability at Baxter International.

At the first company visit on February 3, 2010, the author interviewed Ronald Meissen to understand the history of the company. Dr. Meissen mentioned that most of the initial sustainability initiatives were put in place by William Blackburn, who was also interviewed on February 18, 2010. Over the next few months, the author conducted follow-up interviews and made several other corporate visits. Other data sources included the corporate reports issued by the company, the media releases issued quarterly and other archival data of Baxter.

The work on Baxter International Inc. would be classified as descriptive and intrinsic. Using principles of grounded theory, the case study started without any propositions or hypothesis. Over a series of interviews and archival data collection, the history of the company and how it responded to the challenge of sustainability was recorded. As more documentation was gathered, the case study was updated and revised. The final case study was presented at the Vincentian conference and the paper was revised and updated to capture recent movements of the company up until October 2012.

External Forces

Rachel Carson's book *Silent Spring* was first published in 1962. The publication of this book was an important catalyst that formed environmental awareness and led to eventual environmental regulation in the United States. *Silent Spring*, exhaustively researched and well written, was an attack on the indiscriminate use of pesticides

(Carson 1962). It attracted immediate attention and wound up causing a revolution in public opinion on environmental matters. In 1969, President Nixon's Administration took action on the environmental front by setting up a Cabinet-level Environmental Quality Council as well as a Citizens' Advisory Committee on Environmental Quality.

On April 22, 1970 the first Earth Day celebration was held in the US, which brought 20 million citizens out for peaceful demonstrations in favor of environmental reform. Senator Gaylord Nelson (D-Wis.) and Congressman Paul McCloskey (R-Calif.) gave bipartisan sponsorship to the event. In December 1970, the US Environmental Protection Agency (EPA) was formed and, beginning in the 1970s, it would issue many environmental regulations companies would need to address to deal with air, wastewater, hazardous and solid waste, and other environmental-related issues (Lewis 2010).

In the early 1970s, the United Nations (UN) also began to initiate a number of international environmental initiatives. The UN Conference on the Human Environment (also known as the Stockholm Conference) was held in Stockholm, Sweden in June 1972. This conference, the UN's first major conference on international environmental issues, was attended by representatives of 113 countries, 19 inter-governmental agencies, and more than 400 inter-governmental and non-governmental organizations. At the conference, the United Nations Environmental Programme (UNEP), which is now the main environmental arm of the UN, was launched and the forum itself is widely recognized as the beginning of modern political and public awareness of global environmental problems (UNEP 2010).

This case study breaks down Baxter's evolutionary path to sustainability into five distinct stages. Each of the stages was a response to emerging environmental challenges. The resulting actions, led by key and executive management, catapulted sustainability programs forward and, as the reader will learn, toward positive results.

Stage I: Initial Response to Growing Environmental Issues 1970–1985

From 1970 to 1976, Baxter's response to growing environmental requirements was managed by engineers within Baxter's Corporate Facilities Engineering group. In the beginning, the individuals involved in this subject had no formal environmental training. With mounting environmental regulations, in 1976, the department assigned a young engineer with some formal education specifically in the environmental area (B.S. and M.S. in engineering and a registered professional engineer) to assume this responsibility (Blackburn 2010).

In 1975, Baxter's visionary CEO William Graham believed global environmental issues would become more

important and society's response would only intensify. He believed that Baxter ought to position itself to adequately respond to these challenges and address them in a more strategic manner. Mr. Graham's leadership set the direction of Baxter's environmental/sustainability program for many decades. In recognition of this new reality, a top level Baxter committee called the Environment Review Board (ERB) was created. In late 1976, engineering and legal environmental experts were specifically hired to craft global environmental programs that could be undertaken to assure legal compliance with existing and newly anticipated regulations to properly control environmental risks and reduce waste. Ray Murphy, an attorney and an engineer, was the first Baxter environmental program leader (1977–1989). Others including Bill Blackburn, who was also an attorney and engineer, were involved in managing the program. In 1977, a formal Baxter Environmental Policy was developed, an Environmental Manual issued, a network of facility environmental coordinators established, site level environmental compliance audits started, and Baxter's first annual Environmental Conference was held.³ (Blackburn 2010).

By the early 1980s, the environmental engineering group, within Corporate Facilities Engineering, was comprised an engineering manager and 3–4 environmental engineers. Ray Murphy in the Corporate Legal group had a small support team. Between 1976 and 1985, Baxter had established a very robust environmental compliance and risk management program, which was recognized both internally and externally for program excellence. The program, organized and deployed globally, fit in nicely with Baxter's overarching culture of maintaining high manufacturing and product quality standards in a strictly regulated environment, akin to the Food and Drug Administration (FDA). Reporting program activities regularly to Baxter's Environment Review Board helped to maintain program visibility and executive (including CEO) engagement and support, and executive recognition of facilities/individuals for outstanding achievement.

Here, we were thinking we had a great program, we were on top of the world. Little did we realize it was not enough. (Blackburn 2010)

Stage II: Business Growth Leads to Environmental Hurdles (1985–1989)

In 1985, Baxter acquired American Hospital Supply Corporation (AHSC), which had its corporate offices in

Evanston, Illinois. AHSC included manufacturing operations and a very large distribution operation of medical products to customers, especially to the US hospitals. As a company, AHSC had revenues greater than Baxter and the number of AHSC facilities exceeded those of Baxter. Soon after the merger, for those involved in Baxter's environmental program, it became apparent AHSC's business culture and approach to environmental issues were much different from Baxters. At the time of the merger, an environmental financial reserve of approximately \$10 million was established to address anticipated and potential environmental issues associated with the acquisition.

Between 1985 and 1989, Baxter's corporate-level environmental legal and engineering staff became increasingly involved in AHSC environmental issues, including: underground fuel oil storage tanks permitting for regulated air emissions, the use of solvents and proper disposal of hazardous waste at off-site facilities, issues with property transfers (sales and acquisitions), asbestos surveys and abatement, and environmental compliance and risk management assessments. In this period, Baxter was increasingly drawn into "fire-fighting" actions with regards to environmental issues in many areas, such as air, waste water, and hazardous waste at a number of former AHSC sites.

In the 1980s, a new US EPA Superfund law was being implemented, which required expensive cleanups, especially at sites that handled and disposed of hazardous waste, and often, such issues delayed large real estate transactions. At the same time, the EPA Toxic Release Inventory (TRI), which reported requirements, began disclosing information on the toxics that companies were emitting into the environment. During this time, newspapers frequently carried headlines on the US company emissions, which raised community concerns—even though the companies were complying with environmental laws. As a result, Baxter was beginning to receive some unfavorable media publicity.

Although solid progress was being made in many areas, it was certainly stretching Baxter's environmental resources and detracting attention from Baxter's other sites and planned environmental initiatives. In 1988, a California news team broadcasted a live television news report showing Baxter's company name in front of a recent Baxter-acquired manufacturing facility south of Los Angeles, stating that this specific location emitted the largest annual quantity of toxic air emissions of any site in California's Orange County (Grad 1990). This newscast caught the attention of Baxter's environmental staff and senior management. Something needed to be done to strategically address Baxter's existing and possible future environmental issues (Blackburn 2010).

³ Baxter held an Environmental Conference for corporate, division, and facility environmental staff annually for a number of years. In the late 1990s–early 2000s the forum was combined with health and safety personnel and held bi-annually through 2007.

Stage III: Creating a Path Toward Sustainability (1990–1996)

One of the environmental consulting firms Baxter was using in the late 1980s and early 1990s was Arthur D. Little Inc. This firm was helping Baxter with environmental compliance site assessments, risk management, and advice on program development. At one point, a representative of this firm stated that if Baxter maintained a reactive type of environmental program it could expect environmental-related expenses and risks to generally increase over time. On the other hand, if Baxter were to invest more resources to implement a proactive global environmental program, future environmental-related expenses and risks should be expected to decrease and, in time, Baxter should realize a good return on this investment.

It was time to make a change. It was time to revisit Baxter's global strategic approach to managing global environmental compliance and risk issues and reassert Mr. Graham's environmental vision for Baxter. It was time to develop a much more robust environmental program—one which could respond to possible future challenges in a timely and efficient manner. Bill Blackburn and the company's environmental management team endorsed Arthur D. Little's suggested strategic approach—that is, Baxter should invest the needed resources to move from a reactive to a proactive global environmental program. This recommendation was presented to Baxter management and it was accepted. As a result, Blackburn was asked to lead this effort and the environmental program. Blackburn reported to the legal department and worked closely with Baxter's General Counsel. With the support of General Counsel, the legal department, and senior management, Blackburn served as the VP for Environmental Affairs from 1990 to 1996, and as the VP for Environmental, Health and Safety from 1997 to 2003.

First, Baxter needed to establish a new global Environmental Policy—one which stated Baxter would become a leader in respect to environmental issues.

We needed to define what we are biting off. How do we put together a one-page policy that defines what we are committed to do? (Blackburn 2010)

The team did not think Baxter's CEO would sign off on the first draft policy because it could have been viewed as inconsistent with Baxter's current status/challenges. Given this assessment, another provision was added to the policy to create an environmental program that would be State-of-the-Art (SOA)⁴ among the Fortune 500 companies.

⁴ Baxter held an Environmental Conference for corporate, division, and facility environmental staff annually for a number of years. In the

The goal was to have this SOA environmental program defined and achieved at Baxter facilities in the US, Puerto Rico and Canada by 1993, and achieved at all remaining international locations by 1996. In addition, a new goal was included in the policy, which was to reduce air toxics 80 % (from 1988 to 1996).⁵ The new direction would require the position levels of facility environmental managers to be re-evaluated. As a result of this review, some positions were raised and certain compensation levels increased to match site environmental responsibilities. New company environmental reduction goals, such as those related to solid and hazardous waste, air emissions, and packaging materials,⁶ were established and widely communicated. Baxter management was very supportive of the program and signed the new Baxter Environmental Policy. Those involved understood that a relatively small initial investment should yield large-scale long-term gains—both financial and reputational.

In launching a new proactive environmental program, there was a need to get buy-in from the environmental representatives in each principal Baxter division to make it more democratic, and to help in the ultimate deployment of the program. After considering a few alternatives, a council of corporate and division environmental managers was formed. Next, Baxter needed to go through the process of defining what would be the new *SOA Standards*. To accomplish this, the company studied the results of previous Baxter facility-level environmental compliance audits. Together, these audits identified the characteristics of facilities that were doing well in legal compliance, risk management, and waste reduction. In the end, the corporate and division team came up with a list of 'best practices' that drove excellent environmental performance. Baxter's SOA Standards were built around these best practices. The new SOA Standards also included a progressive requirement that every Baxter site establish an active environmental outreach program with the community in which the site operated.

Arthur D. Little was brought in as a consultant to advise on what other multi-national companies were doing to advance their environmental programs. This input helped the company refine the facility SOA Standards. The corporate and division teams concluded that these standards alone were not enough. SOA-type Standards needed to be developed at the division/business unit as well as corporate levels to dovetail with the new facility SOA Standards, so

Footnote 4 continued

late 1990s–early 2000s the forum was combined with health and safety personnel and held bi-annually through 2007.

⁵ EPA defined air toxics emitted from Baxter facilities. Note that this goal was achieved by 1996.

⁶ Around ± 1998 , a Baxter energy efficiency [and associated energy-related greenhouse gas (GHG) emissions reduction] goal was established.

that there would be good alignment and shared responsibilities/accountabilities across the entire organization.

The various SOA Standards were established along with a scoring system designed to assess progress against the standards. Once the standards were completed, ongoing company environmental audits were used for the scoring and tracking of progress. Next, in a relatively short period of time, was the big challenge of hitting the 1993 and 1996 deadlines—which was in fact accomplished.

About the same time that Baxter was developing the new environmental policy and program that included the SOA Standards, a set of abbreviated environmental compliance audits were performed on several dozen facilities the company had recently acquired, and those results were compiled into a report. Blackburn was invited to share the results of these audits with the top 150 executives of the company. Upon hearing the presentation, Baxter's CEO Vernon Loucks was upset with these results and told his managers in no uncertain terms that improvement would have to be made "or else!" (Blackburn 2010). Soon, the infrastructure for driving the new environmental program forward was in place—people knew what they needed to do, and the measurement of progress and the transparent communication of SOA scores were initiated. In addition, a more candid annual progress report on the environmental program was made available for the Public Policy Committee of Baxter's Board of Directors to review. The report contained informative graphs and charts, transparent in nature, explaining the number and nature of any environmental issues. This same information was also shared within the Baxter organization.

The belief at that time was:

Light brings heat, which brings change. (Blackburn 2010)

The idea was that if the right goals, supporting metrics, good measurement, and progress report were provided in a transparent manner to each facility, division/business unit, and at the corporate level, then there would be internal and external pressures to address apparent issues. It was not so much about punishing people; it was more about recognizing the efforts and providing incentives to the plant managers and others whose operations were excelling—an approach of incentives rather than criticism and fear. In the end, top management support combined with clear expectations for performance (goals, measurement, reporting results), resulted in environmental performance taking off with enhanced compliance, better risk management, reduction in various wastes, an increase in environmental program savings, and positive environmental recognition for Baxter.

The next area of emphasis was at the international level. In the early 1990s, the company was in a domestic

mentality and the next focus would be in the international space. With the help of regional meetings in different parts of the globe, the SOA Standards were modified so that these would be applicable internationally from a cultural perspective, while guaranteeing a common level of protection around the world for people and the environment. Culture played a very significant role. For example, there was a requirement that if an inspector got a wastewater sample, the sample was split in two—one part for the inspector and the other part for the company to retain (and possibly analyze separately). In Japan, this requirement was considered insulting to the inspector, an affront that indicated that there was no trust. Keeping in mind the different cultural mind-sets, the standards were modified as required to make them more accommodating to the local needs and cultures.

In order to deploy the SOA Standards globally, regional environmental meetings were held in Southeast Asia, Europe, and Latin America. This was a new area of focus for these facilities. For the most part, environmental laws outside the US were weak at that time, and where laws existed, enforcement was not rigorous. A special senior management European Environmental Review Board was formed to drive the program in Europe, where Baxter had many facilities. There were numerous meetings of this Board—with questionable commitment by some members. Then 1 day, it all changed. At this particular meeting, the Plant Manager and environmental director of a Baxter manufacturing facility in Ireland told his fellow Board members that the SOA Standards were adding great business value and that they should continue to work on it. All of a sudden, the attitude shifted almost overnight, and implementation of the environmental standards across the region began to accelerate.

In 1992, Baxter began looking at reductions in packaging. For this, the company looked to the Germans and the Canadians, as those facilities were accomplishing the most in this area. Baxter held a summit, established a packaging task force, set goals, and reduced packaging significantly—ultimately saving the company roughly \$35 million in costs.

Environmental Reporting and Environmental Financial Statement (EFS)

An annual process was implemented for measuring specific performance (a report generated by all principal global Baxter locations) against all company goals, including environmental management systems and compliance assurance goals. Beginning in the early 1990s, Baxter began issuing first an internal, and next a public Environmental Report. Baxter was one of the first companies to measure and report its global energy usage and greenhouse

gas emissions, beginning in 1996. In the late 1990s, Baxter's Environmental Report evolved into an Environmental, Health, and Safety Report; this communication transitioned into an annual Sustainability Report by the end of the decade.

In 1994, Baxter developed a unique EFS and subsequently published the statement in its annual public Environment Report. This financial statement summarizes all Baxter's global environmental costs, savings, and cost avoidance due to its environmental initiatives. This EFS, which continues to be published annually and is available on Baxter's website, has received considerable attention over the past 15 years, and has been featured in various publications. Overall through 2010, the EFS generally reflect that for about every \$1 invested annually in a "proactive" global environmental program, Baxter receives a return of about \$2 to \$4. Arthur D. Little and Baxter management were correct. Sound environmental corporate stewardship is not only a responsible action to take but also simply makes good business sense.

Stage IV: Building the Framework for Sustainability (1997–2003)

In 1996, Baxter's environmental engineering group in Corporate Facilities Engineering, its environmental legal group in Corporate Legal, and its health and safety group in the Corporate Human Resources department were all brought together into one organization, which reported to Bill Blackburn (VP in the Legal group). A new Environment, Health, and Safety (EHS) Policy was developed along with a new EHS Manual (Users Guide), from which all EHS Policies were compiled into an EHS Requirements Book. A new EHS organization in the regions/business groups and facilities was organized. Baxter's environmental compliance auditing program was expanded to an EHS auditing program. Previous separately held annual environmental conferences and health and safety conferences were combined into unified EHS conferences—first annually, and then biannually. During this timeframe, Baxter pursued the implementation of the ISO 14001 environmental management standards, and set a requirement that all manufacturing and R&D locations should meet the ISO 14001 standards. Baxter's annual public Environmental Report became an annual Environment, Health, and Safety Report.

Earth Summit 1

The UN Conference on Environment and Development, also known as the Earth Summit 1, took place in Rio de Janeiro, Brazil in June 1992... The central focus was the question of how to relieve the global environmental system through the introduction to the

paradigm of sustainable development. This concept emphasizes that economic and social Progress depends critically on the preservation of the natural resource base with effective measures to prevent environmental degradation.⁷

By the mid-1990s, a group within Baxter's corporate EHS group was regularly discussing certain aspects of sustainability as well as the outcome of the 1992 UN Conference on Environment and Development (Earth Summit 1). This group realized the importance of sustainability/sustainable development, which was defined by a UN commission in 1987 as "development that meets the needs of the present without compromising the ability of future generations to meet their needs." In 1997, Baxter's CEO Harry Kraemer signed the Ceres Principals (Ceres 2010), and in the late 1990s Baxter was one of 22 companies that piloted the Global Reporting Initiative (GRI), which established international sustainability reporting guidelines.

In the late 1990s, Baxter also rejuvenated its energy management program, an important element of sustainability. Between around 1976 and 1986, Baxter had one point person coordinating energy management initiatives within the Corporate Facilities Engineering group. Back in the 1970s, there were a few Organization of the Petroleum Exporting Countries (OPEC) embargos and fuel prices had skyrocketed. Many corporations, including Baxter, formed teams to conserve energy and save money. However, by the mid-1980s, fuel prices had come down again. Baxter's centralized energy group was disbanded and energy management was relegated to divisions and business units to manage. Within a decade, energy prices were rising/volatile again, and the issue of global climate change was gaining more attention.

In 1998, a manager within Blackburn's staff joined with technical representatives of Baxter's largest US manufacturing plant to organize a company-wide Energy Conference. This forum included many global engineering and energy management representatives, as well as a number of outside energy experts, including Amory Lovins from the Rocky Mountain Institute. Forum sessions were held on energy pricing, markets, and volatility. The facilities discussed best practices in energy management, and energy experts presented the latest energy technologies. By design, energy technologies and pricing issues were emphasized and the subject of global warming and climate change received only about half-an-hour of discussion at the end of the conference. In subsequent Energy Conferences, the climate change subject was given more attention.

⁷ [www.eoearth.org/article/United_Nations_Conference_on_Environment_and_Development_\(UNCED\)](http://www.eoearth.org/article/United_Nations_Conference_on_Environment_and_Development_(UNCED)).

An outcome of this Energy Conference was the need to again create a centralized energy manager position, which was accomplished. Subsequent energy audits indicated that there were good opportunities for savings with attractive returns on investment. Because of the financial aspect of the initiative, the finance group took an interest in energy management and prodded the organization even more. Agreements were made on Energy Reduction Goals and Programs to drive cost savings, and a new greenhouse gas goal was piggybacked onto those. In 2003, Baxter became one of the thirteen founding members of the Chicago Climate Exchange (CCX), which was the world's first carbon cap and trading system. Over the years, as climate change has become more visible, Baxter greenhouse gas emission goals and performance has gained greater prominence both inside and outside of the organization.

In 1999, two members of the small EHS sustainability group presented the sustainability subject directly to Baxter's CEO at that time, Mr. Harry Kraemer. After some discussion, Mr. Kraemer soon issued a communication to Baxter's employees supporting this concept. With this endorsement by upper management, for year-end 1999 performance, Baxter's annual public EHS Report was renamed a "Sustainability Report." [Baxter's 2011 Sustainability Report (its thirtieth sustainability report prepared consistent with the GRI guidelines) was issued in June 2012.]

In 2003, Bill Blackburn, along with a number of other top executives, left Baxter due to a change in organizational structure and business direction. The following year, Baxter's CEO, Harry Kraemer, left the company. Joining the company in 2004 as the new CEO was Mr. Robert Parkinson, who was previously an executive within a university in Chicago, and prior to that had a long tenure with Abbott Laboratories. During the period from mid-2003 to year-end 2005, senior managers within Baxter's EHS team managed the global EHS compliance and risk management program. Current initiatives were maintained (EHS teams, compliance and risk management systems, ISO 14001 standards, and reporting), new activities and partnerships were launched, and an EHS group continued to work on sustainability.

A Shift in EHS Reporting: From Legal to Manufacturing

From 1976 to mid-2003, the EHS organization, including certain legal experts, reported to Baxter's legal group. With the organizational changes that occurred in mid-2003, the reporting responsibility of the EHS organization was switched from the legal group to the manufacturing group, with the exception of a few EHS individuals working on compliance assurance and legal issues. The stated logic behind this organizational change was that because EHS

was involved closely with manufacturing, this new change would provide greater alignment and synergy. Hence, the work that EHS was involved with began to focus more on cost containment/reduction and lean manufacturing—a different internal culture for EHS. The EHS legal team members provided independent oversight and engaged outside consultants to conduct EHS audits as required.

Stage V: Leadership Promotes Sustainability (2003–2012)

Starting in around 2003, the EHS sustainability team recognized that there were pockets of individuals and groups (for example, EHS, energy management, packaging, corporate communications) working within Baxter to advance sustainability, but there was not enough traction needed to achieve the desired sustainability-related benefits. Sustainability had not appeared to have permeated the entire organization. Sustainability needed to be elevated, and momentum increased. In 2005, the concept of an executive-level Sustainability Steering Committee (SSC) was developed to accelerate the integration of sustainability throughout the Baxter organization.

There was a need for an executive-level steering committee to help lead and integrate sustainability more into the organization and accelerate company sustainability programs and performance (Meissen, 2010)

In late 2005, Art Gibson was brought into Baxter as the new VP of EHS. In 2006, Mr. Gibson helped with the continuing discussion and proposed the formation of an executive-level SSC. In late 2006, the SSC concept was presented to the CEO, Mr. Parkinson, and he approved the formation of the SSC with nine initial executive members, plus a working group that would support the SSC.

Prior to the first SSC meeting in early 2007, Professor Stuart Hart of Cornell University was engaged to attend all planned 2007 quarterly SSC meetings, to provide the Baxter executives with an overview of sustainability in business terms, and to facilitate sustainability-related discussions as required. In the first quarter and second quarter 2007 SSC meetings, Dr. Hart supported the SSC in learning about sustainability and defining nine high-level Baxter Sustainability Priorities. These Priorities, which represented Baxter's intended direction toward enhancing the companies' sustainability posture, were first presented to the public in Baxter's 2006 Sustainability Report, published in mid-2007.

Between mid-2007 and spring 2008, each member of the nine-member SSC championed one of the nine new Sustainability Priorities and coordinated a working team, which each member selected, to define a few specific 2015

goals to advance the specific priority. Teams were encouraged to benchmark within and outside the healthcare industry to determine possible goal areas and best practices. In early 2008, the SSC reviewed and discussed many potential goals. After two quarterly meetings, the SSC and Baxter management approved nearly two dozen 2015 goals to support Baxter's Sustainability Priorities. These were first presented to the public in Baxter's 2007 Sustainability Report, published in mid-2008.

The Baxter executive-level SSC continues to meet quarterly to evaluate progress toward existing Sustainability Priorities and Goals, to gain knowledge on sustainability program and reporting trends (through external and internal presenters), and to consider new sustainability initiatives. Baxter's CEO Bob Parkinson typically attends one of the quarterly SSC meetings each year and provides his own insights and perspectives on the subject matter. Refer to Appendix 1 for the Baxter 2009 Sustainability Priorities and Goals.

Sustainability helps contribute to long-term stakeholder value and it helps attract and retain key talent.
(Bob Parkinson, CEO)

Model of Shareholder Value

When Stuart Hart was consulting for Baxter, all the members of the SSC received a copy of his book entitled "Capitalism at the Crossroads" (Hart 2005). As stated before, each member of the committee is generally responsible for one of the nine Sustainability Priorities in the Sustainability Report.

One of the models developed by Hart and Milstein (2003) was the model of *Shareholder Value*. The vertical axis of this model represents time; this axis reflects the organization's need to manage today's business while simultaneously creating tomorrow's technology and markets. The horizontal axis represents space; this axis reflects the organization's need to grow and protect the internal organizations capabilities, while simultaneously incorporating new external perspectives and knowledge. The concept is to balance the need to stay focused on core capabilities, while maintaining awareness of fresh, external perspectives. Utilizing both the time and the space dimensions yield a matrix of four distinct areas: risk reduction, reputation, innovation, and growth, each of which being critical to the goal of generating shareholder value.

Sustainable Value Creation

The shareholder value model requires performance on multiple dimensions. In a similar vein, sustainable value is

also multi-dimensional. A natural extension of the shareholder value model is the *Sustainable Value Framework* (Hart and Milstein 2003), which is also built around the same two dimensions—time and space—from the Shareholder Value Model. In addition, this framework includes social and environmental challenges as well.

There are four sets of drivers that need to be considered for global sustainability. The first set of drivers relates to the negative impact of industrialization, namely: pollution, waste, and material consumption. The second set of drivers relates to the proliferation of civil society groups like NGOs, and their growing impact on society due to internet technologies, which allow the non-governmental organizations NGOs to quickly mobilize their members. The third set of drivers includes the emerging disruptive technologies, such as genomics, nanotechnology, biomimicry, renewable energy, etc., which have the potential to make energy- and material-intensive industries obsolete. The fourth set of drivers relates to the global concerns of increasing population, poverty, and inequity arising from globalization (Fig. 1).

According to The Sustainable Value Framework, each *driver of sustainability* and its strategies and business practices correspond to a specific dimension of shareholder value.

For the lower left quadrant, organizations can create value by following a pollution prevention strategy to minimize emissions and waste. The immediate payoff is one of cost and risk reduction. Indeed, empirical evidence shows that companies pursuing pollution-prevention and waste-reduction strategies do reduce cost and increase profits (Christmann 1998; Sharma and Vredenburg 1998).

For the lower right quadrant, organizations can increase external confidence in their intentions and activities by constructively engaging stakeholders. The ideal strategy for a company would be to integrate stakeholder views into business processes to gain a payoff related to reputation and legitimacy. Some actions to take are cause-related marketing, life cycle management, industrial ecology, etc. As an example taken from industrial ecology, organizations can convert wastes from one operation into inputs for another operation. In 1997, Collins and Aikman Floor-coverings developed the capability to convert old carpet into new carpet backing. This product, ER3 (Environmentally Redesigned, Restructured, and Reused) has helped the company to obtain an increase in market share (Buffington et al. 2002). Another example is Nike: when faced with a growing backlash regarding its labor and environmental practices, Nike produced a turn-around by engaging stakeholders to address social and environmental issues (Hart and Milstein 2003).

For the upper left quadrant, organizations would develop the sustainable competencies of the future for a resulting

Fig. 1 Sustainable Value Framework

payoff related to innovation and repositioning. Future economic growth will be driven by companies that can engage in disruptive technologies to address the needs of the society. Firms that fail to lead in development and commercialization of such technologies are not likely to be future market players (Hamel 2000). For example, BP and Shell are investing in solar, wind, and other renewable technologies; Toyota and Honda have incorporated hybrid power systems in their cars; GE, Honeywell, and United Technologies are investing in small-scale energy systems; Cargill and Dow are developing biologically based polymers that will enable renewable feedstocks, such as corn, to replace petrochemical inputs in the manufacture of plastics. Another commendable example is that of DuPont, which transformed itself from a gunpowder and explosives manufacturer to a chemical company in late 1800s, and then transformed itself into a renewable resource company focused on sustainable growth in the 1990s (Holliday 2001). Firms that invest in clean solutions pursue more novel approaches to long-term challenges and, hence, create organizational structures that support the innovative process (Hart and Milstein 2003).

For the upper right, organizations ought to create a shared roadmap for meeting unmet needs for a resultant payoff of a sustainable growth trajectory. In other words, firms that take the time to create a compelling sustainability vision have the potential to unlock future markets of large scale and scope. The common example is Grameen Bank, which opened a new pathway for business growth (Counts 1996). Another example of a multi-national corporation MNC is Hindustan Level Ltd. (HLL), which developed products specifically aimed at the rural poor in India and was able to provide affordable soaps and shampoos to this market (Balu 2002). As a result, more than half of HLL's revenues come from the customers at the bottom

of the pyramid. In another example, HP has created a R&D lab in rural India to understand the needs of this burgeoning market. Other companies like Johnson & Johnson, Dow, DuPont, Coca-Cola, and Proctor & Gamble are attempting to leverage their skills to meet the basic needs of the world's poor (Hart and Milstein 2003).

Application of Shareholder Value Model to Baxter

In 2007, Baxter's executive-level SSC evaluated, discussed, and announced nine initial overarching "Sustainability Priorities," on which the company would focus (Baxter Sustainability Report 2009). These priorities represented a strategic direction toward which Baxter would move. The following year, goals for 2015 were established in support of the Sustainability Priorities. Refer to Appendix 1 for a detailed breakdown of these nine priorities and eighteen goals (Baxter Sustainability Report 2009).

Fig. 2 presents the nine Baxter Sustainability Priorities in each of the four quadrants and highlights the priorities which appear most applicable to the specific quadrant. In some cases a priority, or a component of the priority, could apply to more than one quadrant. It appears that five of Baxter's nine current Sustainability Priorities relate to the lower left quadrant.

From mid-2007 to spring 2008 Baxter's executive-level SSC worked to develop goals appropriate to each of the nine defined Sustainability Priorities. These "Sustainability Goals" were first presented in Baxter's 2007 Sustainability Report issued in mid-2008. Figs. 3 and 4 present the current 18 sustainability goals in the Sustainable Value Framework quadrant, which appears to be most suitable for the goal. Again, in some cases, a goal, or a component of the goal, could apply to more than one quadrant.

Fig. 2 Baxter's Sustainability Priorities

Strategy: Clean technology 9. Strengthen the Company's Commitment To Education, Especially Math and Science	Strategy: Sustainability Vision 8. Strengthen Access to Healthcare Through Product Development and Strategic Product Donations 9. Strengthen the Company's Commitment To Education, Especially Math and Science
Strategy: Pollution Prevention 1. Promote a Safe and Healthy Workplace 2. Promote an Inclusive and Diverse Workplace 3. Promote Ethical Conduct and Legal Compliance 5. Drive Reductions in its Carbon Footprint 6. Drive Reductions in its Natural Resource Use	Strategy: Product Stewardship 2. Promote an Inclusive and Diverse Workplace 3. Promote Ethical Conduct and Legal Compliance 4. Drive a Sustainable Supply Chain 7. Drive Enhanced Product Stewardship 8. Strengthen Access to Healthcare Through Product Development and Strategic Product Donations

Where Does Baxter Go from Here?

Presently, Baxter International, Inc. (Baxter)

...develops, manufactures and markets products that save and sustain the lives of people with hemophilia, immune disorders, infectious diseases, kidney disease, trauma, and other chronic and acute medical conditions. As a global, diversified healthcare company, Baxter applies a unique combination of expertise in medical devices, pharmaceuticals and biotechnology to create products that advance patient care worldwide.⁸

Under the leadership of Robert L. Parkinson, Jr., the current Chairman, President and CEO, Baxter had 2011 sales of \$US 13.9 billion and retained around 48,500 employees (Baxter Annual Report, 2011). Baxter's leadership over the past decade is unique in its ongoing efforts to advance sustainability.

As global corporations increasingly play a greater role in addressing sustainability issues, they are changing how they operate in fundamental ways. Sustainability and profitability are not mutually exclusive. In fact, they are closely intertwined and reinforcing. The sooner we all recognize this, the better—for business and society (Robert Parkinson, CEO)

This belief in combining profitability and sustainability can be seen through Baxter's track record. According to Corporate Knights, for 2012 Baxter ranked at number 86 in its list of "Global 100 Most Sustainable Corporations in the World" (Global100.org 2012). In addition, 2012 marked the eleventh year that Baxter was recognized as the Medical Products Industry Leader of the Dow Jones Sustainability World Index, and the fourteenth year that Baxter was listed in the Dow Jones Sustainability World Index (DJSI) (Dow Jones Sustainability Index 2012).

The GRI is an internationally recognized organization that has created a widely used sustainability reporting framework. This framework is largely made up of Sustainability Reporting Guidelines, the most recent installment of which is known as the GRI G3 Guidelines. The results of this type of economic, environmental, and social reporting allow companies to systematically benchmark their performance. Additionally, because the GRI is such a well-respected system of reporting, having a high standing within the G3 framework helps consumers, investors, and employees alike when assessing the moral standing of a corporation. According to Baxter's 2011 Sustainability Report, it stands at a level B- within the G3 guidelines, and Baxter is a GRI Organizational Stakeholder (OS) (Baxter Sustainability Report 2011).

Baxter attributes many of its historical environmental risk reduction and cost-saving measures to helping improve/maintain its environmental standing. Baxter has been monitoring its annual environmental-related costs and savings through EFSs since the mid-1990 s. By putting into

⁸ Baxter website http://www.baxter.com/healthcare_professionals/products/.

Fig. 3 Baxter's Sustainability Goals

<p>Strategy: Clean technology</p> <ol style="list-style-type: none"> 1. Promote a Safe and Healthy Workplace 2. Promote an Inclusive and Diverse Workplace 3. Promote Ethical Conduct and Legal Compliance 4. Drive a Green Supply Chain 5. Drive Reductions in its Carbon Footprint 6. Drive Reductions in its Natural Resource Use 7. Drive Enhanced Product Stewardship 8. Strengthen Access to Healthcare Through Product Development and Strategic Product Donations 9. Strengthen the Company's Commitment To Education, Especially math and Science 	<p>Strategy: Sustainability Vision</p> <ol style="list-style-type: none"> 1. Promote a Safe and Healthy Workplace 2. Promote an Inclusive and Diverse Workplace 3. Promote Ethical Conduct and Legal Compliance 4. Drive a Green Supply Chain 5. Drive Reductions in its Carbon Footprint 6. Drive Reductions in its Natural Resource Use 7. Drive Enhanced Product Stewardship 8. Strengthen Access to Healthcare Through Product Development and Strategic Product Donations 9. Strengthen the Company's Commitment To Education, Especially math and Science
<p>Strategy: Pollution Prevention</p> <ol style="list-style-type: none"> 1. Promote a Safe and Healthy Workplace 2. Promote an Inclusive and Diverse Workplace 3. Promote Ethical Conduct and Legal Compliance 4. Drive a Green Supply Chain 5. Drive Reductions in its Carbon Footprint 6. Drive Reductions in its Natural Resource Use 7. Drive Enhanced Product Stewardship 8. Strengthen Access to Healthcare Through Product Development and Strategic Product Donations 9. Strengthen the Company's Commitment To Education, Especially math and Science 	<p>Strategy: Product Stewardship</p> <ol style="list-style-type: none"> 1. Promote a Safe and Healthy Workplace 2. Promote an Inclusive and Diverse Workplace 3. Promote Ethical Conduct and Legal Compliance 4. Drive a Green Supply Chain 5. Drive Reductions in its Carbon Footprint 6. Drive Reductions in its Natural Resource Use 7. Drive Enhanced Product Stewardship 8. Strengthen Access to Healthcare Through Product Development and Strategic Product Donations 9. Strengthen the Company's Commitment To Education, Especially math and Science

effect methods agreed upon through this evaluation, Baxter was able to avoid many of its previous costs and consequently has improved its environmental standing as well as its financial standing.⁹ Baxter's 2015 sustainability goals include a number of specific environmental goals, which are indexed to revenue with a 2005 baseline. These environmental goals include, reduce GHG from operations emissions 45 %, increase facility energy usage of renewable power to 20 % (of total), reduce energy usage 30 %, reduce water usage 35 %, reduce total waste generation 30 %, and eliminate 5,000 metric tons of packaging (Baxter Sustainability Report 2011). It has yet to be seen whether Baxter will be able to achieve these lofty goals.

In general, Baxter has been decreasing its environmental impact both by conservation and utilizing renewable energy. Baxter employs numerous innovative methods throughout

its many US and internationally based facilities to conserve resources. For example, at one of its sites in North Carolina Baxter uses scrap wood chips (biofuel) from local lumber operations and furniture mills as input energy into a wood boiler to generate steam for building heat and sterilizing its products. More recently, biofuel for boilers has been introduced at two Baxter facilities in India. Innovative projects such as this have contributed to Baxter's global energy conservation activities, "which, since 2005, have achieved cumulative savings of approximately \$39 million on an annualized basis" (Baxter Sustainability Report 2011).

According to Baxter's most recent 2011 Sustainability Report, the company is using increasing amounts of renewable energy for its global operations. The use of renewable energy contributes to multiple Baxter sustainability objectives, including the reduction of GHG emissions.

During 2011, Baxter purchased 153,700 megawatt hours (MWh) of electricity generated from 100 % certified renewable power. This included 102,200

⁹ "Making Energy Conservation a Cornerstone of Sustainability". Baxter publication, p. 35.

Fig. 4 Baxter's Sustainability Goals

<p>Strategy: Clean technology</p> <p>15. By 2010, assess existing products for relevance to the “base of the pyramid” (developing economies) and identify high-impact, economically viable product opportunities.</p> <p>16. Increase R&D investment from 2008 to improve access to healthcare for the “base of the pyramid”</p>	<p>Strategy: Sustainability Vision</p> <p>15. By 2010, assess existing products for relevance to the “base of the pyramid” (developing economies) and identify high-impact, economically viable product opportunities.</p> <p>16. Increase R&D investment from 2008 to improve access to healthcare for the “base of the pyramid”</p> <p>18. Facilitate learning of math and science through biotechnology education for Chicago Public Schools teachers and students, and partner with other educational organizations to provide similar opportunities at other locations.</p>
<p>Strategy: Pollution Prevention</p> <p>1. Implement best-in-class programs designed to protect the safety and improve the health of employees</p> <p>2. Create and sustain an inclusive culture...</p> <p>3. Continue to champion internal and industry wide ethical sales and marketing practices</p> <p>4. Reduce the carbon footprint of Baxter's U.S. car fleet...</p> <p>6. Reduce Greenhouse gas emissions...</p> <p>7. Increase facility usage of renewable power...</p> <p>8. Reduce total waste generation...</p> <p>9. Reduce energy usage...</p> <p>10. Eliminate 5,000 metric tons of packaging materials... [Baxter savings]</p> <p>11. Reduce water usage...</p> <p>14. Identify new opportunities to replace, reduce and refine (3Rs) the use of animal testing.</p>	<p>Strategy: Product Stewardship</p> <p>2. Create and sustain an inclusive culture...</p> <p>3. Continue to champion internal and industry wide ethical sales and marketing practices</p> <p>5. Incorporate green principals into Baxter's purchasing program...</p> <p>10. Eliminate 5,000 metric tons of packaging materials... [Customer benefits]</p> <p>12. Implement two projects to help protect vulnerable watersheds or provide communities with enhanced access to clean water.</p> <p>13. Incorporate the following elements as appropriate into Baxter's product stewardship programs...</p> <p>17. Work with donor partners to develop and implement a strategic product donations plan beginning in 2010 that includes...</p>

MWh for company operations in Europe (Austria, Spain, Switzerland, and the United Kingdom) and 51,500 MWh of certified renewable energy certificates (RECs) for US operations. Baxter was recognized as the 29th largest corporate purchaser of renewable energy in the United States at year-end 2011. Beginning in 2007, Baxter has used various means such as electricity generated from certified renewable energy, carbon credits and carbon offsets to achieve and maintain “carbon neutrality” at its headquarters in Deerfield, Illinois, United States, and its facility in Cartago, Costa Rica. In both cases, at a minimum, the company offsets facility-related emissions from purchased electricity as well as fuel combustion on site. Beginning in 2012, all purchased electricity used by Baxter operations in Illinois, United States, approximately 80,000 MWh per year, will be generated from 100 % wind generated Green-e certified renewable energy.

Implications

Akin to Stuart Hart's title, it seems that Baxter may be at ‘its own crossroads’. The work that the company has committed to be an environmental/sustainability leader is indeed impressive. In Newsweek's annual ranking of Green Companies, Baxter was ranked in the US at No: 15 in 2010 and it jumped to No: 4 in 2011. (Newsweek Green Ranking 2010, Newsweek Green Ranking 2011).¹⁰ The Maplecroft Climate Innovation Index (CII) Benchmark (for 346 of the largest US companies) ranking for Baxter rose from #35 in Cycle 1 (2010) to #21 in Cycle 2 (2011) and then dropped back to #31 in Cycle 3 (2012)¹¹ (Maplecroft Climate Innovation Indexes 2012). However, this general success may be difficult to maintain.

¹⁰ http://www.baxter.com/press_room/features/2010/10_25_10_newsweek.html.

¹¹ <http://www.businesswire.com/news/home/20101215005218/en/Baxter-Advances-Science-Education-Haiti-Relief-Efforts>.

Given investor and NGO interest and media and public exposure, the bar of sustainability expectations appears to be moving up each year. Added to this fact is that there are more companies voluntarily joining or motivated to join the fray of the so-called sustainable or green corporations. The combination of these representative factors makes the task of a company maintaining its sustainability performance daunting. This can be witnessed by the change of Baxter's presence on some of the rankings. In years 2007 and 2008, Baxter was on the list of the Carbon Disclosure Project (CDP) Leadership Index, but has fallen off since then. For the list of "Global 100 Most Admired Companies in the World", Baxter's ranking was #69 in 2010, fell to #99 in 2011 and bounced back to #86 in 2012 (Global100.org 2012). With organizational sustainability performance increasingly scrutinized by independent and knowledgeable reviewers, will Baxter be able to maintain its standings?

What does Baxter need to do to ensure that this global sustainability innovation, momentum, and business benefits associated with this momentum is maintained? How can a multi-national company continue to innovate in many respects, including in its supply chain, operations, and

products, to be at the forefront of sustainability leadership? Will the companies' trend of sustainability progress continue going up, slow down, or taper off? All these are questions Baxter leadership will need to reflect upon, innovation options evaluated and possible sustainability strategies considered as the world community strives "to meet the needs of the present without compromising the ability of future generations to meet their own needs." (Our Common Future 1987).

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Appendix 1

Baxter priority sustainability and 2015 goals—people

2015 Goal	2011 Progress
1. Baxter will promote a safe and healthy workplace Implement best-in-class programs designed to protect the safety and improve the health of employees that result in performance in the top three of industry peers	Compared to 2010, Baxter improved its recordable case rate by 5% and its cases with days lost rate by 6 %. However, the company's days lost rate rose by 20 %. In 2011, Baxter launched a three-pronged approach to enhancing its safety culture and performance. In 2010, the most recent year data was available, Baxter's cases with days lost rate ranked third of industry peers. 1 As part of the BeWell@Baxter strategy, the company offered free seasonal flu vaccinations to 98% of the global employee population during 2011
2. Baxter will promote an inclusive and diverse workplace Create and sustain an inclusive culture where diverse ideas, backgrounds, experiences and perspectives are respected and valued	All Baxter employees company wide completed training on how to contribute to an inclusive culture. Additionally, all employees were required to add an inclusion goal as part of their individual goals for the year. Also during the year, Baxter established two Business Resource Groups, "Building Women Leaders" and "Latinos@Baxter"
3. Baxter will promote ethical conduct and legal compliance Continue to champion internal and industry-wide ethical sales and marketing practices by Implementing Baxter's enhanced US Healthcare Compliance Program and International Anticorruption Program within the company	In 2011, Baxter's major efforts in the United States focused on implementing a program to comply with the Physician Payment Sunshine Act. Outside the United States, Baxter enhanced its risk-based anticorruption education program by piloting an intensive anticorruption risk education session in the Asia Pacific region, in addition to the awareness and comprehensive training offered annually to employees who regularly interact with government officials and healthcare professionals

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Baxter priority sustainability and 2015 goals—people

2015 Goal	2011 Progress
Working with US and international trade associations, non-governmental organizations and governments to harmonize and enforce standards on financial interactions with healthcare providers that allow for appropriate education, research and dialogue on products and services and discourage improper incentives	Baxter continued work with Eucomed and Advamed on a European approach to third-party anticorruption efforts, sharing Baxter's perspectives and helping to create a standard industry approach. Additionally, Baxter's China Ethics and Compliance team made progress with the China Association of Enterprises with Foreign Investment R&D-based Pharmaceutical Association Committee on advancing an industry-wide ethical sales and marketing code

Baxter priority sustainability and 2015 goals—operations and products

2015 Goal	2011 Progress
4. Baxter will drive a sustainable supply chain	
Reduce Baxter's US car fleet greenhouse gas emissions per kilometer by 20 % from 2007 baseline	In 2011, Baxter's US sales car fleet achieved a 4.1 % reduction in greenhouse gas (GHG) emissions per kilometer driven compared to 2007
Incorporate sustainable principles into Baxter's purchasing program with select 100 suppliers	Baxter now embeds sustainability components into the purchasing, sourcing and supplier management process in nine countries, and conducted its third annual global supplier sustainability survey
5. Baxter will drive reductions in its carbon footprint	
Reduce greenhouse gas emissions 45% indexed to revenue from 2005-baseline	In 2011, Baxter's net GHG emissions from operations equaled 717,800 metric tons carbon dioxide equivalent (CO ₂ e), a 34 % reduction compared to 2005 indexed to revenue, and an absolute decrease of 7 %
Increase facility energy usage of renewable power to 20 % (of total)	In 2011, 19 % of Baxter's energy use for operations was from renewable energy sources. Of this amount, 8 % was from the use of biomass fuel and 11 % was the renewable energy component of purchased electricity and RECs
6. Baxter will drive reductions in its natural resource use	
Reduce energy usage 30 % indexed to revenue from 2005 baseline	In 2011, Baxter used 8,869 trillion joules of energy, a reduction of 24 % compared to 2005, indexed to revenue, and an absolute increase of 7 %
Reduce water usage 35 % indexed to revenue from 2005 baseline. To help achieve this, by 2010 evaluate potentially vulnerable watersheds associated with Baxter facilities and establish aggressive water conservation goals for high-risk areas	In 2011, the company used 13. 8 million cubic meters of water, a reduction of 33 % compared to 2005, indexed to revenue, and an absolute decrease of 6 %. Baxter's absolute water consumption increased by 4 % from 2010 to 2011
Implement two projects to help protect vulnerable watersheds or provide communities with enhanced access to clean water	Baxter worked with two non-governmental organizations on proposals to protect watersheds and enhance sanitation in communities near manufacturing facilities located in water-stressed areas. The company expects to fund and implement both of these projects in 2012
Reduce total waste generation 30 % indexed to revenue from 2005 baseline	In 2011, Baxter generated 70,700 metric tons of waste (including 65,000 metric tons non-hazardous and 5,700 metric tons regulated), a decrease of 11 % compared to 2005, indexed to revenue, and an absolute increase of 26 %. A product recall in the Europe, Middle East, and Africa region resulted in approximately 9,400 metric tons of total waste in 2011, 13 % of the 2011 global total. Excluding this waste, Baxter would have experienced a decrease of 23 % compared to 2005, indexed to revenue, and an absolute increase of 9 %
Eliminate 5,000 metric tons of packaging material from products sent to customers from 2007 baseline	Since the base year of 2007, Baxter has implemented projects that have reduced the amount of waste sent to customers by 4,300 metric tons, 86 % of its goal.

Baxter priority sustainability and 2015 goals—operations and products

2015 Goal

2011 Progress

7. Baxter will drive enhanced product stewardship

Further sustainable product design by identifying and minimizing life cycle impacts and proactively eliminating or minimizing known substances of concern in new products and packaging as feasible

Baxter's XENIUM+ synthetic dialyzers became the second Baxter product to receive Carbon Footprint certification from the Carbon Trust. Baxter has continued the global marketing rollout of FLEXBUMIN [Albumin (Human)]—the first and only albumin in a flexible, plastic container - which is the world's first medical product to receive Carbon Footprint certification from the Carbon Trust (in 2009, re-certified in early 2012)

Identify new opportunities to replace, reduce and refine (3Rs) the use of animal testing!

Baxter is committed to enhancing animal welfare through the 3Rs—replacement, reduction and refinement. In 2011, Baxter further reduced the number of animals used in quality testing of certain biotherapeutic drugs and vaccines. The company also increased the amount of information collected per animal that reduced the number of animals necessary to fulfill specific regulatory requirements

Baxter priority sustainability and 2015 goals—world

2015 Goal

2011 Progress

8. Baxter will strengthen access to healthcare through product development and strategic product donations

Create a new business model to improve access to healthcare for the “base of the pyramid” (developing economies)

Representatives from the organization Enterprise for a Sustainable World interviewed Baxter business leaders from around the world to understand where and how the company is currently selling products in regions with high “base of the pyramid” 1 (BoP) representation or has technology well suited for use in the BoP. The company also began a review of its emerging technology portfolio

Work with donor partners to develop and implement a strategic product donation plan beginning in 2010 that includes: being the first on the scene following disasters and tragedies, contributing most needed products to stabilize supply, and contributing most needed products in least developed and developing economies

Baxter continued working with AmeriCares and Direct Relief International to pre-position products so they are available for emergencies as well as to meet ongoing needs in underserved communities. The company shipped products with long shelf lives to aid partners in the first and fourth quarters of 2011. These proactive strategic donations helped facilitate timely support to 75 countries

9. Baxter will Strengthen the Company's Commitment to Education, Especially Math and Science

Facilitate learning of math and science through biotechnology education for Chicago Public Schools teachers and students, and partner with other educational organizations to provide similar opportunities in other locations

In the 2010–2011 school year, the Science@Work: Expanding Minds with Real-World Science program, a multi-year commitment to Chicago Public Schools, reached nearly 14,000 students and almost 150 teachers in 55 schools through the provision of in-depth biotechnology teacher training and module lesson plans (and a total of more than 45,000 students and 530 teachers in more than 150 schools since 2008). Baxter also contributed to several other educational initiatives during the year, in Chicago and in other locations

Appendix 2: Case Questions for Instruction Use

The case of Baxter International, Inc. can be used for classroom use, especially for graduate students. This case discusses how a large company incorporated Sustainability within its operations and, ultimately, its strategy. Given the laxity of strict environmental regulation from the federal level (the EPA), what incentives exist for companies to take on leadership in sustainability? This case can be used to probe the role of companies in sustainability leadership.

General Questions

1. How and why does a company, started in 1931, decide to embrace sustainability? Who were the leaders who thought about this concept? (Note: A good jumping off point is immediately before that decision is made and Baxter management considering whether to incorporate sustainability in their company.)
2. Had something happened to spark this interest? Had leadership been reading about it? What prompted even

thinking about sustainability? Why were they interested in sustainability before most other companies were (and ultimately, why did they decide to do so on their own??) (Note: At this point, what would follow is Baxter's history and description, where the concept of "sustainability" was in the early 1990s, what the benefits, challenges, risks, obstacles, etc., were.)

3. Who were the stakeholders in this decision? (Note: Kind of a preamble to the actual decision, which would be announced in the class.)
4. Given the absence of climate legislation in the US, why would companies risk media exposure to report on environmental indicators. (Note: Attempt to have students articulate the drivers that can be used to incentivize companies to be sustainable.)

Specific Questions

1. Was carbon offsetting used prior to Robert Parkinson's tenure as CEO?
2. Was there a marked difference in sustainability/green focus when Parkinson joined the company? If so, what specifically changed?
3. Was Robert Parkinson, CEO, involved in sustainability work in his prior jobs? (Loyola, Abbott)
4. How did Baxter get involved in the Chicago Climate Exchange? As a founding member does Baxter act any differently than other CCX members?
5. What should Baxter do to continue its momentum?
6. If you were the CEO of the company, would you have done anything differently. What are the various pressures faced by the senior leadership in the C-suite?
7. Compare and contrast Baxter with other competitors. Students can look at other medical devices companies in Europe and Asia (Seimens Medical (Germany), Philips Medical Systems (Netherlands), B. Braun (Germany), Fresenius (Germany), Smith & Nephew (UK), Terumo (Japan), Gambro (Sweden), etc.

Appendix 3: Sustainability Awards and Recognition for Baxter Inc.

2012—250 Best Companies to Work for In Mexico—Great Places to Work Institute—Mexico
 2012–2005—Global 100 Most Sustainable Corporations in the World
 2012–2007, 2005–2004, 2002–2000—100 Best Corporate Citizens—*Corporate Responsibility Magazine* (formerly Business Ethics Magazine)
 2012–2011—Maplecroft Climate Innovation Index US 100
 2011–1999—Dow Jones Sustainability Index (DJSI)

2011–2009—First in the Healthcare Category of the Newsweek Green Rankings
 2011—Socially Responsible Company—Mexican Center for Philanthropy
 2011—AmCham Corporate Social Responsibility Award—Cartago, Costa Rica
 2011—Bloomberg-Vestas Global Corporate Renewable Energy
 2010—Chair's Award of Merit—United Way of Peel Region—Canada
 2010—Governor's Sustainability Award for Continuous Improvement—Illinois, United States
 2010—Recognition of Best Practices in Corporate Social Responsibility—Mexican Center for Philanthropy
 2010—Yangtze River Delta Pharmaceutical Corporate Social Responsibility Award—Shanghai, China
 2009, 2007—World's Most Ethical Companies—Ethisphere Council
 2008—Highly Commended (large business category)—Western Sydney Industry Awards Excellence in Business Practice—Toongabbie, New South Wales, Australia
 2008—Platinum Award for Innovative Approaches to Environmental Stewardship and Sustainability in Healthcare—Building Common Ground Conference—Burlington, Ontario, Canada
 2007—First Annual Corporate Citizen Award for Environmental Sustainability—League of Women Voters of Illinois (http://www.baxter.com/about_baxter/company_profile/awards_and_honors.html)

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