HOW DO WE INTEGRATE THESE RESPONSIBILITIES INTERACTIVELY?

Introduction

Other courses on sustainable development and corporate social responsibility talk about the triple bottom line. As you read last week, there have been some very credible challenges to this concept. If we assume that the financial people will never really accept a triple bottom line, how do we deal with the three responsibilities that have been presented in the previous modules?

One of the things that I have noticed in most sustainable development projects is that they seem to integrate all three responsibilities (environmental, social and economic). In some cases they were not meant to do this; i.e., they were not designed with this in mind. However, when you examine the results of the effort it is clear that all three responsibilities are there. One then wonders how much more effective (from a sustainable development perspective) the project could have been if all three responsibilities were clearly targeted interactively during the project design and implementation. This is not something that people that practice environmental sustainability and social responsibility are addressing. They would find that it is much easier to make a business case for a truly integrated program.

In looking for an analogy to use for how the three responsibilities can be integrated, I think about color. Using a 12-step color wheel, we start first with the three primary colors: yellow, blue and red.

By integrating these three colors two at a time, we get the three secondary colors:

1 Color Wheel; http://www.artsparx.com/colorwheel.asp
• Orange  (mix red + yellow)
• Green    (mix yellow + blue)
• Violet   (mix blue + red).

This system of color mixing is known as the *subtractive process*, because the resulting secondary color subtracts or absorbs even more waves from the white light than the first color did.

The final step in composing the 12-step color wheel is to further integrate the colors. Six tertiary colors will then be formed in the empty spaces:

• Yellow-orange
• Red-orange
• Red-violet
• Blue-violet
• Blue-green and
• Yellow-green.

This constitutes that color spectrum that one finds in a rainbow. It is called the RYB color model.
The additive system of color mixing is principally involved in working with the effects of colored light. This system is called additive because the mixed hues are obtained by adding light rays instead of absorbing or subtracting them. The fully integrative color in the additive system is white. We see color because of light. However, light waves are not in themselves colored. Our perception of color arises in the human eye and brain. Each color is defined by a particular frequency of electromagnetic energy. The human eye perceives visible light between the wave lengths of 400 to 700 mill microns only. We are not able to see ultraviolet and infrared light that lie that the two ends of this spectrum without the use of specially designed instruments.

We have learned the sustainable development is complicated. Well, so is color! In printing, colors are viewed in the cyan, magenta and yellow primary colors of the subtractive color model.

In the subtractive color model, the convergence of the three primary colors produces black. What we perceive as color on a surface actually is the result of ink absorbing some of the frequencies of the light that is striking it. The cyan ink absorbs red light and reflects green and blue. If you want a printed surface to appear blue, you need both cyan ink (to absorb red) and magenta ink (to absorb green). This is referred to as the CMY color model.

To complicate matters even more, the effects of color or ink pigments on a surface can be altered by a variety of methods:

1. The nature of the surrounding medium
2. Its degree of gloss or the sheen it has
3. The quality and intensity of illumination
4. The effect of the surrounding areas of color.

The actual theories of color vision state that there the primary colors in either model are only “fictional.” These primaries are arbitrary concepts used in mathematical models of color vision. They do not represent real color sensations in the eyes and brain. In other words, primary colors are completely imaginary. Furthermore, any three (or four or five or six) real “primary” colors cannot mix all the colors in any given medium, and this is
always true no matter which “primary” colors are chosen and no matter which medium (inks, pints, dyes, filters, phosphors, artificial light, or monospectral light) is used to mix the colors. In other words, all mixable “primary” colors are incomplete or imperfect.

So this is like the three responsibilities in sustainable development. They are not pure and they are not completely mixable all the time. One is trying to achieve white or black depending on the circumstances. Also you are trying to account for surrounding issues, the harshness of public opinion, the amount of understanding of a cultural issue, and the effects of what others think that the outcome should be.

There are not definable numbers for sustainable development that can be quantified and displayed on a single-triple bottom line. The light model is a much better description. Nothing is perfect, but the directions are clear if we know what model we are working in. To Wayne Norman and Chris MacDonald, the triple bottom line paradigm is a rhetorical device with little substance.

**Responsibility Integration and the Process View**

The Baldrige performance excellence model considers the process as a means of creating value for the organization. It looks at how three groups of stakeholders are involved with the process: leadership, employees, and customers and other stakeholders. Next it looks at how strategic planning, information and knowledge management and results are used to bridge between the people and the process to attain performance excellence and move towards sustainable development. All the elements must work in an integrated fashion in order for this to happen. Much of the utility of the Baldrige model is in these interrelationships.

The ‘five capitals’ component of the SIGMA Guiding Principles provide a basis for understanding sustainable development in terms of its integrated economic concept of wealth creation or “capital.” The five capitals are:

1. Natural capital
2. Social capital
3. Human capital
4. Manufactured capital
5. Financial capital.

All of the capitals are heavily interlinked and there is some overlap between them. These five capitals are encircled by the principle of accountability, representing the relationships that an organization has with its stakeholders and for the stewardship of the five capitals. These five capitals need to be managed for the long term, not just for immediate financial return. The organization needs to build up stocks of capital and get to the point where it can live off the “interest” that accrues rather than having to keep using more capital. These capitals are interdependent, where changes in one are likely to cause an impact on another. Likewise, one form of capital cannot simply be traded against another.
The five capitals apply at every stage of the product or service lifecycle, including through the supply chain, during production or service creation, when products and services are delivered, used, and at the end of their life. Hence a product or service will be based on a combination of all the capitals – built with human skills and knowledge, natural materials and social structures, using machinery and infrastructure and financial investment.

Now you can begin to appreciate the local view of sustainable development and the important role played by the “process focus” in this subject.

**Concept of Responsibility Integration**

Rather than looking at sustainability as the sum of its parts (i.e., the three responsibilities), we need a view of the organization that takes into account the links between the economy, the environment and society. The figures below are frequently used to show the connections:

Within an organization, society, economy and environment are viewed as separate, unrelated functions. Management and financial functions worry about the economic responsibilities and deal with the shareholders. Human resources and public relations deal most frequently with outside stakeholders and employees. Environment, health and safety professionals deal with the environmental responsibilities both inside and outside of the operation. This separation of responsibilities creates a number of problems for the organization:

- Since everything is connected to everything else, solutions to one problem can make another problem worse.
- Piecemeal solutions tend to create opposing functions
- Piecemeal solutions tend to focus on short-term benefits without monitoring long-term results and overall performance.

Actions to address the interests of the stakeholders in a sustainable organization must take all the connections into account. All problems will have actions that take into account connections between all three responsibilities. Understanding the three responsibilities and their links is the key to understanding sustainability, because...
sustainability is about integrating the responsibilities and achieving balance among the social, economic and environmental responsibilities of the organization.

**Integrating Responsibility Indicators**

The Global Reporting Initiative\(^2\) (GRI) segregates the indicators by the three responsibilities. For the most part the indicators seem to measure “less of a bad thing happening.” Maureen Hart has an organization called, Sustainable Measures\(^3\). Her work focuses on communities, not on business. However, she makes a point to find sustainability indicators that address multiple responsibilities and look to “doing more of a good thing.” This shift in focus would really help an organization measure its progress towards sustainable development in a positive and leading manner.

In the description of what is a **sustainability indicator**, she says:

> “Indicators of sustainability are different from traditional indicators of economic, social, and environmental progress. Traditional indicators -- such as stockholder profits, asthma rates, and water quality -- measure changes in one part of a community as if they were entirely independent of the other parts. Sustainability indicators reflect the reality that the three different segments are very tightly interconnected…”

She makes a great case for the integration of the three responsibilities\(^4\):

> “Sustainability requires this type of integrated view of the world -- it requires multidimensional indicators that show the links among a community's economy, environment, and society. For example, the Gross Domestic Product (GDP), a well-publicized traditional indicator, measures the amount of money being spent in a country. It is generally reported as a measure of the country's economic well-being: the more money being spent, the higher the GDP and the better the overall economic well-being is assumed to be. However, because GDP reflects only the amount of economic activity, regardless of the effect of that activity on the community's social and environmental health, GDP can go up when overall community health goes down. For example, when there is a ten-car pileup on the highway, the GDP goes up because of the money spent on medical fees and repair costs. On the other hand, if ten people decide not to buy cars and instead walk to work, their health and wealth may increase but the GDP goes down.

In contrast, a comparable sustainability indicator is the Index of Sustainable Economic Welfare. In order to get a more complete picture of what is economic progress, the ISEW subtracts from the GDP corrections for harmful bases or consequences of economic activity and adds to the GDP corrections for significant activities such as unpaid domestic labor. For instance, the ISEW accounts for air pollution by estimating the cost of damage per ton of five key air

\(^2\) Global Reporting Initiative; [http://www.globalreporting.org/](http://www.globalreporting.org/)

\(^3\) Sustainable Measures; [http://www.sustainablemeasures.com/](http://www.sustainablemeasures.com/)

\(^4\) Sustainability Indicators; [http://www.sustainablemeasures.com/Indicators/WhatIs.html](http://www.sustainablemeasures.com/Indicators/WhatIs.html)
pollutants. It accounts for depletion of resources by estimating the cost to replace a barrel of oil equivalent with the same amount of energy from a renewable source. It estimates the cost of climate change due to greenhouse gas emissions per ton of emissions. The cost of ozone depletion is also calculated per ton of ozone depleting substance produced. Additionally, adjustments are made to reflect concern about unequal income distribution. The correction for unpaid domestic labor is based on the average domestic pay rate. Some health expenses are considered as not contributing to welfare, as well as some education expenses.”

There are a number of useful sections on this web site that will provide a perspective on the difference between a sustainability indicator and the types of indicators promoted by the GRI and others:

- What are the characteristics of effective sustainability indicators?
- Is there a checklist that a community can use to evaluate sustainability indicators?
- How can you organize indicators; how many and what kind do you need?
- What data sources are available for indicators?
- Can you show me examples of good sustainability indicators?
- Are there any training materials that explain indicators and sustainability?

Remember that sustainability indicators measure the outcomes of the sustainable development program. Even “leading indicators” (as compared to “lagging indicators”) still happen in the past. In the next section, a tool will be presented that allow an organization to quantitatively score its indicators and provide a single grade. This scoring tool can also be tied to the results criteria of the Baldrige model and score the progress of a sustainable development program with a single number. I have seen sustainable development projects use indicators to help them keep better track of the progress. However, for better understanding by all the stakeholders, it may be better for the overall program to use a scoring method based on the Baldrige method rather than amass a large collection of sustainability indicators that will create a lot of effort to maintain and will add a lot of confusion with regards to their interpretation.

Let’s consider some examples of this integration of the responsibilities:

- Improved employee job satisfaction obtained from direct participation in the sustainable development program can result in –
  - Higher productivity – less waste
  - Greater innovation and problem solving and personal ownership for results – often with reduced impacts to the environment
  - Lower turnover, absenteeism and personal illness (lower health insurance costs)
- Improved quality systems can lead to better targeted research and development and product improvements/development – this results in happier customers, fewer returns (results in the use of more resources and more waste to the environment) and more repeat business.
• Reduced or eliminated wastes leads to a reduced environmental impact, fewer trucks traveling through the neighborhood and savings on both the resources used and lost.

There are a number of reasons that an organization should search for the impacts of the integration of the three responsibilities. They include:

• To strategically improve the organization’s competitiveness, financial performance, relationships with key stakeholders, and strengthen its public trust.
• To learn about the organization’s operational and ethical performance and how stakeholders perceive it.
• To learn whether the organization actually does what it says it stands for.
• To ensure alignment between the organization’s core values and its culture and the core values of the communities where it operates.
• To understand and be accountable for meeting the expectations of owners, employees, customers, community leaders, and advocacy groups demanding greater accountability and transparency.

Organizations that seek to be in business in the future need to consider sustainable development as an insurance policy to grant them their wish.

**Integrated Responsibility Management Systems**

In the economics responsibility, I covered the Sarbanes-Oxley (SOX) Act. Unfortunately many people only view these requirements from a financial management perspective since they are focused on financial reporting. However, SOX is actually focused on the processes and the management decision-making. From a management system perspective, the implications of SOX are quite similar to the ISO 9000, ISO 14001, and OHSAS 18001 as well as many other quality and regulatory requirements. These requirements specify:

• A well-defined management system and processes
• A proactive approach to problem and risk management
• Clearly defined responsibilities for implementation
• Self-assessment and appropriate checks and balances
• Take corrective action when needed.

The figure below defines the roots of SOX in an organization.
The next figure shows how a company can develop an integrated management system that not only satisfies SOX but also provides a framework for managing sustainable development. The paybacks of this approach are better integration of the companies three responsibilities efforts, a more comprehensive approach to management of risk, higher efficiency in achieving compliance, and a broad foundation for continuous improvement.

Organizations that have a well-established systems thinking perspective see things differently from other organizations. They know and understand how their business operates as a system. They tend to understand management approaches, quality standards, and improvement methodologies at a deeper level, and they understand the principles behind each approach and how they might apply to their business. These organizations can handle multiple management approaches (as presented in previous chapters) because they see them only as tools to help them move down the path to sustainable development. As a result, these organizations are able to use the most appropriate approach or tool for a particular situation and are more likely to be market leaders with higher returns on capital employed and higher market valuations.

Systems thinking is fundamental to developing and implementing a more integrated approach to sustainable development rather than wallowing in environmental
sustainability or social responsibility. Instead of dealing with the three responsibilities separately and potentially redefining how the business is managed around any one of them, the right approach is to focus on the design of the overall organizational management system that optimizes how the interests of the stakeholders can be met in a sustainable development program.

Using this approach will result in a number of significant benefits:

- The overall management system will more effectively achieve all the systems’ requirements because it is more integrated. All three responsibilities are an integral part of the way the organization manages the business.
- Because they are well integrated with the business management approach, these integrated responsibilities will produce real business value that goes beyond simple complicity with each responsibility separately.
- The need for duplicate resources that might otherwise be required to implement and manage the three responsibilities will be minimized and a more consistent approach for management reporting, problem solving, and improvement will be provided.

It is difficult to implement this systems approach to management without the appropriate tools. Hierarchical process mapping is one of the most important tools required. To take a systems approach to sustainable development, it is essential to be able to graphically visualize the way the process operates as a system at different levels of detail, how all parts of the process fit together and interact with each other, and how records, documents, and resources are used in support of the systems.

The figure below shows a high level overview of how the process mapping initiative and the SOX control requirements can be integrated.
Organizations that want to have a successful implementation of a sustainable development program should take a systems thinking approach and use hierarchical process mapping along with the other elements specified in this integrated management system.
**Concluding Remarks**

This chapter points out the importance of “systems thinking” in organizations and how sustainable development can help spur this thinking, not by theoretical means, but rather by learning about connections and integration and how it affects the organization. The late Dana Meadows, one of the early champions of the field of sustainable development and systems thinking came up with a number of change strategies that will drive the many issues covered in this chapter:

- Change the measurements and formulas
- Change the inventories and flow rates of resources
- Regulate negative impacts and vicious cycles
- Sustain virtuous cycles
- Provide new information to all stakeholders
- Change the rules, or who makes and enforces them
- Create a new system that makes the old ones obsolete
- Change the goals – often
- Change the mind set – emphasize sustainable development!

Good advice, indeed!

This chapter concludes the consideration of the “whats” that make up the domain of sustainable development. In the following chapters, we will begin to look at the “hows” associated with making it happen at the local level.

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5 Dave Pollard’s “How to Save the World Weblog:”
http://blogs.salon.com/0002007/categories/businessInnovation/