# The Greening of Process

Business process practitioners often ask me how to sell "process" to executives. I usually advise them not to try to sell process, as such, but to provide solutions that improve business performance. One of the obvious sources of problems—and one of the best opportunities to improve business performance—lies in the adoption of new technologies. A new technology comes along and we are forced to redesign processes to take advantage of the benefits of the new technology. Any process professional or process management center of excellence ought to be familiar with these new technologies and be prepared to redesign processes to take advantage of the benefits of the new technologies.

A few years ago I started encountering RFID technologies. In essence, one can now attach a small computer chip to items and track the items with wireless signals. It seemed obvious to me, as soon as I saw the technology and heard about the relatively low cost of implementation, that cargo containers and large costly items, like cars and battle tanks, would soon all have RFID chips and that inventory operations would slowly but surely be revolutionized by this new technology. I was, however, surprised to learn that a retail store had started placing chips on expensive blue jeans. It turns out that many retail chains can better manage inventory and service customer needs, on a cost effective basis,
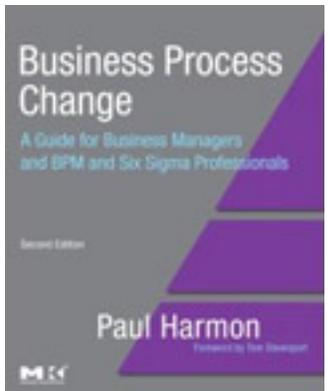
by using RFID technology.

In this Advisor, however, I want to point to a whole domain of technologies that are about to hit companies like a giant wave. Specifically, I am referring to technologies that allow companies to reduce their energy use, technologies that reduce the release of greenhouse gases, technologies involved in carbon trading or any other technology designed to generate a more environmentally benign workplace. Increasingly, this whole movement toward more environmentally benign practices is referred to as the *greening of process*.

In 1973 I coauthored *Ecology: Selected Concepts*. In the opening chapter we reviewed a then recently published book, *The Limits of Growth*, by Donella Meadows and others from the Systems Dynamics group at MIT. This book accurately projected what has, in fact, happened in the last 35 years. In the early Seventies, when *The Limits of Growth* was first published, all of the conventional commentators dismissed its predictions. Today, those same commentators are urging action to prevent a growing crisis—the warming of the global climate system. At the same time, they are concerned about specific examples of resource constraints, as manifested by the recent climb of gasoline prices is the US. As Meadows and her colleagues from the Systems Dynamics Group explained back in the Seventies, the earth is a closed system. Closed systems can't support unlimited growth or exponential increases in resource consumption. At that time, a wide variety of people tried to warn others about the problems we faced, but they were largely ignored. Between 1973 and today, the world population has doubled, and consumption of natural resources has continued to accelerate. Unfortunately, warnings in the Seventies went unheeded. People don't generally

take a long term perspective. They wait until a crisis develops before they try to figure out how to cope. Today, we are beginning to face up to the crisis. Luckily, there is an extensive literature on the nature of the problem that we can draw on as we try to figure out effective responses.

Currently, we are trying to cope with rising resource prices and rising temperatures. These promise to get worse and are already being compounded by rising food prices, rising water levels, and, ironically, a growing fresh water crisis. Slowly but surely, companies and individuals will have to rethink how we conduct ourselves.

Consider a trivial example: Lots of people are currently complaining about high gasoline prices in the US. At the same time, many of those same people buy bottled water, imported from abroad. San Francisco, where I live, has some of the best water in the world, piped in from a reservoir in the Sierra Nevada Mountains. But when I visit friends for dinner, I am usually offered popular varieties of bottled water from France or from New Zealand. That water costs more per gallon than gasoline currently costs, but my hosts think nothing of it, and the dinner conversation turns, instead, to the high cost of gasoline. One might ask, of course, why the water costs so much. Objectively, the water costs as much as it does because it's relatively heavy, can't be condensed, is bottled in heavy glass containers, and has been shipped half way around the world on ships that are powered by increasingly expensive fossil fuels. I say all of this to suggest that we are only beginning to understand the depth of the crisis we are in. It will take quite a while before most of us begin to adopt more environmentally sound ways of thinking and behaving.

Every process professional will need to learn a lot more about how energy is used in business processes. Similarly, we are also going to have to learn how and where greenhouse gases are generated and what is involved in doing work with less energy or without producing greenhouse gases. The environmental crisis period that we are entering is not going to rely on a single technological solution. It's going to rely on hundreds of different technologies.

Predictably, some executives and many marketers are going to promote solutions that require considerable lead time and significant investments. In the course of the next 40 years we will undoubtedly build a lot of Nuclear Power Plants and will install a lot of equipment for cleaning particulate matter from coal powered plants. It's unclear, however, if all these initiatives will return enough benefits to justify the investment. Moreover, as we are all learning from the synthetic fuels fiasco in the US, the side effects of poor choices can be worse than inaction. Food prices are rising, in part, because the US has begun to use significant amounts of agricultural commodities to generate trivial amounts of auto fuel. This is a prime example of a hasty and ill-conceived effort to solve the current gasoline problem.

Almost every credible study of energy consumption, however, has pointed out how much we can save by simply using less. If every household in the US simply lit one less electric light each night, a large savings would result. If every factory was using new, energy efficient light bulbs we would be saving quite a bit.

McKinsey recently published a study on what could be done to cut greenhouse gas omissions. They focused, particularly, on what could be done quickly and what different alternatives would cost. They

identified some 50 different technologies that could make a difference. Then, they divided them in half and suggested that some should be done immediately because the savings would exceed the cost. Others would require more thought because, at this point, the costs still exceed any projected savings. What's impressive is that about half the technologies McKinsey identified would yield a positive ROI. These are energy saving options that companies can implement today and make money in the process! Basic changes in existing technologies, like using new light bulbs and better insulation can result in savings that generate a positive return on investment. One of the areas McKinsey highlighted was Industrial Process Improvement. Simply making processes more efficient usually provides a net gain. Reducing the time it takes to execute a repetitive process often means less energy is consumed.

Those of us engaged in process redesign and improvement can easily imagine changes that go well beyond industrial process improvement. Metastorm recently published a paper, *Go for the Green*, that looked at how IT operations could be made more efficient. Some of the questions they asked were: How much paper do you consume? How much fuel is wasted on inter-office location mailings and paper mailings? How often do you create new specialized applications to support essentially similar activities? IBM has also offered seminars on how to cut energy costs associated with IT.

Energy has been so cheap for so long that most of us think about saving money while ignoring energy costs. In essence, we are often willing to spend more for energy if the results will save time or please customers. That equation is about to change. We are going to have to face the fact that energy costs money—that anything that generates heat costs

money—and we are going to learn to look at processes with new eyes. Lean taught us to look at processes and see unnecessary waste. Six Sigma taught us to look at processes and see inconsistent outcomes. Reengineering taught us to look at processes and think about how we are using IT resources—and more recently, how effectively we are using information to guide our decisions.

The rising cost of energy is going to teach us to look at processes and see the flow and consumption of energy. With time, we will learn to design processes that use a lot less energy. Every serious process practitioner owes it to him or herself to begin to learn more about how energy is used in processes and how we can design processes that require less energy. BPTrends will do its share by publishing more articles on the relationship between processes, energy and the environment.

Till next time,

Paul Harmon

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