## **Foreword**

Greg Babe<sup>1</sup>

A century ago, Gifford Pinchot – one of the environmental movement's most important early champions – wrote:

The outgrowth of conservation, the inevitable result, is national efficiency. In the great commercial struggle between nations which is eventually to determine the welfare of all, national efficiency will be the deciding factor. So from every point of view conservation is a good thing for the American people.<sup>2</sup>

Pinchot's words were no doubt mystifying to his early 20th-century readers. How could conservation – an important component of what we today call sustainability – promote "efficiency" in the sense of how Frederick Winslow Taylor, the father of industrial efficiency, had popularized the term? Pinchot's ideas about conservation and wilderness preservation must have struck many as far removed, literally and figuratively, from the world of Taylor's time-motion studies on the factory floor.

Indeed, it has taken nearly a hundred years for us to reach the point where we can fully grasp Pinchot's vision of sustainability as part of a broader struggle for worldwide competitiveness in every sense of the word. Today, as businesses work to recover from the biggest recession since the Great Depression, those who look on sustainability, not merely as a management "fad du jour," but as the key to future prosperity, are rapidly gaining a powerful advantage over their domestic and international competition.

Today, the concept of sustainability has matured from the concept of conservation in the 20th century to the concept of stewardship in all its forms – social, economic, and environmental. True sustainability involves applying systems thinking to anticipate unintended consequences that can occur when the entire system is not taken into account.

In this book, Chris Laszlo and Nadya Zhexembayeva offer a practical guide to the power and necessity of weaving sustainability into the DNA of an organization. They show how, over the years, three once-distinct trends – declining natural resources, increasing transparency of business practices, and a rising tide of social and commercial expectations – have converged to make sustainability the most urgent issue of the contemporary business agenda. In this sense, they are heirs to the legacy of Pinchot and Taylor. But they bring to their cause, a century later, an even greater sense of urgency.

Professors Laszlo and Zhexembayeva well understand that embedding sustainability into the corporate culture – which is to say, into the hearts and minds of employees, customers, suppliers, shareholders, and other stakeholders – represents a long and difficult journey. And while our sustainability journey at Bayer in North America is far from over, we have already learned much along the way. Those lessons can be summarized in three words: awareness, involvement, and innovation.

Awareness. Companies must begin their change journey by recognizing that reputation is their biggest asset or their biggest potential liability. Companies who fail to adhere to sustainability thinking and principles – everywhere and always – can garner, practically overnight, negative media attention, lost stakeholder trust, and enormous unplanned costs. BP's disaster in the Gulf of Mexico is the most recent and costly example of this phenomenon, but it is far from the only one. As the authors argue, "Managing sustainability-related business risks is not so much about value creation as it is about avoiding its destruction" (page 61). It's an important point.

Bayer has launched an employee education program to advance sustainability throughout the corporation. It's called STEP – for Sustainability Thinking Education Program. Chris Laszlo was instrumental in designing STEP and preparing Bayer executives for the key leadership role they must play in making the program a success.

**Involvement**. Beyond awareness, embedding sustainability means mobilizing the active involvement, not just of employees, but of all stakeholders in the adoption of sustainable business practices. The authors cite the example of Australia's Yellow Tail wines, which "raised the retail store involvement relative to table wines" (page 85), creating in the process a product almost beyond category. As of this writing, Yellow Tail is the best selling wine in the United States, outselling all French producers combined. Sustainability is embedded in Yellow Tail's brand image, which includes recycling all irrigation water, cardboard, plastic, and glass. And the involvement of both employees and consumers in its sustainability efforts is one of the keys to the company's success.

Similarly, a patent-pending idea by a Bayer employee trained in process control led to a decrease in greenhouse gas emissions equivalent to 13,000

metric tons of carbon a year. That single change will save our company some \$2 million in operating costs annually.

Innovation. As we increase organizational awareness of sustainability and engage our stakeholders in our vision, we find that we also unlock the power of company-wide innovation. At Bayer MaterialScience, that has led, for example, to innovative products for retrofitting buildings to make them more energy-efficient and to combat one of the bigger sources of greenhouse gas emissions in North America. In our CropScience group, we have developed seed treatment technology to help growers produce more output per acre of land without extra steps. Producing more per acre equates to using fewer natural resources such as water and arable land to feed a growing population. Our HealthCare group has likewise developed such innovative products as the Contour USB meter for patients on insulin therapy. Helping them better manage their disease over a lifetime means not only a better quality of life for the individual but lower costs to society as a whole.

The journey to embedded sustainability isn't one that can be traversed over a matter of several quarters or even several years. But ideas that underlie it have evolved to the point where we can fully grasp and employ them to transform both business and society.

Likewise, the meaning of sustainability itself will continue to unfold over time As Gifford Pinchot wrote:

> While at first conservation was supposed to apply only to forests, we see now that its sweep extends even beyond the natural resources . . . I recall very well indeed how, in the early days of forest fires, they were considered simply and solely as acts of God, against which any opposition was hopeless and any attempt to control them not merely hopeless but childish. It was assumed that they came in the natural order of things, as inevitably as the seasons or the rising and setting of the sun. Today we understand that forest fires are wholly within the control of men. So we are coming in like manner to understand that the prevention of waste in all other directions is a simple matter of good business. The first duty of the human race is to control the earth it lives upon.<sup>3</sup>

The time has come for business to understand that duty and, what is more important, to act on it.

> Greg Babe President and Chief Executive Officer Bayer Corporation and Bayer MaterialScience LLC

## **Foreword**

## Andrew L Hoffman<sup>4</sup>

This book recognizes one overriding reality: sustainability represents a market shift. The simple fact is that you can be completely agnostic about the science of many environmental issues such as climate change and still see them as business issues, ones that will alter the market environment.

Consider the issue of climate change; companies will find that their raw material and energy costs will go up as government sets policies to reduce greenhouse gas emissions (whether a price for carbon; fuel economy, appliance or building standards; renewable portfolio standards; subsidies for renewable energy sources or simply regulating  $\mathrm{CO}_2$  as a pollutant). In addition, consumers are becoming more aware of energy conservation, investors are starting to get excited about investment potential of renewables, and new college graduates are looking more carefully at a company's values (environmental and otherwise) before accepting a job. Jeffrey Immelt freely admits that his company's Ecomagination initiative has vastly improved GE's ability to attract and retain the best candidates. And with the reframing of the climate change issue as a market shift, it becomes an issue of straight business strategy.

Market shifts create winners and losers; and companies must innovate to survive. They must divest some businesses, acquire others, and alter the ones they keep. The question "does it pay to be green?" becomes nonsensical. It is the same as asking "does it pay to innovate?" The answer depends on who does it, when they do it, and how they do it. As this book explains, to answer these questions, the business executive must put aside "green" considerations and concentrate on business fundamentals. And so, when it comes to "green" jobs, we are talking about new demographics and skill sets in the face of new competitive realities. When we talk of "green-tech" we are talking about new

innovation and investment opportunities. And when we talk of "green buildings" we are talking about buildings that use improved technologies that lead to lower operating costs and more productive workforces.

But the problem is that green is presently everywhere! For many companies, it has become a fad without much substance behind it. "Green jobs;" "Green-tech"; "Green buildings"; and on it goes! CSX boasts of the greenness of train hauling; IBM touts its green mainframe computers; trucking companies are pushing for tandem trailers as a way to reduce greenhouse gas emissions. Like the broader term "sustainability," everyone is jumping on the "green" bandwagon and using the term ad nauseam. For many, the term "green" is becoming too undefined, ambiguous, and universal. And for others, the term is like waiving a red flag in front of a bull, yielding resistance and outright antagonism. For example, Christian Evangelicals who have begun to engage climate change as a moral issue are loath to call themselves "environmentalists," which they see as synonymous with a left-leaning, liberal agenda: one that in their minds elevates nature over humans and disrespects property rights to protect it. Instead, they call themselves "caring creationists." Similarly, in the area of green architecture, surveys have found that many consumers and business executives will answer "no" when asked if they want a "green building," but answer "yes" when asked if they want a hyper-efficient building or smart building. And concern over mainstreaming goes beyond semantics. In 2009, the New York Times pointed out that, in the same home improvement store, one can buy a plastic-handled paint brush that is "green" because it does not use trees to make the handle. In the next bin, you can buy a wooden-handled paintbrush that is "green" because the handle is not made from fossil fuels.

This can only breed confusion, cynicism, and contempt, both in the general public and in the corporate sector. The problem became vivid for me in 2008 when I was talking with an auto industry executive (before the fiscal crisis hit the industry). He told me that the hybrid market was a temporary blip because it made no economic sense. His logic ran that, once consumers realized that they will never recoup their initial investment in the hybrid drive train through gas savings, they will stop buying them.

I countered that the psychology of buying a hybrid car was no different than that of buying other cars. It was tied to a personal decision-making process; it wasn't merely an economic choice. On that count, I told him, he should see very little difference between his company selling a hybrid to someone who wants to project his or her environmental values and selling a Corvette to a middle-aged guy who wants to pick up chicks. He smiled, but I sensed I was not getting past his resistance that this whole green thing was just a liberal fad, soon to die. As is now obvious, he was wrong.

The problem is that the continual drum beat of "green" perpetuates the kind of resistance that this experience illustrates. Certainly the Detroit auto sector would be better off right now had it invested more in energy-efficient autos (not ignoring other issues such as health care and legacy costs). But in seeing hybrids as merely an "irrational" blip of the moment that is driven by a social and nonbusiness agenda, auto executives could not see the market shift coming. It is reminiscent of Thomas Watson, CEO of IBM, famously predicting "a world market for maybe five computers"; or H.M. Warner, CEO of Warner Brothers, asking "Who the hell wants to hear actors talk?" For their own particular reasons, these legendary business leaders could not see the market shift in their midst.

Today, we are in the midst of such a transition: what I believe future generations will look back on as an energy renaissance. So, rather than talking of "green" jobs, tech or building, we need to talk of the next generation of innovations in each of these sectors. This is not an issue of "corporate social responsibility." This is an issue of market economics and business strategy. In the end, as green becomes more mainstream, it becomes less "green." When Clorox introduces its new line of Green Works<sup>TM</sup> cleaners, GE develops wind turbines under its Ecomagination program, Toyota develops its Hybrid Synergy Drive train, or Matsushita increases lithium-ion battery production, these are not examples of "green" products; they are examples of companies attacking new and profitable market segments and hastening the market shift under way. "Green" goes away. I can see it in my MBA classes on environmental strategy: no longer is this the domain of a fringe group of socially minded students. Attendance has exploded with the entry of mainstream business students who see environmental issues as critical to the corporate success and that of their careers. It is just becoming the way we do business. That is the overriding message of this book.

> Andrew J. Hoffman Holcim (U.S.) Professor of Sustainable Enterprise University of Michigan Ann Arbor, Michigan