

## **Keeping our Eye on the Goal -- How To Measure Corporate Sustainability Progress**

**By Susan Burns, Principal, Natural Strategies Inc.**

"Sustainable Development" is a common goal among many companies today. But how does a corporation know if it is succeeding in reaching this goal? Two things are necessary: the first is a clear definition of the goal and the second is feedback, in the form of environmental performance indicators.

An indicator is "a measurement that reflects the status of a social, economic, or environmental system over time."<sup>1</sup> Companies have used environmental performance indicators, or EPIs, for years to measure and achieve progress toward "environmental excellence." These indicators help companies track everything from regulatory compliance to waste reduction. But *sustainability* indicators are different from traditional EPIs. Unlike traditional EPIs that track trends toward environmental improvement, sustainability indicators are designed to help us reach a particular end state: sustainability.

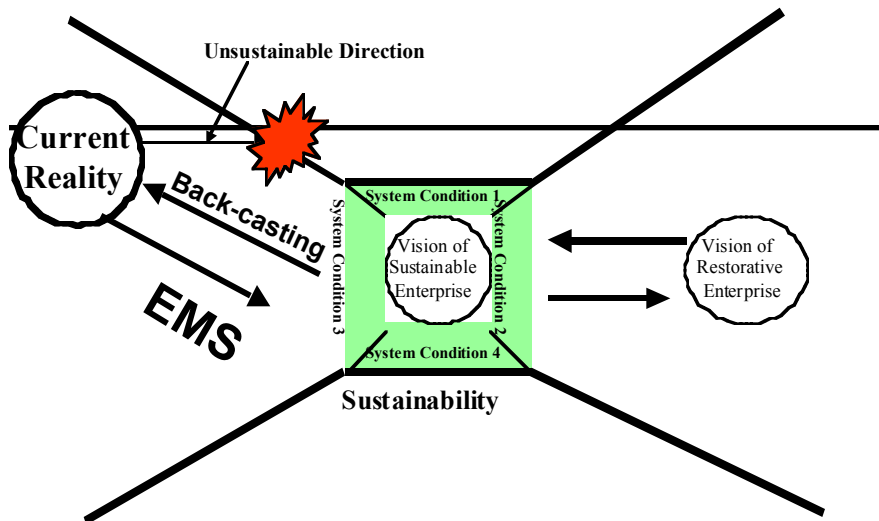
As a society, our understanding of sustainability is new and is coming into sharper focus as it is collectively described. So what exactly is sustainability? Quite literally, it is a state, or a socio-economic system, that can be "sustained" over time. The Natural Step framework describes the minimum, non-overlapping, conditions necessary for such a system. The System Conditions help us describe and define the goal of sustainability and with this clear definition, we can then design indicators that are relevant for the journey<sup>2</sup>.

### **Back-casting adds Strategic Focus**

How do EPIs differ when TNS is used as a compass to guide their design? The overarching influence is the strategic focus The Natural Step framework gives through the process of back-casting. Fundamental to The Natural Step framework, back-casting is a

method of strategic planning that aligns a company's long term vision with its current actions and plans.

Exhibit 7 : The Natural Step, Back-Casting, and Environmental Management Systems



When back-casting, a company first analyzes its current situation in light of the four TNS system conditions. In other words, it examines its current operations, products, and services to determine where it is most out of alignment with the basic principles of sustainability. Next, the company envisions an ideal future in which it operates in accordance with the system conditions. This includes imagining how the marketplace of the future will view its products and services, and how its core competencies can be best positioned to service that market. This can be a tremendous source of creativity and innovation. Finally, the company designs an action plan that will move it from its current reality to its long-term vision. It takes advantage of activities that are easy to do right away and that have immediate pay off, making sure that each short-term action serves as a platform for longer-term goals.

### **Advantages of backcasting**

This type of long term strategic planning makes for stronger EPIs. Jimmy Sjöblom, former Environmental Manager of Sångärdalen Hotel and Conference Center notes, "By

using the system conditions, our environmental program is something we can use on the offense, rather than just guarding our back. The system conditions tell us how far we can go, how far we can set our anchor. We are way beyond incremental improvements or defensive strategies. Defensive activities are not a constructive use of our resources." The advantages of back-casting become even more apparent when contrasted with the traditional forecasting approach of many companies. During forecasting, a company reviews its current impacts and sets targets that incrementally reduce its impacts year after year. It may measure such things as pounds of hazardous waste produced per year or the number of regulatory violations per year, setting goals for reductions of these numbers. This type of measurement is important and can lead to major improvements in environmental performance, but it doesn't provide the types of leaps that are possible with seeing the whole picture.

### **Keeping our eye on the goal**

Corporate sustainability indicators are created when a company refers to sustainability principles and its own strategic goals and asks the following questions:

- \* What are our biggest impacts (violations of the system conditions)?
- \* What are our current strategies for mitigating these impacts?
- \* What indicators will tell us if we are successful?

The following are examples of three companies that use EPIs to measure sustainability progress.

### **Interface Looks at the Big Picture**

Interface, a 1.3 billion carpeting and textile company is using this systemic approach. When Ray Anderson, CEO, began shaping his company's vision of sustainability, he began by asking: What is the total quantity of material moving through the company? How much material from the earth's crust is removed each year due to our operations? How much is deposited in landfills each year? He calculated that the company is

responsible for 1.2 billion pounds of petroleum being extracted from the earth's crust each year. Only 1/3 is used for the materials in carpet; 2/3 is the energy it takes to make the carpet. Over 250 million pounds of carpet are produced each year in the United States. With an average life of 15 years, most of this material goes to landfills. Quantifying these flows can be a very powerful experience; it motivates people because they begin to see the whole picture.

This realization led to the development of a key indicator for company performance, "pounds-of-petroleum per dollar sales". Interface's vision is to eventually make all carpet from recycled materials and to use totally renewable energy sources. If their strategy succeeds, the indicator will approach zero. Since it started its journey to sustainability, Interface has watched this indicator fall as its sales have risen.

### **Electrolux uses a Systems Approach**

Swedish-based Electrolux, the largest home appliance company in the world, credits TNS for its holistic approach to environmental management. In its 1997 annual environmental report (see Figure 2), the company articulates both corporate and facility level EPIs that show its systemic approach to sustainability<sup>3</sup>. Its EPIs, in addition to being designed with its sustainability goals clearly in focus, are also expressed in business terms such as "share of total sales" and "added value," so that they are understandable among top management for planning purposes.

## **Exhibit 9:**

### **Electrolux Environmental Indicators**

#### Corporate Level

- \*Share of Total Sales Represented by Environmentally Leading Products
- \*Average Annual Environmental Improvement of Product Range
- \*Increase in Recyclability of Products
- \*Environmental Improvement of Manufacturing Facilities

#### Facility Level

- \*Energy cost per added value (%)
  - \*Energy consumption per added value (kWh/\$)
  - \*Carbon Dioxide emissions/added value (kg/\$)
  - \*Water consumption/added value\* (cubic meters/\$)
  - \*Energy consumption per square meter of heated surface area (kwh/m<sup>2</sup>)
  - \*Direct material efficiency (kg product/kg raw material used)
- \*added value is defined as the difference between total manufacturing costs and direct material costs.

Source: Electrolux 1997 Annual Environmental Report (available at [www.electrolux.se](http://www.electrolux.se))

The first three corporate level indicators relate to Electrolux's products directly.

According to Electrolux's analysis, its biggest environmental impacts occur during the use (not the manufacturing) of its products. Its strategy, therefore, is to produce the most ecologically superior products on the market (ones with the lowest water and energy use, for example). The indicator: "Share of total sales represented by environmentally leading products" measures the success of this strategy directly and can demonstrate to even skeptical managers, the value of the company's investment in its sustainability strategy. In its 1997 report, the company reported that environmentally leading products were 4% more profitable than other products.

### **Sånga Säby Designs Indicators around the System Conditions**

A further example of innovative utilization of sustainability metrics has been adopted by Sånga Säby, a Swedish Hotel and conference center located in central Sweden. The

company has utilized the TNS framework in all aspects of its environmental management system, starting with its environmental policy, and has designed a comprehensive set of EPIs based on the system conditions. The company tracks and reports, in yearly environmental reports, its performance as either a positive, neutral or negative trend for each indicator<sup>4</sup>.

Thus, in order to work toward sustainable development, a company needs both a clear definition of sustainability and environmental performance indicators to give it feedback on its progress. The Natural Step framework is helpful for designing these new sustainability indicators because of its clear definition of sustainability and the strategic planning process of back-casting. Peter Senge, chairman of the Society for Organizational Learning, speaks to the importance and utility of the TNS framework in saying, “The Natural Step pedagogy has proven itself to be among the most effective ways in the world to establish a foundation for the mind-set shift needed for twenty-first century enterprises to work. In order for organizations to truly practice environmental stewardship there must be a shared understanding of natural systems and the principles for sustainable human societies.”

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## **References:**

- 1- The Community Indicators Handbook: Measuring Progress Toward Healthy and Sustainable Communities, Tyler Norris Associates, Redefining Progress, and Sustainable Seattle, 1997
- 2- Karl-Henrik Robert, unpublished article: Metrics from a Sustainability Perspective, March 22, 1999

- 3- Electrolux 1997 Annual Environmental Report, available at [www.electrolux.se](http://www.electrolux.se)
- 4- Sångå Säby Kurs & Konferens 1996 Environmental Report, available at [www.sanga-saby.se](http://www.sanga-saby.se)