



## *Innovations in Sustainability*

To what extent can competition between companies encourage innovations in sustainability that have the potential to solve some of the world's major challenges? Using a series of case studies, this book pits closely related competitors against each other to examine the progress in and obstacles to the evolution of sustainable innovations in energy efficiency, solar power, electric vehicles and hybrids, wind energy, healthy eating, and agricultural productivity. It delves into the efforts of Tesla Motors to bring about a revolution in personal transportation, and the challenges Toyota and General Motors (GM) confront in commercializing hybrids. It explores the movement to healthy food by cereal companies General Mills and Kellogg's, and depicts the battles between Whole Foods and Walmart for the world's palate. By examining the experiences that particular businesses have had with sustainable innovation, this insightful book reflects upon lessons learned and encourages readers to think carefully about the challenges that lie ahead.

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The increasing attention given to environmental protection issues has resulted in a growing demand for high-quality, actionable research on sustainability and business environmental management. This new series, published in conjunction with the Group for Research on Organizations and the Natural Environment (GRONEN), presents students, academics, managers, and policy-makers with the latest thinking on key topics influencing business practice today.

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# Innovations in Sustainability

Fuel and Food

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*For Judy,  
ahavat Lebi and ezer cenegdi*

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## *Foreword*

The relationship between business and the environment has become extremely popular. Amazon lists 22,500 books under the heading “sustainable management” and 80,000 titles under “environmental management.” There are of course many reasons why so many books on these topics are being published. One is that many firms are finding themselves under substantial pressures from government, consumers, employees, and the general public to improve their environmental performance. They want and need guidance as to how to accomplish this – information that such books provide.

A second reason is that a growing number of executives and investors have become persuaded that there are substantial business opportunities associated with becoming more sustainable. The very term “sustainable management” represents an effort to link improved environmental performance with long-term growth and profitability. Thus a “sustainable company” is one that has successfully managed its long-term ecological impact in a way that also assures its future financial viability, with the two goals reinforcing one another.

The claim that becoming “greener” can make a firm more profitable dominates writing on sustainable management. What makes this claim credible is that many firms have financially benefited by becoming more sustainable. As this book demonstrates, venture capital firms have prospered by investing in clean energy, investments in solar and wind power have proven profitable, there is a market for more fuel-efficient vehicles and other environmentally friendly consumer products, and many consumers want to purchase healthier food.

The stories of such business successes are certainly inspiring. But what is less clear is what lessons they have to teach. For by only highlighting “win–win” stories, the literature on sustainable management often winds up making it look too easy – just because some firms have made profitable green innovations does not mean that other firms

can successfully do so. Equally important, focusing on green business successes overlooks the equally valuable business lessons from firms whose green innovations have proven disappointing.

What makes *Innovations in Sustainability* a truly innovative book is Alfred Marcus's ability to integrate his extensive knowledge of sustainable management with a sophisticated understanding of corporate strategy. As he notes in his introduction, green innovations are most usefully understood as a strategic choice. Like any corporate strategy, they involve uncertainty, or predictions about the future that may or may not prove valid. This is especially true to the extent that their successful achievement often depends on favorable public policies.

The case studies in this book are not only exhaustively researched, but they place each of the firms whose experiences they describe in a broader context. Marcus' detailed case studies enable us to clearly understand the several choices each of these firms made over time, how they affected one another, and what they have and have not accomplished – both financially and environmentally. They clearly demonstrate why the path to sustainability is so challenging and complex – in essence no different than any other corporate strategy.

By ending each chapter with a series of questions that highlight the strategic choices that now confront each firm, Marcus reminds us that sustainable business objectives are never achieved. Rather they represent an ongoing challenge; the path to profitable sustainability is an endless one. Just because a firm has succeeded in financially benefitting from green innovations in sustainability in the past or present does not mean that it will also be able to do so in the future.

Another feature that distinguishes this book from other studies of “green” business is its sophisticated recognition of the importance of the competitive context. By organizing its chapters in a way that pairs each company with a similar or comparable one, Marcus reminds us that green business strategies do not occur in a vacuum. A sustainable company must not only succeed on its own terms: its success often requires it to be *better* than its competitors. Students of business strategy understand this, but too many of those who write about successful green business strategies do not.

*Innovations in Sustainability* covers an enormous amount of ground; while it is organized around individual firms, few dimensions of current

environmental concerns fall outside its scope. It makes fascinating reading and represents an original and much needed contribution to our understanding of the challenges facing sustainable innovations.

*David Vogel*  
*University of California, Berkeley, CA*

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I thank J. Alberto Aragon-Correa and Jorge Rivera, editors of this series, who urged me to write this book and Cambridge University Press' anonymous reviewers for their input. In studying sustainability and sustainable innovation my primary inspiration comes from the co-authors of the academic papers with whom I have been recently working: Ari Ginsberg of NYU, Adam Fremeth from the Ivey School, Mazhar Islam at Drexel, Joel Malen at Hitotsubashi University Institute of Innovation Research, Sue Cohen at the University of Pittsburgh Katz School, and Shmuel Ellis and Israel Drori at the Tel Aviv University Business School.

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As a past chairperson of the Organizations and Natural Environment Division of the Academy of Management, I owe the division a great deal. I also have been a regular attendee of the Group for Organizations and the Natural Environment meetings. I believe that it was at a session in the South of France that the prospect that I might write this book first gained traction. The organizations and natural environment community has expanded greatly over the years and if I have forgotten to mention anyone please forgive me.

The *California Management Review* and the journal *Organizations and the Natural Environment* are where some of the ideas found in chapters of this book first appeared. I wrote earlier cases on Pepsi, Coca-Cola, Monsanto, DuPont, and Walmart that appeared in *Winning Moves*, a book published by Marsh Press. Libby Rubinstein, a long time editor at McGraw-Hill, who ran Marsh Press, deserves some of the credit for my understanding of these companies.

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*Acknowledgments*

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