

# Sustainability and the New Economy

*By Jeff Hogue*

In past years, the term “sustainability” was a word spoken mainly in environmental circles as a descriptor of an ideal balance among environmental consciousness, resource reduction, economic resilience and social responsibility. In recent years sustainability has become prevalent in business as a way to improve the overall bottom line of the business. In fact, for some companies sustainability has become an imperative and established way of conducting business to drive profitability, to set short and long term strategies and to ensure that the business is considering broader stakeholder expectations and social and ethical imperatives.

Forum session 245, Sustainability and the New Economy, Preparing Your Company for the Next Revolution in Environmental Health and Safety Management, was designed to provide a new perspective of business and governmental organizations. The session provided participants with a working knowledge of the principles and practice of sustainable development, based on Agenda 21, crafted at the United Nations Environmental Program World Summit on Environment and Development and some of the most important regulatory initiatives in the United States and Europe based on sustainability. Participants discussed case studies on developing plans for sustainable production and engaging customers or suppliers on sustainable development and community responsibility.

The term sustainability was coined in the Bruntland Commission Report, issued in 1987, entitled “Our Common Future.” Gro Harlem Brundtland and her Commission defined sustainable development as, “Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”

In essence, the Bruntland definition embodied, and the commission report detailed, the three pillars of sustainability, environment, equity or social responsibility and economics and the important relationships between them. The definition, a first of its kind, started to drive business and government to identify how the definition could be applied to their actions.

## **Implementing a Sustainability Management System**

The biotechnology company, Genencor, has embraced these concepts and has driven sustainability into the way that they do business. In the mid-1990s, the company contemplated an environmental health and safety management system to organize its EHS efforts and to continually improve its systems. Around the same time, the corporate sustainability steering committee was chartered to understand sustainability and to identify how it could be applied to the Genencor’s business.

The parallel process of identifying a suitable EHSMS strategy and the understanding of sustainability crystallized their development of a sustainability management system. SMS implementation began in the summer of 1999 and was led by the Global EH&S Team. The implemented vision was a result of the company’s business actions and was fully

dependent on the environment and the social well being of all stakeholders including the community, employees and customers.

The SMS was patterned after current international standards, ISO 14001: 1996(E), the European Union's Eco-Management and Audit Scheme Regulation, British Standard 8800 on Occupational Health and Safety Management Systems, Social Accountability 8000 and some of the most pertinent chapters of Agenda 21. The system, however, was designed to drive specified outcomes, performance improvements and leadership rather than only improvements in Genencor's management system, as suggested in ISO 14001.

"The system was instrumental in aligning EHS with the business of the business," said Beth Concoby, corporate director of environmental health and safety. "Through the implementation process, the sites were able to realize the benefits of the system." In fact, the system drove significant improvements in resource use, social programs and financial savings. At several sites resources like water, energy and steam were reduced up to 74 percent.

Likewise, by applying a systematic approach similar to the methods used in ISO14001, and EMAS, several social aspects were identified and slated for improvements. Sites were able to engage the community regarding their local operations and identify areas to contribute, thus improving conditions in the community while increasing and enhancing Genencor's standing by enabling an understanding of its business and operations.

"Most of our sites were able to experience a financial benefit from the SMS," said Concoby. "The efforts in reduction of resources, decreasing injuries, improving employee well-being and morale and engaging our communities have translated into cost savings, but more importantly have allowed us to better anticipate critical future business issues that we can be proactive and creative in solving now."

## **Assessing Sustainability**

An important part of Genencor's SMS is the evaluation on sustainability performance. "Traditionally Genencor has been a very compliance focused company, conducting very stringent EHS compliance audits," said Jeff Hogue, corporate EHS manager. "Because of this focus, and our excellent compliance state, we determined that we needed to drive performance and leadership into the process which is consistent with our SMS approach." The company also wanted to use this assessment approach to facilitate the increase in technical proficiency of the site, EHS representatives in regulations, aspects of industrial hygiene and social issues outside of the audit context.

Consequently, Genencor developed an improved approach to assessing sustainability including EHS compliance, conformance with the system documentation requirements as in ISO 14001 and efforts towards environmental impact improvement and social responsibility. Instead of using the traditional checklist-based, command and control, compliance auditing approach, the Genencor methodology was designed to address business operations. Specifically, those areas where people encounter risk and change and are forced to make decisions.

The new focus required a change in auditor mentality and questioning. "We found that we needed to change our questioning to drive performance at the site level," said Hogue.

“Instead of using the traditional audit questions like ‘Has the workplace been evaluated for the presence of confined spaces per 29 CFR 1910.146 (c)(1),’ we used questions like ‘Are there ways that you can reduce confined space entries through re-design or engineering controls?’” This new methodology is starting to change the thinking of site personnel regarding current practices and for new capital projects and process changes.

In addition, the change in thinking, the assessment process has improved alignment of EHS objectives with the business objectives. At several sites the objective-setting process for the site business has adopted the management review and assessment elements of the SMS to align all site objectives. “At our Hanko, Finland plant, the assessment process helped guide a site reorganization process where the three pillars of sustainability became strategic drivers for every site objective and goal,” said Hogue. “The transition to this methodology has also improved our relationship with the sites and has been clearly identified by plant management as a value to the sites.”

## **Sustainability Principles**

A unique business, BMW Designworks/USA, located near Los Angeles, has also embraced the SMS concept to drive its business. Designworks is a firm specializing in the design of industrial and consumer products. The idea of sustainability at Designworks stemmed from the realization that designing products so people will want them is sometimes at odds with the environment when new design concepts and communication idioms are translated into products and packaging materials.

The firm decided to address this potentially harmful aspect of their business with a systematic approach to incorporate sustainability in the product design process. An SMS was developed and significantly impacted the creative processes as well as the types of projects actively pursued. Examples include the design of the new BMW X5 and 3 Series Sedan. “The cars were designed to be easily dismantled and separated for recycling purposes,” said Bob Del’Ve, senior vice president of the firm. “Both cars are almost entirely recyclable. The SMS and sustainability thinking sparked the creativity of our designers on both projects.”

Document control and systems to anticipate regulations have been implemented to increase efficiency and to anticipate regulatory issues related to their products. This focus has already proven to be a significant cost saver for their customers.

Designworks is also working on an iconic recycling bin program to replace the traditional blue bins. “The program was driven internally by sustainability focus and the SMS,” said Del’Ve. “We had several teams of individuals very enthusiastic in this project and the concepts that materialized were beyond our expectations.”

## **Reporting Progress to Stakeholders**

Another business, Agilent Technologies is pursuing sustainability with an emphasis on reporting their performance to their stakeholders in an annual environment and social responsibility report. Agilent recently completed its second report and has won several international awards for content and overall approach.

Environmental reporting has been a trend in business over the past two decades, however, more instances of sustainability reporting have been observed over the past five years.

Recently, international guidelines such as the Global Reporting Initiative were developed to standardize this type of reporting with required and recommended measures. The intent of the guidelines is to drive consistency in reporting and to eventually develop leading measures that clearly demonstrate sustainability performance. Consequently, Agilent used the GRI for its most current report.

“Our ESR has provided an important feedback mechanism for our stakeholders to let us know how we are doing,” said Gail Brownell, corporate environment and sustainability manager. “We were able to respond to many comments provided by readers of the report and take action.”

In addition to the value provided by stakeholder feedback, the Agilent report stimulated interest in the investment community. The report made it easier to complete applications and qualify for sustainable investment indices and funds like the Dow Jones Sustainability Index and FTSE for Good, respectively.

## **Driving Governments to Change**

Implementation of sustainability in an organization can be a challenge, but the complexities in a city government are at a completely different magnitude. While business is normally concerned with the management of tens of acres, the City of San Diego manages over 331 square miles on a daily basis. As the seventh largest city in the United States, San Diego must serve over 1.2 million people and more than 450,000 housing units.

Sustainability at the city has been driven by an attitude of “going beyond business as usual.” This vision is endorsed by the mayor and the city’s chief environmental officer and has been driven into all aspects of how the environmental services division conducts everyday activities.

The city’s efforts range from alternative fuels and energy to green buildings to a sustainable community program. To date, San Diego has completed projects like the construction of the first “green building” in the United States to be certified by the EPA as an “Energy Star Building.” In its first year, the building saved over 480,000 gallons of water, eliminated 353 tons of CO<sub>2</sub> emissions and saved over 90K in energy per annum.

In addition, San Diego has taken unique approaches to reducing greenhouse gas emissions and fuel use by retrofitting vehicles to natural gas and determining the best way to route vehicles using a geographical information system. “We have experienced a reduction of fuel use by 561,000 gallons in our refuse vehicles,” said Kip Sturdevan, recycling program manager. “In addition, we found that by challenging the status quo and shutting down our diesel vehicles when they were not in use, we were able to save \$700K per year.”

Other efforts include the use of photovoltaic cells for energy at the ESD headquarters, utilizing methane as a fuel source for power generation at their landfill and recovering energy through the installation of a turbine in the waste water treatment plant effluent pipe.

## **What are you going to do?**

At the end of the session, attendees were asked, “what are you going to do?” After being confronted with the problems we face as a global society, the broad mal-distribution of wealth in society and the significant challenges that our wasteful ways present for the fragile eco-system, attendees were challenged to take presenters’ lessons and ask whether they were relevant to their organizations.

Moreover, if attendees did find such relevance, they were challenged to implement these models in the interest of creating a more sustainable society.

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