

REPORT

The Business of Sustainability

Imperatives, Advantages, and Actions



THE BOSTON CONSULTING GROUP

This report is published by The Boston Consulting Group and reflects our collaboration with *MIT Sloan Management Review* on the Sustainability Initiative, a joint undertaking with the objective of determining how the challenges and opportunities presented by sustainability will transform management in the twenty-first century.

The Boston Consulting Group (BCG) is a global management consulting firm and the world's leading advisor on business strategy. We partner with clients in all sectors and regions to identify their highest-value opportunities, address their most critical challenges, and transform their businesses. Our customized approach combines deep insight into the dynamics of companies and markets with close collaboration at all levels of the client organization. This ensures that our clients achieve sustainable competitive advantage, build more capable organizations, and secure lasting results. Founded in 1963, BCG is a private company with 66 offices in 38 countries. For more information, please visit www.bcg.com.

MIT Sloan Management Review is a Web site and print magazine published by the MIT Sloan School of Management. Its mission is to host the conversation among thinkers, professors, and managers about the future of management practice. *MIT Sloan Management Review* captures the creativity, excitement, and opportunity created by rapid societal, economic, and technological change, and brings this insight home to thoughtful managers.

The Business of Sustainability

Imperatives, Advantages, and Actions

Maurice Berns

Andrew Townend

Zayna Khayat

Balu Balagopal

Martin Reeves

Michael Hopkins

Nina Kruschwitz

September 2009

© The Boston Consulting Group, Inc. 2009. All rights reserved.

For information or permission to reprint, please contact BCG at:

E-mail: bcg-info@bcg.com

Fax: +1 617 850 3901, attention BCG/Permissions

Mail: BCG/Permissions

The Boston Consulting Group, Inc.

One Beacon Street

Boston, MA 02108

USA



Contents

Preface	4
Executive Summary	5
Survey and Interview Findings	7
The Consensus: Sustainability Matters	7
Sustainability Is Not a “Topic du Jour”	7
Opinions Differ on Certain Aspects of Sustainability	8
Some Companies Are Acting Decisively and Winning	12
Many Companies Are Moving Slowly or Struggling with Execution	12
Challenges to Decisive—and Effective—Corporate Action	14
Three Major Barriers Impede Decisive Corporate Action	14
Necessary Capabilities	18
Looking Ahead: Seizing Opportunities and Mitigating Risks	20
Lessons from Leading Companies	20
Peering over the Horizon	21
Appendix I: Methodology for the Sustainability Survey and Interviews	23
Appendix II: The Sustainability Audit	24
Appendix III: Thought Leader Interviewees	27
For Further Reading	31
Note to the Reader	32



Preface

Sustainability is garnering ever-greater public attention and debate. The subject ranks high on the legislative agendas of most governments; media coverage of the topic has proliferated; and sustainability issues are of increasing concern to ordinary citizens around the world.

However, the business implications of sustainability merit greater scrutiny. Will sustainability change the competitive landscape and reshape the opportunities and threats that companies face? If so, how? How worried are executives and other stakeholders about the impact of sustainability efforts on the corporate bottom line? What—if anything—are companies doing *now* to capitalize on sustainability-driven challenges? And what strategies are they pursuing to position themselves competitively for the future?

To begin answering these questions, The Boston Consulting Group and *MIT Sloan Management Review* are collaborating on a project called the Sustainability Initiative. As part of that effort, we recently launched a global survey of more than 1,500 corporate executives and managers about their perspectives on the intersection of sustainability and business strategy.¹ (We plan to make this an annual survey.) We separately conducted more than 50 in-depth interviews with a broad mix of global thought leaders. Our interviewees included executives whose companies are at the cutting edge of sustainability (including General Electric, Unilever, Nike, Royal Dutch Shell, and BP) and experts from a range of disciplines such as energy science, civil engineering, and management. The insights of both the survey respondents and the thought leader group yielded a fascinating glimpse of sustainability's current position on the corporate agenda—and where the topic may be headed in the future.

This report presents high-level findings from the survey responses and thought leader interviews and offers interpretation and analysis of the results, along with a diagnostic tool to help companies assess where they stand with their own sustainability efforts. We hope to provide executives food for thought as they consider how—or whether—they can take their sustainability efforts to the next level.

For more about this work in sustainability, including detailed results from the survey, please see the online exploration at *MIT Sloan Management Review's* Sustainability Initiative Web site, <http://sloanreview.mit.edu/busofsustainability/>.

About the Authors

Maurice Berns is a partner and managing director in the London office of The Boston Consulting Group. **Andrew Townend** is a principal in the firm's Dallas office. **Zayna Khayat** is a principal in BCG's Toronto office. **Balu Balagopal** is a senior partner and managing director in the firm's Houston office. **Martin Reeves** is a senior partner and managing director in BCG's New York office and leads the firm's Strategy Institute.

Michael Hopkins is the editor in chief of *MIT Sloan Management Review*. **Nina Kruschwitz** is the sustainability editor.

1. We received an additional 462 survey responses from academics, government officials, executives of nonprofits, and others. The data and analysis in this report reflect the survey responses from 1,560 business leaders. For more information on the survey methodology, please see Appendix I.



Executive Summary

There is a strong consensus that sustainability is having—and will continue to have—a material impact on how companies think and act.

- ◇ Ninety-two percent of survey respondents said that their company was addressing sustainability in some way.
- ◇ There was also a strong consensus that the underlying drivers of sustainability are highly complex, interrelated, and lasting, and that the corporate sector will play a key role in solving the long-term global issues related to sustainability.

Sustainability is surviving the downturn.

- ◇ Fewer than 25 percent of survey respondents said that their company had decreased its commitment to sustainability during the downturn.
- ◇ Respondents in some segments, such as the automotive industry and the media and entertainment industry, reported an *increased* company commitment to sustainability relative to the average.

Although almost all the executives in the survey thought that sustainability would have an impact on their business and were trying to address this topic, the majority also said that their companies were not acting decisively to fully exploit the opportunities and mitigate the risks that sustainability presents.

- ◇ The majority of sustainability actions undertaken to date appear to be limited to those necessary to meet regulatory requirements.

- ◇ More than 70 percent of survey respondents said that their company has not developed a clear business case for sustainability.

A small number of companies, however, are acting aggressively on sustainability—and reaping substantial rewards.

- ◇ Once companies begin to pursue sustainability initiatives in earnest, they tend to unearth opportunities to reduce costs, create new revenue streams, and develop more innovative business models.
- ◇ The early movers' approaches have several key characteristics in common: they incorporate a comprehensive set of data into a robust business case, which they then integrate throughout all relevant aspects of their operations to deliver measurable financial results.

Thought leaders and survey respondents with experience in sustainability interpreted sustainability concerns (and their management implications) far more broadly than did survey respondents lacking such experience. This understanding can open sometimes surprising opportunities for capturing advantage.

- ◇ While sustainability's novice practitioners thought of the topic mostly in environmental and regulatory terms, with any benefits stemming chiefly from brand or image enhancement, practitioners with more knowledge about sustainability expanded the definition for sustainability well outside the "green" silo. They tended to consider the economic, social, and even political impacts of sustainability-related changes in the business landscape. Simply put, they saw sustainability as an integral part of value creation.

- ◇ Self-identified experts in sustainability believed more strongly in the importance of engaging with suppliers across the value chain. Sixty-two percent of these respondents considered it necessary to hold suppliers to specific sustainability criteria; only 25 percent of novices felt the same way.
- ◇ There was a high correlation between the depth of a business leader's experience with sustainability and the drivers and benefits that he or she perceived. For example, 68 percent of business leaders with sustainability expertise cited improved financial returns as a benefit from their organization's investments in sustainability initiatives, compared with only 32 percent of novices. This suggests that the more people know about sustainability, the more thoughtfully they evaluate it and the more opportunity they see in it—and the more they think it matters to how companies manage themselves and compete.

According to survey respondents, the biggest drivers of corporate sustainability investments—that is, the forces that are having the greatest impact on companies—are government legislation, consumer concerns, and employee interest in sustainability.

- ◇ Government legislation was cited as the principal driver of sustainability efforts by nearly all the industries we analyzed—with the exception of agriculture, mining, and water companies, which cited concerns about environmental pollution, and companies in both the media and entertainment industry and the technology and telecommunications industry, which identified global political security as being of greatest concern.

- ◇ Consumer concerns were viewed as a relatively more critical force in sustainability among companies based outside the United States and Europe.

Sustainability will become increasingly important to business strategy and management over time, and the risks of failing to act decisively are growing.

- ◇ Our research indicates that companies need to develop a better understanding of the implications of sustainability for their business—and that the companies already doing so are seeing significant benefits.
- ◇ Companies will need to develop new capabilities and characteristics, including the ability to operate on a systemwide basis and collaborate across internal and external boundaries; a culture that rewards and encourages long-term thinking; capabilities in the areas of activity measurement, process redesign, and financial modeling and reporting; and skills in engaging and communicating with external stakeholders.



Survey and Interview Findings

First and foremost, our survey revealed that there is no single, established definition for sustainability. Companies view it in myriad ways—some focusing solely on environmental impact, others incorporating the numerous economic, societal, and political implications. Yet while companies may differ in how they define sustainability, our research indicates that they are virtually united in the view that sustainability, however defined, is and will be a major force to be reckoned with—and one that will have a determining impact on the way their businesses think, act, manage, and compete.²

I think that the world has reached a tipping point now. We're beyond the debates over whether [addressing sustainability] is something that needs to be done or not—it's now mostly about how we do it. And from the perspective of ecomagination, it's not about altruism, it's about creating value.

—Steve Fludder, vice president, ecomagination,
General Electric

The Consensus: Sustainability Matters

Indeed, the overwhelming majority of the respondents in the corporate survey group—as well as nearly all the corporate executives interviewed in the thought leader group—told us that sustainability-related issues are having or will soon have a material impact on their business. For example, 92 percent of the survey respondents told us that their company was already addressing sustainability in some way. Furthermore, there was a strong consensus that the underlying drivers of sustainability are highly complex, interrelated, and lasting, and that the corporate sector will play a key role in solving the long-term global issues related to sustainability.

In the last year or two, everything has changed. People are starting to suspect that these are really strategic issues that will shape the future of our businesses. The specifics are different depending on industry and context, but we're in the beginning of a historic wake-up.

—Peter Senge, senior lecturer, MIT Sloan School of Management; founding chair, Society for Organizational Learning

Sustainability Is Not a “Topic du Jour”

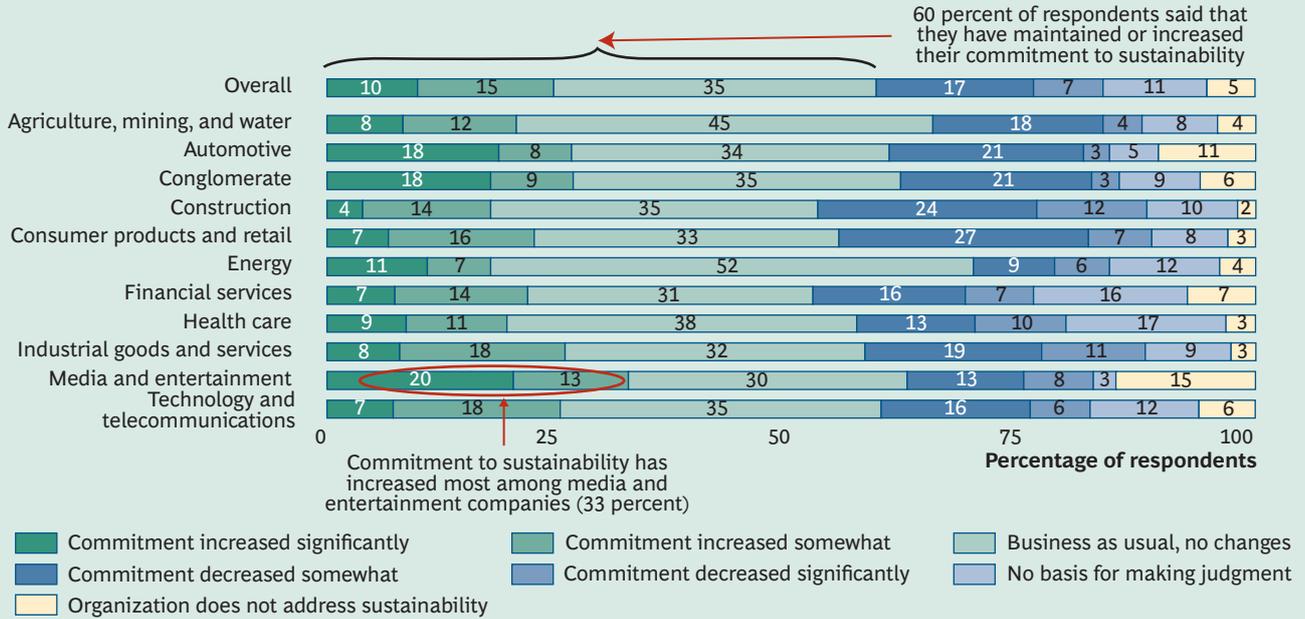
A good indication that sustainability is here to stay is the fact that fewer than one-fourth of the survey respondents told us that their companies have pulled back on their commitment to sustainability during the downturn. (See Exhibit 1.) In fact, respondents in some segments, such as the automotive industry and the media and entertainment industry, reported an *increased* company commitment to sustainability relative to the average.

A number of corporate executives in the thought leader group also shared their belief that the downturn has accelerated a shift toward a greater corporate focus on sustainability—particularly toward sustainability-related actions that have an immediate impact on the bottom line. At the same time, several respondents in the corporate survey group lamented having to meet higher-than-normal criteria for sustainability investments. They told us that the current financial environment has made it increasingly difficult to maintain investments—not only in sustainability but also more fundamentally in the business—because of limited access to capital.

² For a discussion of the many ways in which companies are defining sustainability, see the Sustainability Initiative Web site.

Exhibit 1. At Respondents' Companies, the Downturn Has Had Little Effect on the Commitment to Sustainability

How has the current economic downturn affected your organization's commitment to addressing sustainability issues?



Source: The Sustainability Initiative 2009 Survey, BCG and MIT Sloan Management Review.

Note: Data reflect 1,560 responses from business leaders; because of rounding, the percentages for some industries do not total to 100 percent.

The issue we have this year is this: how do you continue to make progress without the capital that you've had in the past?

—William O'Rourke, vice president of sustainability and environment, health, and safety, Alcoa

Opinions Differ on Certain Aspects of Sustainability

Although the points above reflect a strong convergence of views on the overarching question of sustainability's impact on business, significant divergence in opinion arose regarding particular aspects of sustainability. We highlight some of the most noteworthy differences below.

Self-identified sustainability experts viewed the topic differently from those who considered themselves novices in the area. We asked respondents in the corporate survey group to rate their experience with sustainability by classifying themselves as either sustainability experts, individuals with some experience, or novices. In

a number of cases, the perspectives held by these three groups were at odds.

- Experts defined sustainability more comprehensively than novices did. While a significant proportion (40 percent) of novices defined sustainability simply as "maintaining business viability," nearly two-thirds (64 percent) of experts used one of two widely accepted definitions: the so-called Brundtland Commission definition or the Triple Bottom Line definition, both of which incorporate economic, environmental, and social considerations.³
- Whereas 50 percent of the experts we surveyed said that their company had a compelling business case for

3. The Brundtland Commission wrote in its 1987 report, *Our Common Future*, that "sustainable development seeks to meet the needs and aspirations of the present without compromising the ability to meet those of the future." The Triple Bottom Line, also known as "people, planet, profit," is a term coined by John Elkington in 1994. It expands traditional financial-reporting frameworks to include ecological and social performance.

sustainability, only 10 percent of the novices we surveyed said the same. Further, when asked about the logic underlying their organization’s investments (or lack thereof) in sustainability initiatives, 68 percent of experts cited improved financial returns, compared with only 32 percent of novices.

- ◇ Experts believed more strongly in the importance of engaging with suppliers across the value chain. Sixty-two percent of the experts surveyed considered it necessary to hold suppliers to specific sustainability criteria; only 25 percent of surveyed novices felt the same way.

The more people know about sustainability, the more opportunity they see in it.

It is noteworthy that surveyed experts’ views on the points above were largely consistent with those of the corporate executives in the thought leader group, with experience being the common denominator between the groups. Simply put, we conclude that the more people know about sustainability, the more thoughtfully they evaluate it and the more opportunity they see in it—and the more they think it matters to how companies position themselves and operate.

The essence of environmental strategy is to make it an issue for your competitor, not for your own company...because you’ve already made sustainability an integral part of your business.

—Amory Lovins, chairman and chief scientist, Rocky Mountain Institute

All the benefits of sustainability are only possible if you tackle the issues on the supply chain. If you don’t, it’s greenwashing.

—Dierk Peters, director, World Wildlife Fund Sustainable Seafood Initiative

Overall, the opinions of the respondents in the corporate survey group were different from those of the thought leaders we interviewed. Perhaps because of their comparatively greater experience with sustainability, the thought leaders’ views on several aspects of sustainability diverged from those of the survey respondents—particularly with regard to the topic’s drivers and benefits. The main points of contention included the following:

- ◇ *Government Legislation.* Overall, respondents in the corporate survey group deemed government legislation to

be the sustainability-related issue with the greatest impact on their business. (See Exhibit 2.) Sixty-seven percent said that this issue had a significant impact on how their organization was approaching sustainability.⁴ By contrast, the thought leader group placed far less emphasis on government legislation as a driving force in sustainability. Further, many of the thought leaders we interviewed cited instances in which companies had played a role in *shaping* the regulatory framework rather than simply reacting to it. (For more about one company that actively shapes the regulatory environment and partners with government and other stakeholders, see the sidebar “Better Place: Enabling the Global Transition to Electric Vehicles.”)

- ◇ *Consumer Concerns.* Fifty-eight percent of respondents in the corporate survey group cited consumer concerns as having a significant impact on their companies.⁵ By contrast, although interviewees in the thought leader group acknowledged that consumer awareness is a reality that businesses must confront, they cited other drivers—such as climate change and other ecological forces—as more pressing.
- ◇ *Employee Interest.* Rounding out the top three drivers was employee interest in sustainability; 56 percent of respondents in the corporate survey group selected it as an issue having a significant impact on their company.⁶ Yet among the thought leader group, employee interest was deemed to be a far less significant issue. Corporate interviewees in this group, however, consis-

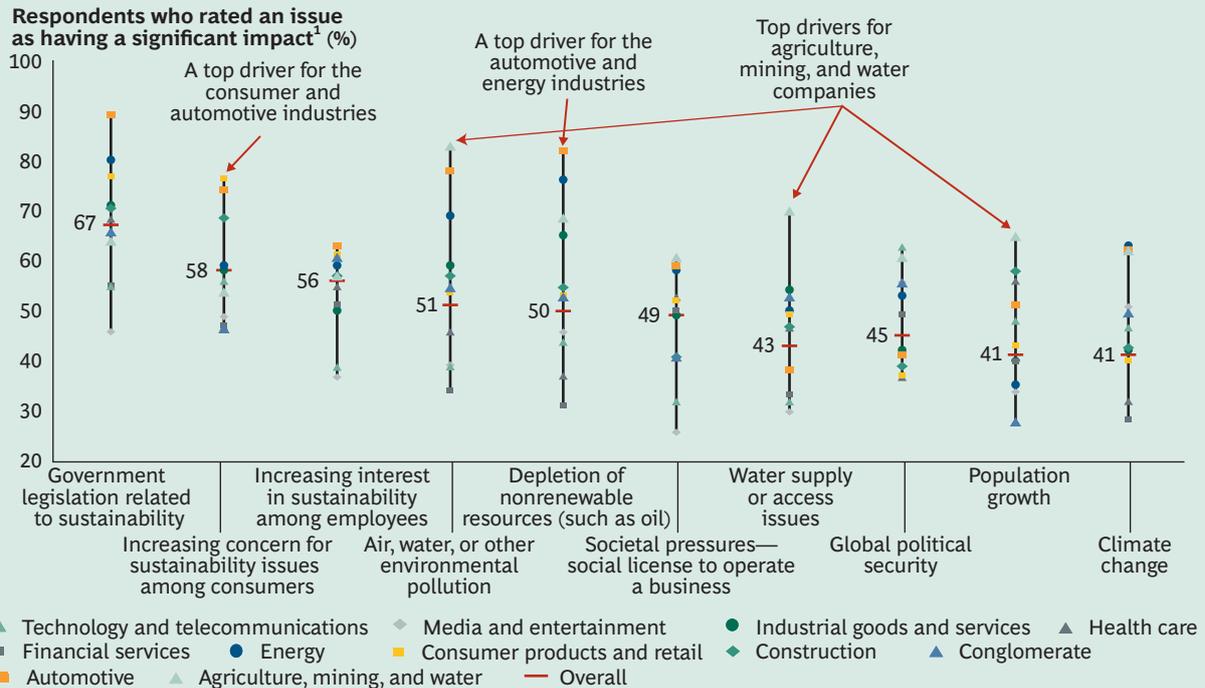
4. When we examined sustainability drivers by industry, we found that government legislation also led among nearly all the industries we analyzed, with a few exceptions. Survey respondents from agriculture, mining, and water companies cited environmental pollution as the issue having the greatest impact; for the media and entertainment industry and the technology and telecommunications industry, respondents identified global political security as having the greatest impact.

5. Consumer concerns were viewed as a relatively more critical force in sustainability among companies based outside the United States and Europe. In Australia and New Zealand, Africa and the Middle East, and Latin America, 73 percent, 68 percent, and 67 percent of survey respondents, respectively, identified consumer concerns as an issue having a significant impact on their company.

6. The topic was markedly more significant to respondents from Africa and the Middle East (where it was cited by 70 percent of respondents) and Australia and New Zealand (where 76 percent of respondents cited it, deeming it the region’s top driver overall).

Exhibit 2. Companies Are Influenced by a Wide Range of Sustainability-Related Issues

How much impact will the following sustainability-related issues have on your organization?



Source: The Sustainability Initiative 2009 Survey, BCG and MIT Sloan Management Review.

Note: Data reflect 1,560 responses from business leaders.

¹ Respondents were asked to rate the issues on a scale of 1 (no impact) to 5 (major impact); this exhibit reflects the percentage of respondents who rated each issue with a 4 or 5.

Better Place

Enabling the Global Transition to Electric Vehicles

No one ever catches the back of the wave and reaches the shore. You must start paddling before the wave comes in.

—Shai Agassi, founder and CEO, Better Place

Better Place is one of the world's leading suppliers of services to the electric-vehicle industry. Founder and CEO Shai Agassi launched the company in 2007. Agassi envisions Better Place as a key part of the solution to the environmental and other problems generated by fossil-fueled vehicles.

The company has operations in Australia, Canada, Denmark, Israel, Japan, and the United States—countries chosen for having government policies that support the adoption of electric vehicles and relatively strong con-

sumer demand for such vehicles. Better Place has made particularly impressive inroads in Australia, Denmark, and Israel and has established itself as a bona fide driver and shaper of progress and policy. In Israel, for example, the company has formed a partnership with the Renault-Nissan Alliance and the government of Israel to advance the adoption of electric vehicles. There, the government has committed to developing an infrastructure that supports electric vehicles, and Better Place will play a lead role in developing that infrastructure.

By identifying and seizing promising opportunities and forming strong partnerships with stakeholders, Better Place is both accomplishing its mission of advancing the global adoption of electric vehicles and positioning itself as a primary beneficiary of that growth.

tently cited enhanced recruitment, retention, and engagement—among other employee-related issues—as major benefits of addressing sustainability.

People (in our company) are thrilled when they feel that they can be part of the solution.

—Chris Page, director of climate and energy strategy, Yahoo!

I think that the first reward is around the ability to attract and motivate the very best people. It is extraordinary how attractive BP's alternative-energy business is for people coming into the company. And where—certainly up until very, very recently—many good graduates would not consider a career in the oil industry, they will consider a career in an alternative-energy business, even if it is inside an oil company.

—Vivienne Cox, former executive vice president, BP; former chief executive officer, BP Alternative Energy

By a wide margin, respondents in the corporate survey group identified the impact on a company's image and brand as the principal benefit of addressing sustainability. (See Exhibit 3.) But corporate executives in the thought leader group rarely cited this factor (or else they described it as a second-order benefit), emphasizing instead

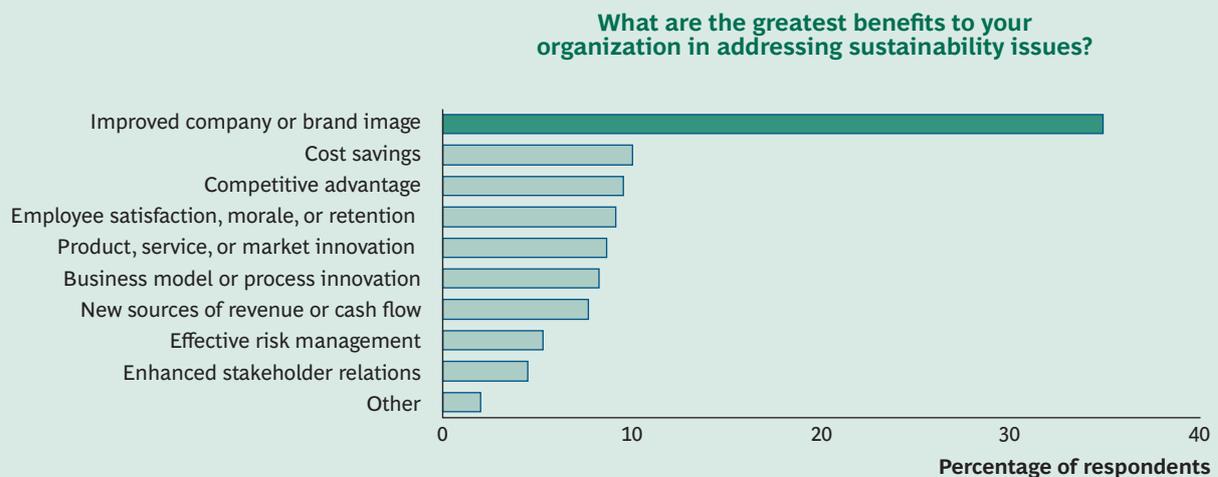
a broad continuum of rewards that were grounded more in value creation—particularly sustainability's potential to deliver new sources of competitive advantage. Several thought leaders offered other provocative ideas about the potential benefits of addressing sustainability. For example, some suggested that leadership in sustainability might be viewed as a proxy for management quality.

A small core of skeptics did not share the views espoused by the majority of the respondents in the corporate survey group. Most survey respondents were convinced that sustainability is currently relevant to their companies. But depending on the questions asked, approximately 5 to 10 percent of the survey respondents expressed doubts.⁷ Those doubts were centered largely on the following three basic arguments:

- ◇ *Sustainability issues are not real or material.* “All groups talk about the issue, but solely from a politically correct viewpoint,” said an executive at a midsize multinational company. “Behind the sustainability ‘chatter,’ no one is willing to take any action or invest any time in the matter.”

7. This percentage may underrepresent the number of skeptics and critics in the market since there could be an inherent self-selection bias among survey respondents. That is, those who took the time to respond to our survey may be more likely to believe that sustainability is having or can have an impact.

Exhibit 3. Respondents Cited—by a Wide Margin—an Improved Image as the Principal Benefit of Addressing Sustainability



Source: The Sustainability Initiative 2009 Survey, BCG and MIT Sloan Management Review.

Note: Data reflect the top-ranked responses from the 1,560 business leaders who participated in our survey.

- ◇ *Business does not have a role, in general, in addressing sustainability issues.* The chairman of a Latin American consumer-retail company told us, “My only objective is [a high] return on equity, and I hope that the CEOs who manage the companies in which I invest my savings reason just as I do.”
- ◇ *Sustainability presents no material opportunities (or threats) to the company.* Another argument we heard was that even if sustainability presents opportunities or threats, they are minor—particularly when compared with those related to other investments that companies could make. An executive at a European financial-services company explained simply, “Sustainability has no impact on our business.”

These views may reflect legitimate doubts; they may also reflect a misunderstanding or misinterpretation of sustainability. For example, we have met with several companies that voice many of the arguments listed above—but that are nonetheless redesigning and repositioning their products to have a lighter environmental footprint because it “makes good business sense.”

Some Companies Are Acting Decisively and Winning

While the vast majority of companies have yet to commit aggressively to sustainability, our survey and interviews confirmed that there are some noteworthy exceptions. The group of so-called first-class companies in sustainability, as identified by survey respondents, is populated by the usual suspects that are often highlighted in business articles, reports, books, and sustainability indexes. The five cited most often by our survey respondents were General Electric, Toyota, IBM, Royal Dutch Shell, and Wal-Mart.⁸ But some lesser-known names also surfaced, such as Rio Tinto, Better Place, and IWC (International Watch Company). In aggregate, these companies are demonstrating that a sustainability strategy can yield real results. (For more about Nike—another one of the companies that many of our survey respondents also cited as a first-class company—and the steps that it has taken in the area of sustainability, see the sidebar “Nike: Moving from Operating Defensively to Capturing Advantage.”)

Many Companies Are Moving Slowly or Struggling with Execution

Our survey and interviews demonstrated that there is a large degree of consensus regarding the potential business impact of sustainability. Our research further confirmed that there are stirrings of activity throughout the business realm. But we found a material gap between intent and action at most of the companies we examined. On one hand, more than 60 percent of the respondents in the corporate survey group said that their company was building awareness of its sustainability agenda. On the other hand, most of these companies appeared to lack an overall plan for attacking sustainability and delivering results. Many of their actions seemed defensive and tactical in nature, consisting of a variety of disconnected initiatives focused on products, facilities, employees, and the greater community. While these efforts might be impressive on some levels, they largely represented only incremental changes to the business.

Clearly, companies can do more to connect their stated intent in sustainability with business impact—and they can do it in a way that maintains explicit links to the bottom line over both the short and long term. But why aren’t they doing more, given that they believe sustainability will materially affect their business?

We found a material gap between intent and action at most companies.

8. See the Sustainability Initiative Web site for the full list of organizations identified by survey respondents as first-class companies in sustainability (<http://sloanreview.mit.edu/busofsustainability/>).

Nike

Moving from Operating Defensively to Capturing Advantage

Today, Nike is a leader in sustainability—in terms of both the company’s initiatives and the value that those initiatives create for the company. Yet Nike “bumped into” sustainability long before the company attempted an active transformation to the strategy. In the early 1990s, when Nike was vilified for its labor practices, it undertook steps that have led to sustainable practices. How did the company travel along the arc from operating defensively to capturing advantage?

Nike set ambitious goals grounded in facts. In the late 1990s, Nike set ambitious long-term goals for the year 2020: zero waste and toxins, fully closed-loop systems, and sustainable growth and profitability. According to Darcy Winslow, a former general manager for women’s fitness at Nike, it was “very difficult to really grasp and understand what we were attempting, much less to get buy-in on it.” Back in 2001, Nike estimated that annual footwear production created \$700 million of waste in materials alone. Having that information for the first time triggered the creation of “design for environment” principles and the development of closed loops and recycling efforts (among other initiatives). The goal was to reverse the trend and point Nike toward ambitious goals for 2020.

Nike sought engagement with its partners. In 2000, Nike started looking at its major supply-chain partners and asking them where they sourced their materials. It forged deep relationships with The Dow Chemical Company, DuPont, and BASF, among others; shared its goals with these suppliers; and asked for their support in achieving its ambitious goals in sustainability. Nike also took this approach with its manufacturing partners.

The company tailored the definition of sustainability to its own organization. Ultimately, Nike discarded prevailing notions of sustainability for a definition that fit its own culture and environment. The company’s initial efforts to catalyze action failed when it framed sustainability in terms of “natural capital” and the Triple Bottom Line. And it wasn’t until the footwear group started to translate its 2020 goals into dollars and cents that it began to capture the attention of top management. According to Winslow, “One of the reasons we have been so successful is that the language is congruent with the Nike slogan ‘Just Do It.’”

Nike changed its design principles. When Nike started to examine its design processes, the footwear group realized that it was wasting materials. It found that for every two pairs of shoes that the company was producing, an additional third pair, on average, could have been produced from the materials that were being incinerated or discarded in a landfill. This insight and the company’s solution led to positive impacts on the environment and on Nike’s bottom line.

As Winslow explained, “We started to create an overarching strategy of what it meant to be a more sustainable company.” Today, Nike uses its own index to provide product teams real-time feedback on how much waste a product is creating. The company also maintains a broad library of environmentally preferred materials that have been analyzed using “zero toxics” principles. It has created restricted-substances lists that its vendors now adhere to. It has well over 50 closed-loop systems within its manufacturing and materials processes. And its product teams have something tangible that they can measure their work against: real decision-making tools.

By aiming high and pursuing its goals thoughtfully and aggressively, the company is proving that success in sustainability not only is compatible with bottom-line success but also contributes directly to it.



Challenges to Decisive— and Effective—Corporate Action

The thought leader group and the survey respondents alike viewed sustainability as a unique business issue, both strategically and economically. They embraced the following principles:

- ◇ Sustainability has the potential to affect all aspects of a company's operations—from development, manufacturing, and distribution to sales and support functions.
- ◇ Sustainability also has the potential to affect every value-creation lever over both the short and longer term. Rarely has a business issue been viewed as having such a broad scope of impact.
- ◇ There is mounting pressure from stakeholders—employees, customers, consumers, supply chain partners, competitors, investors, lenders, insurers, nongovernmental organizations, media, the government, and society overall—to act.
- ◇ The solutions to the challenges of sustainability are interdisciplinary, making effective collaboration with stakeholders particularly critical.
- ◇ Decisions regarding sustainability have to be made against a backdrop of high uncertainty. Myriad factors muddy the waters because their timing and magnitude of impact are unknown. Such factors include government legislation, demands by customers and employees, and geopolitical events.

These principles make sustainability a uniquely challenging issue for business leaders to manage and address effectively.

The best way to get people to take sustainability seriously is to frame it as it really is: not only a challenge that will affect every aspect of management but also, for first movers, a source of enormous competitive advantage.

—Richard Locke, deputy dean and professor of entrepreneurship, MIT Sloan School of Management

Three Major Barriers Impede Decisive Corporate Action

There are many reasons why companies have difficulty tackling sustainability more decisively. But our research points to three root causes. First, companies often lack the right information upon which to base decisions. Second, companies struggle to define the business case for value creation. Third, when companies do act, their execution is often flawed.

Some companies don't understand what sustainability is—and what it means to the enterprise. Many business leaders do not have a full understanding of what sustainability really means to their company, largely because of some key underlying information gaps.

- ◇ Managers lack a common fact base about the full suite of drivers and issues that are relevant to their company and industry. More than half of the respondents in the corporate survey group stated a need for better frameworks for understanding sustainability.
- ◇ As noted earlier, companies do not share a common definition or language for discussing sustainability—some define it very narrowly, some more broadly, and others have no corporate definition at all.

- ◇ The goal or “prize” of concerted action is often defined too loosely and not collectively understood within the organization. And there is often very little understanding of how to measure progress once actions are undertaken.

All of these issues point to a critical need for a thorough and structured gathering and sharing of basic facts about sustainability as a first step toward helping managers to be more decisive in the choices they face. To aid managers in this difficult task, we have developed a simple framework for understanding the drivers and impacts of sustainability efforts and for helping to add clarity to the boardroom discussion on the appropriate actions for each company. (See the sidebar “One View on Framing Sustainability for Business.”)

[Pursuing sustainability] opens up a broader set of options. For example, there are places where the fact that we have a solar business—or are involved in carbon capture and storage—changes the conversa-

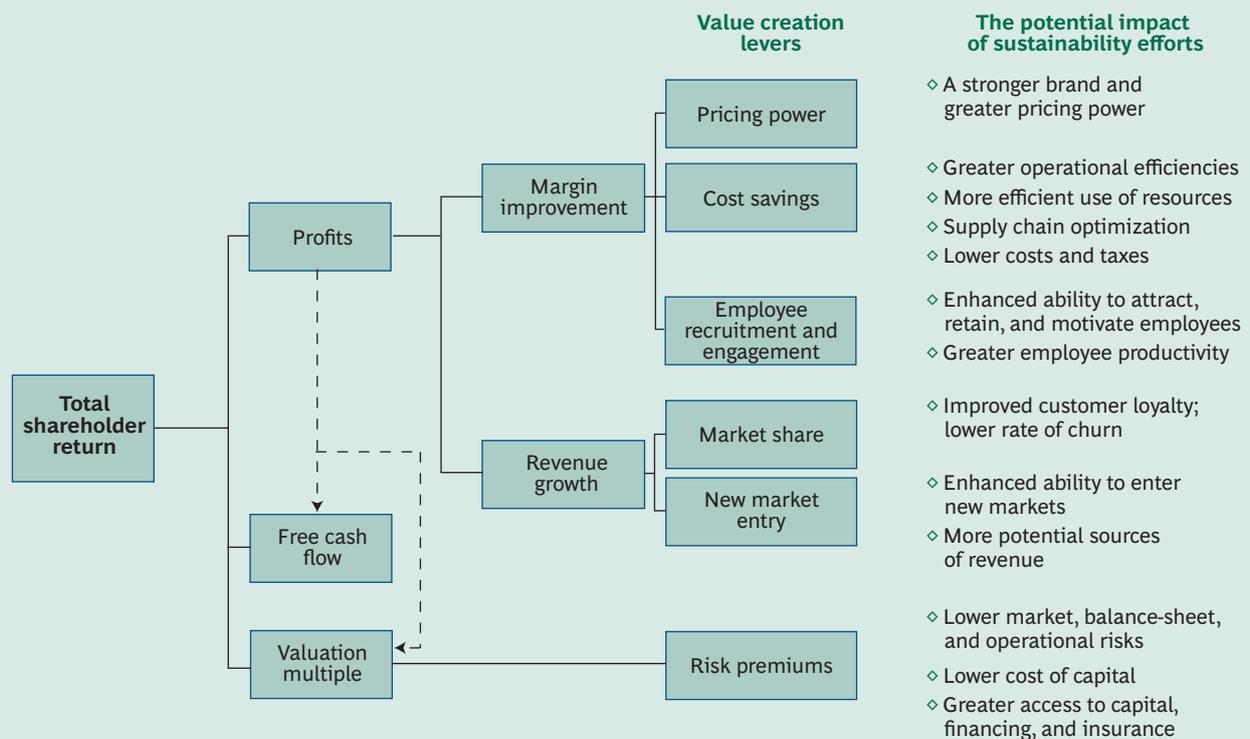
tions even around the oil and gas business. And sustainability efforts are therefore opening up a different dialogue than the one that would occur if we were just a traditional oil and gas company.

—Vivienne Cox, former executive vice president, BP; former chief executive officer, BP Alternative Energy

Some companies have difficulty modeling the business case—or even finding a compelling case—for sustainability. Most survey respondents who considered themselves experts in sustainability, as well as most of the corporate executives in the thought leader group, said that their company had found a compelling business case—one that reflected multiple tangible and intangible costs and benefits—for sustainability. (See Exhibit 4 for a summary of sustainability’s potential impact when viewed through the lens of shareholder value creation.)

The majority of survey respondents overall, however, disagreed: almost 70 percent said that their company did

Exhibit 4. Sustainability Efforts Could Influence All the Levers That Companies Use to Create Value



Sources: The Sustainability Initiative 2009 Survey, BCG and MIT Sloan Management Review; interviews with thought leaders.

One View on Framing Sustainability for Business

Many companies lack a clear, cohesive view of what sustainability is and how they should approach it. We offer a visual framework that can help these companies conceptualize their efforts. (See the exhibit below.)

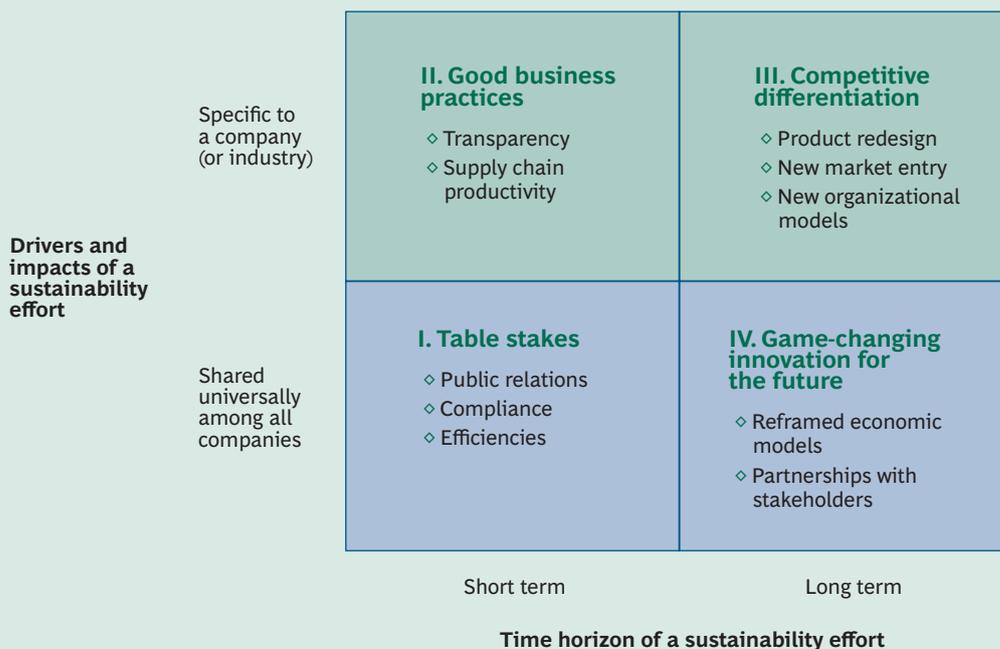
The framework looks at sustainability through two lenses: the time horizon for the sustainability effort and the degree to which the drivers and impacts of the effort are specific to a company or are shared more broadly among the corporate community. This framework categorizes sustainability efforts into one of four quadrants.

In the first quadrant (lower left) are short-term actions that we call table stakes: the minimum, lowest-cost sustainability actions that all companies can—and in many cases *must*—take, such as complying with regulatory demands or capturing easily attainable cost efficiencies. In the second quadrant are actions that go beyond the broad, basic steps companies can take; these sustainability efforts make good business sense because they capture

unique opportunities or mitigate unique threats posed by near-term sustainability issues. Examples in this category include the \$500 million energy-efficient retrofit of the Empire State Building in New York, along with improving resource productivity and eliminating waste across the supply chain as Unilever and Wal-Mart have sought to do.

In the third quadrant are actions geared toward capturing competitive advantage via sustainability. These efforts include innovations and longer-term bets that are difficult for competitors to imitate and that often require organizational rewiring so that a company can achieve the full impact of its sustainability efforts. Reimagining how products are made and used and what happens to them when they expire is an example of a strategy in this category. The fourth quadrant encompasses future innovations that all companies can undertake as long as they form broader alliances with external stakeholders and rethink economic frameworks, because payoffs occur over a longer time frame.

Our Framework Helps Companies Categorize Their Sustainability Objectives and Then Align Their Sustainability Efforts with Achieving Those Objectives



Sources: BCG and MIT Sloan Management Review.

not have a strong business case for sustainability. Of these respondents, 22 percent claimed that the lack of a business case presented their company with its primary barrier to pursuing sustainability initiatives.

Why do companies struggle in their efforts to develop the business case for sustainability? Our survey uncovered three main challenges that trip up companies. The first challenge is *forecasting and planning beyond the one-to-five-year time horizon typical of most investment frameworks*. It is easy to assert that sustainability is about taking a long-term view. In practice, however, calculating the costs and benefits of sustainability investments over time horizons that sometimes span generations can be difficult with traditional economic approaches. This is further exacerbated by the short-term performance expectations of investors and analysts. The simple framework mentioned earlier can provide a company's board, shareholders, employees, and investors with a starting point for assessing the potential of short- and long-term moves in sustainability to create value.

The second challenge is *gauging the systemwide effects of sustainability investments*. Companies find it difficult enough to identify, measure, and control all of the tangible facets of their business systems. So they often do not even attempt to model intangibles or externalities such as the environmental and societal costs and benefits of their current business activities and potential moves in sustainability. This hinders their ability to get a true sense of the value of investments in sustainability.

The third major challenge is *planning amid high uncertainty*. Factors contributing to uncertainty include potential changes in customer preferences and regulation. Strategic planning, as traditionally practiced, is deductive—companies draw on a series of standard gauges to predict where the market is heading and then design and execute strategies on the basis of those calculations. But sustainability drivers are anything but predictable, potentially requiring companies to adopt entirely new concepts and frameworks.

In general, both the thought leader group and the survey respondents with experience in sustainability believe that clarifying the business case for sustainability may be the single most effective way to accelerate decisive corpo-

rate action, since it gets to the heart of how companies decide where they will—and will not—allocate their resources and efforts.

Green can save you a lot of money—not two or three years from now, but now.

—Catherine Roche, partner and managing director,
The Boston Consulting Group

Clarifying the business case for sustainability may be the best route to decisive action.

Execution is often flawed. Even companies that have a solid understanding and can make a strong business case for sustainability often stumble over execution. While it is still early days in terms of being able to judge the effectiveness of execution in sustainability, our survey

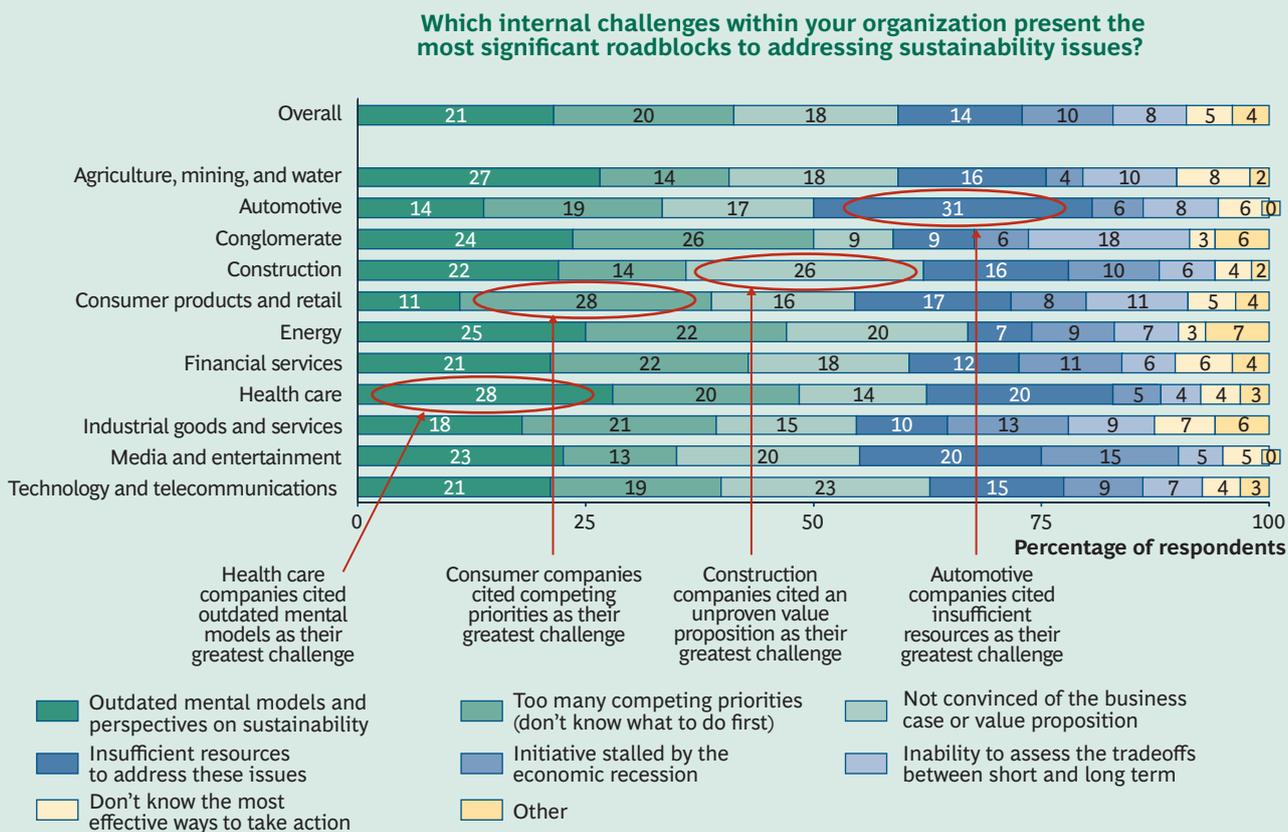
results and our interviews with thought leaders highlighted three significant challenges in executing sustainability initiatives. The first is *overcoming skepticism in organizations*. Indeed, respondents in the corporate survey group cited outdated mental models and perspectives as the top internal roadblock to addressing sustainability issues. (See Exhibit 5.) Examples of entrenched mindsets that respondents cited include views that sustainability is solely “an additional cost” or “a green utopia.”

The second challenge in execution is *figuring out how to institutionalize the sustainability agenda throughout the corporation*. Survey respondents and the thought leader group alike were adamant that top-down vision, commitment, and leadership were critical for success—and that the absence of a top-down commitment was one of the greatest impediments to successful execution. What's more, companies were often uncertain about where responsibility for achieving sustainability strategies should or did reside, and whether that responsibility had the necessary scope.

The third major challenge cited is *measuring, tracking, and reporting sustainability efforts*. These tasks involve seeking complete transparency on sustainability. Companies are often expected to share information such as their carbon footprint and the specifics of their manufacturing practices.

Several of these barriers, it should be noted, are likely to accompany any major change effort in corporate strategy and operations. But they are intensified in the case of sus-

Exhibit 5. Business Leaders Reported Various Internal Challenges to Sustainability



Source: The Sustainability Initiative 2009 Survey, BCG and MIT Sloan Management Review.

Note: Data reflect the top-ranked responses from 1,560 business leaders who participated in our survey; because of rounding, the percentages for some industries do not total to 100 percent.

sustainability in light of the topic's unique economic and strategic challenges and companies' limited experience with it.

Sustainability must be an integral part of strategy—not an add-on.

—Ramón Baeza, senior partner and managing director and topic leader in the sustainable development sector, The Boston Consulting Group

We have specific metrics because in a culture of execution, which is what GE is all about, the only way that ecomagination could survive is if we put some hard metrics around it.

—Steve Fludder, vice president, ecomagination, General Electric

Necessary Capabilities

Most of the survey respondents expressed relatively limited concern about their companies' having distinct gaps in the technical or operational capabilities needed to address sustainability. We believe, however, that those executives might have underestimated the challenge. According to corporate executives in the thought leader group, companies will need to develop and master a multitude of new capabilities and tools—and take a number of actions—if they are to successfully execute their sustainability strategies, as highlighted below:

- ◇ Adopting a broad, systems-thinking approach to the business. Actions could range from deploying frameworks that allow for modeling the systemwide effects

of sustainability initiatives over the long term to forming more effective partnerships and alliances and working in more concerted ways with stakeholders, regulators, and other influencers.

- ◇ Adding scenario-planning capabilities that allow the company to build resilience to unpredictable future environments and external shocks, such as sharp swings in commodity prices.
- ◇ Developing tracking, measuring, and reporting capabilities, particularly as the bar for transparency continues to rise.
- ◇ Retooling R&D, product development, and sales and marketing to reimagine how products are designed, made, used, and recycled.
- ◇ Enhancing capabilities in innovating organizational models and management practices. This includes reorienting incentive and reward systems to promote long-term strategic and tactical thinking and multidisciplinary collaboration. It also includes knowing how and when to partner to achieve maximum advantage.

In the near future, these capabilities and tools may represent table stakes for managers and organizations. Already, many leading companies possess these skills.

We need to educate people about systems thinking and help them understand how all of these activities are interdependent and affect each other.

—Jeffrey Hollender, chief inspired protagonist and cofounder, Seventh Generation

Anticipating what's coming, such as new greenhouse-gas regulations, is vital. Key energy technologies need to move through the Four Ds: discover, develop, demonstrate, and deploy.

—Graeme Sweeney, executive vice president of future fuels and CO₂, Royal Dutch Shell

Masdar's typical engagement model is to partner with more experienced organizations. Torresol Energy, London Array, or our Masdar Clean Tech Fund with Credit Suisse are typical examples of such partnerships. Our investment strategy is centered around "people, planet, profit." Besides the obvious commercial benefits that we expect to achieve, we also consider the social and environmental impact of new investments.

—Ziad Tassabehji, director of utilities and asset management, Masdar



Looking Ahead

Seizing Opportunities and Mitigating Risks

As they confront the barriers to pursuing and achieving sustainability, many—if not most—business managers are struggling to understand where their companies are, where they need to go, and how to get there. The examples of leading companies offer a blueprint for how to proceed.

Lessons from Leading Companies

There is much that can be learned about how to overcome the managerial obstacles to sustainability by examining the companies that are leading the way and—even more important—that are creating value while doing so. We asked respondents in the corporate survey group which companies they consider to have first-class capabilities in sustainability and why. We also gathered deep perspectives on these—and other—leading companies' practices and key success factors through in-depth interviews with corporate executives in the thought leader group. (In Appendix II, we synthesize the lessons from leading companies into a proprietary audit that companies can use to assess their own progress.)

While the particulars of each of these companies' respective sustainability campaigns are unique, all first-class approaches have several notable characteristics in common.

Leading companies understand and articulate sustainability's impact on their organization. Leaders in sustainability gather the full set of facts and incorporate this knowledge into how they frame and define sustainability strategically and economically. They also adopt a systemwide view in understanding the relevant issues and needs of all their stakeholders. For example, they

push suppliers to be better stewards of sustainability—often even selecting them on that basis. And they form partnerships and alliances with critical influencer groups (such as regulators, nongovernmental organizations, experts, communities, and other companies) so that they can learn about and jointly develop innovative solutions. Mining firm Rio Tinto, for example, leads an industry-wide initiative in sustainable development and has ties to the International Council on Mining and Metals. (See the sidebar “Rio Tinto: Earning a Social License.”)

They create a robust business case for sustainability.

In developing the financial case for sustainability, leading companies speak the language of business: value creation. They assess their sustainability strategies as they would any investment, systematically evaluating each value-creation lever—including the intangibles, which are more difficult to model.

These companies also make effective tradeoffs between short-term expectations and longer-term impact, bringing the same long-term mindset to sustainability investment decisions that they bring to other routine long-term bets. They take into account all external factors and system effects when analyzing the business case for sustainability, assessing the full set of costs and benefits.

With a grounding in the facts and a solid business case, leading companies publicly commit to ambitious goals that they measure and report—and they demonstrate that sustainability investments produce real business results.

They holistically integrate their sustainability strategy throughout the business. Leading companies believe that sustainability is a source of value creation

Rio Tinto

Earning a Social License

We have to create an environment in which local—and to some extent global—stakeholders can see us operating in a manner that is viewed as sustainable and respectful to the community, science, the environment, and our employees.

—Tom Albanese, CEO, Rio Tinto

Rio Tinto is a leading international mining group that finds, mines, and processes the earth's mineral resources. Its activities span the world but are strongly represented in Australia and North America. The company's chief executive officer, Tom Albanese, seeks to minimize the potential negative effects of its operations on local environments and populations. To achieve this goal, he is committing the firm to adopting best practices in sustainability and earning what has been termed a social license—unwritten acceptance of the company's operations by local communities, governments, and society overall. To achieve these goals, the company has undertaken a range of actions and initiatives that include the following:

- ◇ A program to reduce carbon emissions
- ◇ Policies to protect biodiversity and water quality
- ◇ Programs aimed at enhancing employees' health, safety, and welfare

- ◇ New technologies and training designed to enhance employees' skills and transform employees from manual laborers to skilled workers
- ◇ Policies that provide employment opportunities for Australia's Aboriginal population
- ◇ A program that tests product safety
- ◇ Safety and sustainability metrics that are incorporated into the company's performance-management schemes
- ◇ A "no ghost town" plan that calls for developing local communities after mines are closed

Rio Tinto is also leading an industrywide initiative in sustainable development. The initiative has, in turn, spawned the International Council on Mining and Metals, which aims to advance the industry's thinking on sustainability and encourage sustainable best practices.

Rio Tinto aspires to be a leader in what the company calls "the global transition to sustainable development." Its successes to date demonstrate this commitment and have established the company as one of the early champions of sustainability.

rather than merely a legal imperative. They therefore work to integrate it deeply into their culture and to embed it holistically into their strategy and all relevant aspects of their operations, while supporting it through strong, top-down commitment from the executive leadership team.

In sum, the companies that are winning with their sustainability approaches are embracing aggressive strategies, adapting their organizations, and creating new sources of advantage to deliver measurable business results.

You cannot implement these kinds of programs bottom-up—it's impossible. It's always top-down, always. Because it's such a cultural change, you cannot do it organically.

—Georges Kern, CEO, IWC

Peering over the Horizon

Sustainability will have an increasingly large impact on the business landscape going forward. Companies that recognize this fact and position themselves at the forefront stand to reap sizable competitive advantages. Consider the following emerging realities:

- ◇ Prices for food, water, energy, and other resources are becoming increasingly volatile. Companies that are able to optimize their sustainability profile and practices will be less exposed to these swings—and more resilient.
- ◇ Stakeholders—including consumers, customers, shareholders, and the government—are paying more attention to sustainability and putting pressure on companies to act.

- ◇ Governments around the world are becoming increasingly involved in developing policies that advocate sustainability. Companies that are proactively pursuing sustainability initiatives will be less vulnerable to sudden regulatory changes. They will also be better positioned to have a voice in *shaping* policy—rather than simply reacting to it.
- ◇ Capital markets are paying more attention to sustainability and using it as a gauge to evaluate companies and make investment decisions.
- ◇ First movers are likely to gain a commanding lead, and it may become increasingly difficult for competitors to catch up.

The experiences of executives already wrestling with sustainability-driven business issues suggest that companies do not need to make large, immediate investments in new programs. The findings reveal instead that what is essential is that companies start to think more broadly and proactively about sustainability’s potential impact on their business and industry—and begin to plan and act.

The time to take risks is when you’re successful, not when you’re sliding down the slope.

—Tim Mohin, principal consultant, Environmental and Occupational Risk Management; former senior manager for supplier responsibility, Apple; former director of sustainable development, Intel

Appendix I

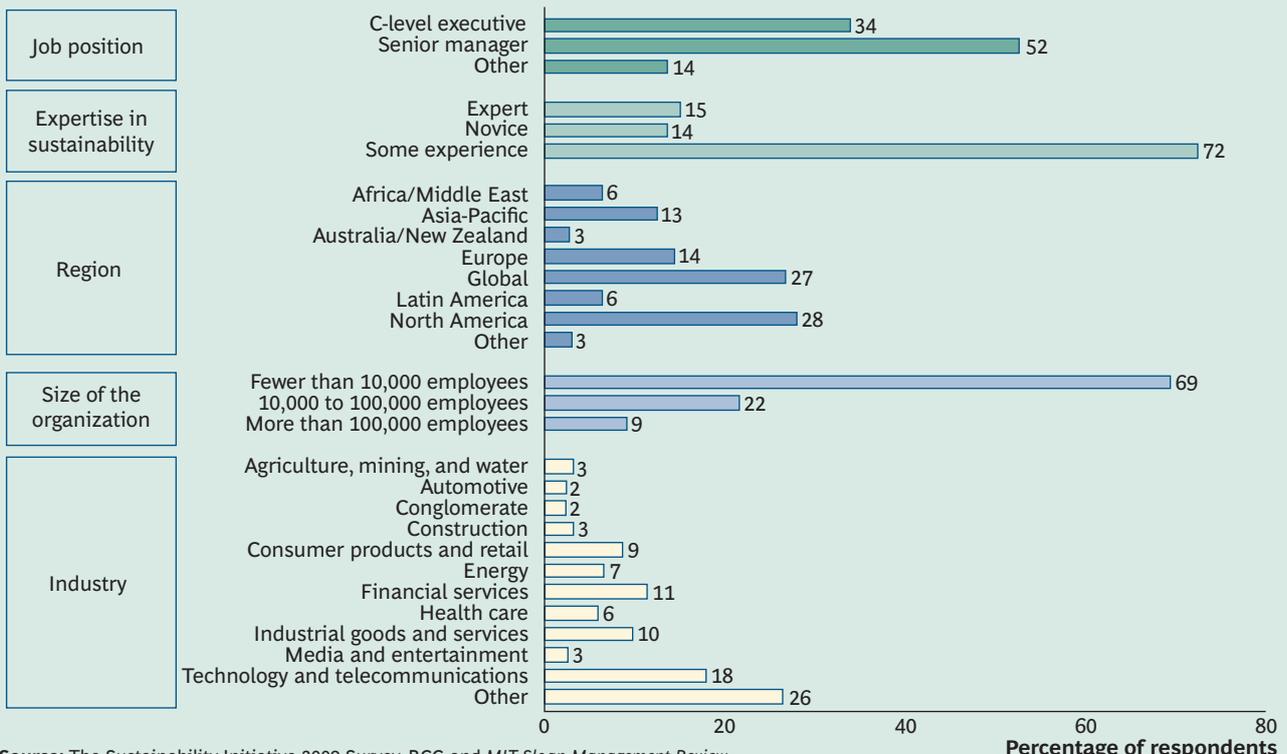
Methodology for the Sustainability Survey and Interviews

BCG and *MIT Sloan Management Review* developed a 20-question electronic survey drawing on our interviews with more than 50 thought leaders in sustainability (listed in Appendix III). The survey was available online during March and April 2009. More than 2,000 respondents, representing a broad mix of companies and organizations, participated in the survey. The data and analyses in this report reflect the 1,560 survey responses from business leaders at

for-profit companies. (See the exhibit below.) The large number of survey responses allows for statistical significance across all of the major categories examined.

An additional 462 survey responses from academics, government officials, executives at nonprofits, and others were analyzed separately. This analysis is available at <http://sloanreview.mit.edu/busofsustainability/>.

A Diverse Mix of Business Leaders Responded to the Sustainability Survey



Source: The Sustainability Initiative 2009 Survey, BCG and *MIT Sloan Management Review*.

Note: There were 2,022 respondents to our survey; data and analysis in this exhibit reflect 1,560 responses from business leaders at for-profit companies.

Appendix II

The Sustainability Audit

Companies that seek to enhance their profile in sustainability should begin by undertaking a critical self-assessment. In our proprietary Sustainability Audit, we have identified ten statements that we believe represent the most important dimensions of sustainability from a managerial perspective. We developed these statements by

drawing on the lessons of organizations that are cited as having first-class capabilities in sustainability. Company executives that candidly evaluate their level of agreement with each statement in this audit will gain an understanding of where their organization stands and which areas it needs to focus on.

The Sustainability Audit

Statement	Level 1 Agreement	Level 2 Agreement	Level 3 Agreement	Level 4 Agreement
Framing the Sustainability Agenda				
<i>1. Our company has a clearly articulated definition of sustainability and an understanding of how sustainability is or will be affecting our business</i>	We have no corporate definition of sustainability; the term is used loosely and in different ways throughout the company	We have no formal corporate definition of sustainability; however, the term is used in a broadly uniform way throughout the company	We have a corporate definition of sustainability that has been endorsed by the board and disseminated throughout the company, but it has yet to be fully accepted and internalized across all levels	We have a clearly articulated corporate definition of sustainability that has full consensus and buy-in from the board and across all levels of the organization
<i>2. Our company has conducted a thorough assessment of the drivers of sustainability that present the greatest opportunities and potential risks to our business¹</i>	We have not carried out a thorough assessment of the drivers of sustainability	We have made an assessment of some drivers of sustainability for some key business areas or markets	We have conducted a thorough audit of several key drivers of sustainability for our most critical business areas or markets—but not for all of them	We have completed a thorough assessment of all potential drivers of sustainability and have a realistic view of which drivers will affect each business area and market
<i>3. Our company has translated analysis into action by defining where and how we will deal with sustainability as a business issue</i>	We do not yet have a clear sustainability strategy	We have determined where we will position ourselves regarding sustainability but do not yet have a well-defined plan for getting there	We have determined what our sustainability positioning and associated strategy are (or will be), where we will and will not engage, and how quickly we want to achieve these goals	We have a clearly articulated sustainability strategy and a clear timeline for getting there, and have publicly committed to this timeline and strategy

¹Drivers include government legislation, pressure from consumers and customers, employee activism, pressure from society, the impact of ecological factors (including climate change, pollution, and the supply of resources such as food and water), and sociological factors (such as population growth, urbanization, and inequities in health and labor).

The Sustainability Audit (continued)

Statement	Level 1 Agreement	Level 2 Agreement	Level 3 Agreement	Level 4 Agreement
Developing the Business Case for Sustainability				
4. <i>Our company has developed a clear and compelling business case for our sustainability efforts over the short term (that is, over the next one to three years)</i>	We have not yet examined the business case for the short term beyond those actions needed to meet regulatory requirements	We have some sense of the short-term business case but have not yet exploited all value-creation levers (including costs, revenues, price, and intangibles) ²	We have a clear understanding of the short-term business case that exploits several potential value-creation levers (both economic and intangible)	We have a clear and compelling short-term business case that exploits all possible value-creation levers to drive competitive advantage and that has been incorporated into our financial plans
5. <i>Our company has modeled the business case for sustainability investments over the long term (that is, four years into the future and beyond)</i>	We have not yet examined the long-term business case for sustainability investments	We have not yet examined the business case for the long term beyond those actions needed to meet regulatory requirements	We have some sense of the longer-term business case for sustainability investments but have not yet modeled the systemwide costs and benefits across our value chain over the life cycle of our products and services	We have modeled a longer-term business case for sustainability investments that drives competitive advantage and considers systemwide costs and benefits across our value chain over the life cycle of our products and services for a multiyear time horizon
6. <i>Our company has established targets for our sustainability efforts, along with metrics for measurement, tracking, and reporting</i>	We have no targets or metrics in place	We have high-level targets and metrics that we report infrequently or do not fully disclose (because we have difficulty measuring results)	We have targets and metrics in place and routinely compile reports on our performance	We have defined a set of targets and metrics and have integrated the metrics into our performance management as part of a holistic sustainability strategy
Executing the Sustainability Strategy				
7. <i>Our company's sustainability strategy receives sufficient focus from senior management, and all responsibilities and accountabilities are clear</i>	It is unclear where responsibility resides or who in our organization is accountable for the sustainability agenda	Responsibility for our sustainability strategy has been added to the existing responsibilities of an individual (or individuals) or unit, but there is little visibility	We have assigned accountability for delivering the company's sustainability strategy to a dedicated individual or unit with sufficient seniority in the organization	Discrete individuals or units with seniority in the organization are responsible for driving the sustainability agenda, but accountability for delivering results is spread throughout the organization
8. <i>Our company's sustainability strategy is integrated with our operations, processes, and culture</i>	There has been little to no internal integration	There has been some integration of our sustainability strategy with selected operations and processes	Our sustainability strategy has been partially incorporated into our culture through assimilation into many of our key operations and relevant processes	We have fully integrated our sustainability objectives and strategy into our corporate culture, operations (such as product development, manufacturing, sales, and support functions), and processes (such as performance management, financial reporting, and HR processes)

²Intangible impacts include enhanced brand awareness and equity (which leads to customer loyalty and the ability to command a price premium); improved employee recruitment, retention, and engagement; and lower risk premiums (which improve valuations and enable easier access to capital and insurance).

The Sustainability Audit (continued)

Statement	Level 1 Agreement	Level 2 Agreement	Level 3 Agreement	Level 4 Agreement
9. <i>Our company's sustainability agenda is aligned with the relevant external stakeholders in our business system</i> ³	We have little or no communication or engagement with stakeholders outside the company	We have conducted some public relations campaigns and provided ad hoc reporting to some but not all of the relevant external stakeholders in our business system	We have an extensive public-relations campaign and have communicated with—and at times reported to—some stakeholders but only on some issues and not in a consistent or systematic way	We are partnering and working methodically with all relevant stakeholders to solve our mutual sustainability issues, encouraging those stakeholders to drive value from sustainability efforts and working together to proactively shape the landscape of our industry
10. <i>Our company has the required capabilities and tools to effectively execute our sustainability strategy</i> ⁴	We lack both the capabilities and the tools to effectively deliver a strategy	We lack several required capabilities and tools but are on a path to rectify our shortcomings	We have in place (or available) most of the necessary capabilities and tools and are moving to fill any gaps	We have in place the full suite of necessary capabilities and tools to enable the effective execution of our sustainability strategy

³Stakeholders include consumers, business-to-business customers, competitors, regulators, nongovernmental organizations, investors, lenders, capital-market analysts, and society at large.

⁴Capabilities and tools include, but are not limited to, frameworks for developing the business case; measurement, tracking, and reporting tools; scenario-planning capabilities; technologies for product design and manufacturing; supply chain technologies; capabilities in partnering with stakeholders; and regulatory expertise.



Appendix III

Thought Leader Interviewees

The thought leaders who generously shared their views on the topic of sustainability, and whose insights helped form the basis of our survey, are listed below. They include managers, C-level business executives, academics, and experts from government organizations, nongovernmental organizations, advisory services firms, and think tanks. Videos of several of these interviews can be found at *MIT Sloan Management Review's* Sustainability Initiative Web site, <http://sloanreview.mit.edu/blog/2009/05/05/mit-sustainability-interview-series/>.

Shai Agassi

Founder and Chief Executive Officer
Better Place

Tom Albanese

Chief Executive Officer
Rio Tinto

Ray Anderson

Founder and Chairman
Interface

Roberto Bocca

Senior Director, Head of Energy Industries
World Economic Forum
Former Director, Emerging Consumer Markets
BP Alternative Energy

Jason Clay

Senior Vice President, Market Transformation
World Wildlife Fund

Vivienne Cox

Former Executive Vice President
BP
Former Chief Executive Officer
BP Alternative Energy

John Ehrenfield

Executive Director
International Society for Industrial Ecology
Former Director
MIT Program on Technology, Business, and Environment

John Elkington

Founder and Non-Executive Director
SustainAbility
Founding Partner and Director
Volans Ventures

Alyssa Farrell

Marketing Manager for Sustainability Solutions
SAS

Steve Fludder

Vice President, ecomagination
General Electric Company

Jay Forrester

Germeshausen Professor Emeritus of Management; System Dynamics Group
MIT Sloan School of Management

Hal Hamilton

Codirector
Sustainable Food Laboratory

Stuart Hart

Samuel C. Johnson Chair in Sustainable Global Enterprise, Professor of Management
The Johnson School, Cornell University

Paul Hawken

Author, Environmentalist, and CEO
Biomimicry Ventures Group

Rebecca Henderson

Senator John Heinz Professor of Environmental Management
Harvard Business School

Howard Herzog

Principal Research Engineer
MIT Laboratory for Energy and the Environment

John Hofmeister

Founder and Chief Executive Officer
Citizens for Affordable Energy

Jeffrey Hollender

Chief Inspired Protagonist and Cofounder
Seventh Generation

Georges Kern

Chief Executive Officer
IWC (International Watch Company)

Judith Layzer

Associate Professor of Environmental Policy
Department of Urban Studies and Planning
Massachusetts Institute of Technology

Bernard Lietaer

Chairman
ACCESS Foundation
Fellow, Center for Sustainable Resource Development
University of California, Berkeley

Richard Locke

Deputy Dean and Professor of Entrepreneurship
MIT Sloan School of Management

Amory Lovins

Chairman and Chief Scientist
Rocky Mountain Institute

L. Hunter Lovins

President and Founder
Natural Capitalism Solutions

Thomas Malone

Professor of Management
MIT Sloan School of Management
Founding Director, MIT Center for Collective Intelligence

David Marks

Goulder Professor of Civil and Environmental Engineering and Engineering Systems
Massachusetts Institute of Technology

Lord Robert May

Professor
Oxford University and Imperial College, London

William McDonough

Founding Partner
William McDonough & Partners

Tim Mohin

Principal Consultant
Environmental and Occupational Risk Management
Former Senior Manager for Supplier Responsibility
Apple
Former Director of Sustainable Development
Intel

Adil Najam

Director
Frederick S. Pardee Center for the Study of the Longer-Range Future
Boston University

Jacqueline Novogratz

Founder and Chief Executive Officer
Acumen Fund

William O'Rourke

Vice President, Sustainability and Environment, Health, and Safety
Alcoa

Chris Page

Director of Climate and Energy Strategy
Yahoo!

Rod Pearse

Chief Executive Officer and Managing Director
Boral Limited

Dierk Peters

Director
World Wildlife Fund Sustainable Seafood Initiative
Former International Marketing Manager
Unilever

John Reilly

Senior Lecturer, Center for Energy and Environmental
Policy Research
MIT Sloan School of Management

Dawn Rittenhouse

Director of Sustainable Development
DuPont

Harriett Ritvo

Professor of History
Massachusetts Institute of Technology

Walter Robb

Co-President and Chief Operating Officer
Whole Foods Market

George Roth

Principal Research Associate
MIT Sloan School of Management

Gwen Ruta

Vice President of Corporate Partnerships
Environmental Defense Fund

John Sall

Cofounder and Executive Vice President
SAS

Peter Schwartz

Thought Leader
Monitor Group
Cofounder and Chairman
Global Business Network

Jeff Seabright

Vice President, Environment and Water Resources
The Coca-Cola Company

Peter Senge

Senior Lecturer, Organization Studies
MIT Sloan School of Management
Founding Chair
Society for Organizational Learning

Yossi Sheffi

Professor
Massachusetts Institute of Technology
Director, MIT Engineering Systems Division
Director, MIT Center for Transportation and Logistics

Cameron Sinclair

Executive Director and Cofounder
Architecture for Humanity

Sarah Slaughter

Senior Lecturer, Strategy
MIT Sloan School of Management
Coordinator
Laboratory for Sustainable Business and Sloan Sustain-
ability Initiative

John Sterman

Jay W. Forrester Professor of Management and Engi-
neering Systems
MIT Sloan School of Management
Director, System Dynamics Group
Laboratory for Sustainable Business

Joseph Sussman

JR East Professor of Civil and Environmental Engineer-
ing and Engineering Systems
Massachusetts Institute of Technology

Graeme Sweeney

Executive Vice President of Future Fuels and CO2
Royal Dutch Shell

Ziad Tassabehji

Director, Utilities and Asset Management
Masdar

Vijay Vaitheeswaran

Correspondent
The Economist
Coauthor
Zoom: The Global Race to Fuel the Car of the Future

Allen White

Senior Fellow and Vice President
Tellus Institute

Darcy Winslow

Chief Executive Officer and Founder
Designs for a Sustainable World Collective
Former General Manager
Nike

Interviews with BCG Experts

Finally, we interviewed 20 global experts from several of BCG's industry and functional practice and topic areas, including the Energy and Environment, Industrial Goods, Consumer, Financial Institutions, Public Sector, Strategy, Marketing and Sales, and Technology, Media & Telecommunications practices as well as the sustainable development, social impact, and megatrends sectors. These individuals shared their personal views as leading strategists and thinkers in their fields. They also shared the perspectives of their clients, who are confronting many issues of sustainability as they manage their businesses.



For Further Reading

BCG and *MIT Sloan Management Review* have written extensively about sustainability. The publications listed here represent a sampling.

Back to the Basics: How Photovoltaic Suppliers Can Win in Today's Solar Market

BCG Opportunities for Action in Energy, August 2009

Sustainable Steelmaking: Meeting Today's Challenges, Forging Tomorrow's Solutions

A White Paper by The Boston Consulting Group, July 2009

A Sober Optimist's Guide to Sustainability: An Interview with John Sterman

sloanreview.mit.edu, January 29, 2009
(<http://sloanreview.mit.edu/beyond-green/a-sober-optimists-guide-to-sustainability/>)

Sustainability as Fabric—and Why Smart Managers Will Capitalize First: An Interview with Richard M. Locke

sloanreview.mit.edu, January 14, 2009
(<http://sloanreview.mit.edu/beyond-green/sustainability-as-fabric-and-why-smart-managers-will-capitalize-first/>)

Capturing the Green Advantage for Consumer Companies

A report by The Boston Consulting Group, January 2009

The Comeback of the Electric Car? How Real, How Soon, and What Must Happen Next

A Focus by The Boston Consulting Group, January 2009

Carbon Capture and Storage: A Solution to the Problem of Carbon Emissions

A Focus by The Boston Consulting Group, July 2008

Collaborating for Systemic Change

MIT Sloan Management Review, January 1, 2007



Note to the Reader

BCG's sustainable development sector is one of the fast-growing sectors within the Energy and Environment practice. We help corporate clients develop strategies and best practices to create competitive advantage and make business sense of sustainability. The practice also helps clients in the public sector set environmental policies and strategies that drive major changes while meeting the needs of the many stakeholders in sustainability.

Acknowledgments

The authors would like to thank Michael Deimler, Iván Martén, and Simon Targett for guidance and oversight; Hari Govindahari, John Hutchison, Stevan Jovanovic, Christopher Knape, Acer Nethercott, and Robin Ridesic for research and analytical support; and Barry Adler, Katherine Andrews, Gary Callahan, Matthew Clark, Mary DeVience, Angela DiBattista, David Fondiller, Elyse Friedman, Kim Friedman, Gerry Hill, Elizabeth Lento, Corrie Maguire, Christi Stubbs, and Janice Willett for editorial, production, and distribution support. The authors would also like to thank *MIT Sloan Management Review's* Michael Barrette and Deb Gallagher for their thought partnership.

The authors are very grateful to the more than 50 thought leaders who agreed to be interviewed and the more than 2,000 respondents who completed the survey, as well as the 20 global experts from BCG who shared their time and perspectives.

For Further Contact

For additional information about this report or BCG's role in the Sustainability Initiative, please contact:

Maurice Berns

Partner and Managing Director
BCG London
+44 207 753 5353
berns.maurice@bcg.com

For a complete list of BCG publications and information about how to obtain copies, please visit our Web site at www.bcg.com/publications.

To receive future publications in electronic form about this topic or others, please visit our subscription Web site at www.bcg.com/subscribe.



BCG

THE BOSTON CONSULTING GROUP

Abu Dhabi
Amsterdam
Athens
Atlanta
Auckland
Bangkok
Barcelona
Beijing
Berlin
Boston
Brussels
Budapest
Buenos Aires
Chicago

Cologne
Copenhagen
Dallas
Detroit
Dubai
Düsseldorf
Frankfurt
Hamburg
Helsinki
Hong Kong
Houston
Jakarta
Kiev
Kuala Lumpur

Lisbon
London
Los Angeles
Madrid
Melbourne
Mexico City
Miami
Milan
Minneapolis
Monterrey
Moscow
Mumbai
Munich
Nagoya

New Delhi
New Jersey
New York
Oslo
Paris
Philadelphia
Prague
Rome
San Francisco
Santiago
São Paulo
Seoul
Shanghai
Singapore

Stockholm
Stuttgart
Sydney
Taipei
Tokyo
Toronto
Vienna
Warsaw
Washington
Zurich
bcg.com