Going for green

A capabilities-driven approach to environmental opportunity
This report was originally published by Booz & Company in 2009.

Contacts

Munich

Walter Wintersteller
Partner
+49-89-54525-540
walter.wintersteller
@strategyand.pwc.com

New York

Rich Kauffeld
Partner
+1-212-551-6582
rich.kauffeld
@strategyand.pwc.com

Martha Turner
Partner
+1-212-551-6731
martha.turner
@strategyand.pwc.com

About the authors

Rich Kauffeld is a Strategy& partner based in New York. He focuses on corporate and business unit strategy, supply chain management, and transformational improvement programs for consumer products manufacturers and retailers.

Abhishek Malhotra was formerly a Strategy& partner.

Susan Higgins was formerly a Strategy& senior associate.
Executive summary

Four factors — the demands of consumers, business partners, and regulators; employee enthusiasm; the commercialization of green technology; and the opportunity for top- and bottom-line growth — have created a permanent place for sustainability on the strategic agendas of large companies. All of these companies must “go for green” to some extent, but it falls to their leaders to determine what degree of effort and investment in sustainability is most appropriate.

There are three increasingly ambitious strategic levels of green that companies can pursue: Responsible Green strategies seek to meet the sustainability demands of key stakeholders, such as trade customers and regulators, and maintain the company’s competitive position; Efficient Green strategies pursue operational efficiency and cost competitiveness through environmental initiatives; and Differentiated Green strategies adopt sustainability as the source of long-term business value and enhanced market share.

Differentiated Green companies treat sustainability as a core element in their overall strategy and develop the organizational capabilities, particularly innovation and design capabilities, needed to achieve their green goals. They include green considerations in their decision-making processes, and they integrate green into their corporate and brand marketing. These companies will be best positioned to meet the challenges and capture the opportunities of sustainability.
In 2004, when General Electric CEO Jeffrey Immelt presented his plan for a new green business initiative to 35 top executives at the company, they voted against it. Perhaps it was inevitable: GE had a spotty environmental record up to that point, and its leadership had generally failed to voluntarily address high-profile problems, such as the company’s role in polluting the Hudson River. But Immelt was convinced they were wrong and that it was time for a change. So he exercised a leader’s prerogative and overruled them. Today, the program, called ecomagination, is widely lauded as one of the most successful green programs in the corporate world.

By the end of 2008, ecomagination had delivered US$100 million in cost savings to GE’s bottom line while reducing the company’s greenhouse gas emissions by 30 percent. The program had also yielded a portfolio of 80 product and service offerings generating $17 billion in annual revenue. “I thought going green was going to be a good idea,” said Immelt. “It has been 10 times better than I ever imagined.”

Although they might not all describe their green efforts in precisely these terms, GE and a handful of other leading companies in various industries, such as Dell, Kaiser Permanente, Nike, and Toyota, are elevating to the level of core corporate strategy their initiatives to reduce and manage humankind’s environmental impact. They recognize that green is not a fad; rather, it is an enduring priority on the corporate agenda. They see Differentiated Green — the highest level of green strategy — as a cornerstone of their businesses and a defining corporate strength, one that will enable their companies to stand apart in the marketplace and compete more successfully in the coming years and decades. Accordingly, they are developing the organizational capabilities by interconnecting the people, knowledge, systems, tools, and processes needed to operate at that level.
Green business is not a new idea. It is an enduring concept that has been evolving for years, a natural offshoot of an expanding environmental consciousness within society that dates to the 1960s, with roots that can be traced back over centuries. More recently, there are a growing number of signs, such as the initiative in September 2009 of an annual ranking of corporate “greenness” by Newsweek, the second largest consumer newsweekly magazine in the U.S., that green should be an essential consideration in the way every company approaches its operations and markets.

The growing strategic interest in sustainability is the result of the convergence of four factors that seem certain to drive green business forward: external demand from consumers, business partners, and regulators; employee enthusiasm; the growing availability of affordable technology; and a rising awareness among business leaders of green’s potential for top- and bottom-line growth.

**External demand:** Three key external stakeholders — consumers, business partners, and governments — are driving the demand that companies go for green. They are major influencers across the business value chain, and clearly, companies are responding to their desires.

Consumer concern for the environment has morphed into buying behaviors that are at least somewhat recession-resistant. An Edelman survey of 6,000 global consumers conducted from August to October 2008 found that 87 percent believed it was their “duty” to contribute to a better environment and that in a recession 55 percent would still pay more for a brand if it supported a cause in which they believe.

Retailers and manufacturers are demanding greener products and supply chains in their efforts to reduce environmental impact, cut costs, and better serve customers. For instance, when Walmart decided to sell only concentrated laundry detergents, which require less packaging and space for transport and storage, it precipitated an industry-wide shift. In July 2009, the world’s largest retailer announced support and funding for a consumer index for evaluating product sustainability, the first
phase of which will require more than 100,000 Walmart suppliers to fill out sustainability surveys.

Governments, too, are driving companies to go for green. The regulatory environment is tightening, and the recession has presented an opportunity to provide financial stimulus to green industries. In 2009, for example, proposed “cap and trade” legislation aimed at controlling greenhouse gases is wending its way through the U.S. Congress, and the Obama administration included a $70 billion stimulus package for renewable and efficient energy technologies and manufacturing in the American Recovery and Reinvestment Act. The European Union’s climate and energy policy has set targets for reducing emissions to 20 percent of 1990 levels by 2020 through the use of individual country caps and the reduction of emissions allowances under the E.U. Emission Trading System. In a September 2009 address to the United Nations, Chinese President Hu Jintao said his nation would generate 15 percent of its energy from renewable sources within a decade, and for the first time, he committed to reducing the rise in China’s carbon emissions rate.3

**Employee enthusiasm:** The initial response of GE’s senior management team to ecomagination notwithstanding, internal stakeholders are also encouraging companies to formulate and pursue sustainability initiatives. As the senior manager at a major consumer products company said when we asked about employee interest in green programs, “I have been in the environment, health, and safety business for 20 years, and have never seen anything like the groundswell of the past year.”

Green is rapidly becoming an essential element in creating a compelling employer brand. In a 2008 National Geographic survey, more than 80 percent of the U.S. workers polled agreed that it is important to work for a company or organization that makes the environment a top priority. The world’s largest private energy service provider, Germany-based E.ON AG, is publicizing its sustainability efforts and a growing stable of renewables businesses as an integral element in its employer brand. “The environmentally and socially aware will want to join us, and they’ll want to stay with us,” said Chief Human Resources Officer Christoph Dänzer-Vanotti.

Green also provides a valuable opportunity to engage employees on the job — leading not only to greater employee satisfaction and retention levels but also to cost savings and value creation. Harrah’s Entertainment’s CodeGreen initiative is a rigorous attempt to extend the work of 40 local “green teams” of employees throughout the company. Harrah’s expects its “Power Down” campaign, which asks the company’s 85,000 employees to act on an individual basis to conserve electricity at work, to deliver savings of 2 million kilowatt-hours annually.
Affordable technology: Like every other corporate decision, the decision to go for green must make sense in financial terms. The growing availability of cost-effective technologies and, indeed, the emergence of an entire ecosystem that supports their development and commercialization are ensuring the profitability, or at least the economic feasibility, of green initiatives.

Solar energy provides a good example of this driver in action. For many years, the widespread adoption of solar energy systems was hampered by the high cost of photovoltaic (PV) cells per kilowatt-hour compared with other energy sources. But as the price of traditional energy skyrocketed, low-cost thin-film technology (which had existed since the 1970s) was commercialized and began replacing first-generation crystalline silicon PV installations. Meanwhile, third-generation PV technologies that promise to combine cost-effectiveness with higher productivity are being researched. As solar energy’s cost per kilowatt-hour continues to drop, adoption rates will continue to rise.

There is a growing ecosystem, an essential feature in the ultimate affordability of green initiatives, supporting and stimulating solar's technological progress. Colleges and universities, such as the Georgia Institute of Technology and the University of Delaware, are partnering with the National Center for Photovoltaics to undertake the research needed to create and test new advances in technology. The U.S. government is funding the development of green technology with grants and loan guarantees. The Chinese government is offering subsidies of 50 percent of solar power project construction and transmission costs, and even higher incentives for the development of solar farms in remote rural areas. Venture capital and hedge funds, such as Khosla Ventures, CMEA Ventures, and Virgin Green Fund, provide the financing needed to launch and support companies that aim to commercialize solar technology. Finally, there is a growing host of technology and service providers, such as First Solar, Sharp Electronics, and Solyndra, that make up the still-emerging solar power sector.

Green's bottom and top lines: Although many corporate green initiatives began as exercises in corporate social responsibility and public relations, more and more leaders are recognizing that going for green can have a dramatic effect on their companies' financial results. To capture this value, they are using green programs to eliminate waste and drive efficiency throughout the enterprise and, in more advanced cases, to create top-line growth by bringing new product and service offerings to market.

The savings that can be captured in green initiatives are very clear, and new avenues for such savings are emerging throughout companies. For example, since 2006, Kaiser Permanente has recorded savings of
$4.8 million by purchasing only IT hardware and software that was registered with EPEAT, which allowed the company to gauge and quantify the environmental impact of its purchases. The value-creating potential of going green is demonstrated most dramatically by GE’s ecomagination, which is targeting $25 billion in revenue in 2010.

Further, the growing recognition of green’s financial returns is evident in corporate behavior even during the worst recession in 75 years. When Greener World Media surveyed its intelligence panel of 2,480 businesspeople in the summer of 2009, it discovered significant increases in corporate hiring and spending on environment, health, and safety compared with late 2008, when the full extent of the economic meltdown was not yet obvious.\(^4\)

*The value-creating potential of going green is demonstrated most dramatically by GE’s ecomagination, which is targeting $25 billion in revenue in 2010.*
Because the forces described above are compelling and enduring, every company should be going for green to some extent. This is not a business choice but a prerequisite, particularly for major companies. More and more companies are coming to the realization that if they don’t address the green challenge in a rigorous way, their costs will increase over time, their reputations will suffer, and they will miss what are sure to be some of today’s and tomorrow’s most valuable market opportunities.

That said, the proper commitment to green will vary widely among companies. Each company must weigh its own green potential, based on its industry, business strategy, capabilities, financial position, and leadership commitment, and then craft an approach for realizing that potential. Generally speaking, this analysis will direct companies to go for green at one of three levels: Responsible Green, Efficient Green, and Differentiated Green (see Exhibit 1, next page).

**Responsible Green:** Aside from ignoring environmental impact altogether (an increasingly less viable course in today’s world), the least-evolved level of green business is characterized by a limited and legalistic approach to sustainability. Companies that are pursuing green at this level are focused on projects and initiatives designed to ensure compliance with environmental laws and regulations in the locales in which they operate. They are also responding to the green demands of value chain partners they cannot afford to lose. For instance, Walmart’s suppliers will likely complete the retailer’s sustainability survey in order to maintain their relationship with a major account, and computer makers that wish to earn Kaiser Permanente’s business will register their products with EPEAT.

This is the minimal level of green business. It does not require that companies develop capabilities that support green; depending on the industry, it might not even require a dedicated environmental function within a company. But it is a moving target, so even at the Responsible Green level, there must be some degree of ongoing managerial attention, if only an awareness of ever-changing regulations and
### Exhibit 1
**Three shades of green**

<table>
<thead>
<tr>
<th>Responsible Green</th>
<th>Efficient Green</th>
<th>Differentiated Green</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>(measure, report, comply)</strong></td>
<td><strong>(engage, invest, drive continuous improvement)</strong></td>
<td><strong>(elevate, build innovation capabilities, integrate marketing messages, manage trade-offs)</strong></td>
</tr>
<tr>
<td>– Pursue green sustainability initiatives that focus on compliance</td>
<td>– Pursue green initiatives that enable cost reduction, improve efficiencies, and minimize waste</td>
<td>– Elevate green strategy from just a social responsibility initiative to a core strategy</td>
</tr>
<tr>
<td>– Measure and report results to government or value chain partners</td>
<td>– Leverage lean principles</td>
<td>– Use a “green lens” on the entire product life cycle, considering the environmental impact at each stage of the value chain</td>
</tr>
<tr>
<td></td>
<td>– Consider establishing a green minimum that provides both cost savings and revenue opportunities</td>
<td>– Integrate green messaging into brand positioning and communications</td>
</tr>
<tr>
<td></td>
<td></td>
<td>– Manage trade-offs explicitly across growth, cost, sustainability, risk, and service</td>
</tr>
</tbody>
</table>

Source: Strategy&
market conditions. At this level, some investments will be required to prove compliance — that is, to track and report varied metrics to a set of trade partners and government agencies. It is also highly likely that to the extent that environmental regulation increases, value chain partners pursue their own green initiatives, and customers refuse to buy goods and services that harm the earth, the bar for companies that restrict their environmental strategy to Responsible Green will continue to rise.

**Efficient Green:** More and more companies are operating at this second level of green business. They are approaching green with an internal focus, thinking about how they can simultaneously reduce environmental impact, lower costs, and enhance operating efficiencies. In the most advanced cases, they are applying lean principles of design and manufacturing and continuous improvement strategies, such as Six Sigma, to achieve long-term sustainability goals.

The sophistication of efficient green initiatives ranges widely. They can take the form of a simple e-mail message asking office workers to voluntarily turn off their computers before leaving work or a rigorous, ongoing effort to reduce waste by, in the case of a global manufacturing company, redesigning products. They can feature dedicated efforts and significant investments, but typically they deliver relatively short-term payback. The key is to balance the investments — in resources, systems, and assets — with the likely payoff. In Efficient Green companies, the continued focus of senior leadership on costs and efficiency savings provides significant support for green initiatives.

**Differentiated Green:** At its most developed level, the concept of green business is extended to seeking sustainable corporate growth. Differentiated Green companies pursue green in a strategic way throughout the value chain of the business and in a variety of new businesses and business opportunities. As described earlier, GE’s ecomagination is a leading example of how a company might pursue green as a core strategy.

The transition to Differentiated Green is an evolutionary process. Typically, companies that are pursuing Differentiated Green strategies are already practitioners of Efficient Green. They are successfully reducing their costs and environmental impact with green programs — thus gaining internal and external credibility. They have also begun to build the capabilities required to drive green business at the highest level.

Going for green at the Differentiated Green level requires significant investments of time, effort, and capital, which may not make sense for all companies. But more companies are moving in this direction
by going beyond Efficient Green objectives and initiatives. Kaiser Permanente is a notable example of such a company: It is approaching Differentiated Green in the way it is building new hospitals. It is spending more on materials, such as rubber flooring (instead of vinyl) and PVC-free carpeting, to construct health care facilities that are actually healthy. The company expects to obtain long-term paybacks in terms of more efficient operations, a healthier patient population, and increased market share.
Five key characteristics of Differentiated Green

Differentiated Green is more than a single initiative or a corporate social responsibility program; it is an ongoing and integrated effort. It requires a high degree of commitment to and belief in green that enables the leaps of faith required to make investments that feature long-term paybacks and that are often contingent on the creation of value in the marketplace. In short, Differentiated Green is a way of doing business. Companies that go for green at this level typically exhibit five key characteristics:

1. They elevate sustainability to a core business strategy.
   Differentiated Green is a core and integrated element in the overall strategy of a firm. The company’s products or services are green, they are marketed as green, and a substantial portion of the company’s revenue is green-related.

   To achieve this level of green, sustainability must be on the agenda of the senior leadership team as a cultural trait within the company, and it needs to be driven across the organization. Witness Dell, which has publicly committed to a goal of becoming “the greenest technology company on the planet.” Toward this end, the company has adopted a clearly articulated set of sustainability initiatives and goals for reducing the environmental impact of its products and its operations from design to disposal.

2. They embed green in their innovation efforts. Because so many green initiatives require new ways of looking at problems, as well as the extension of existing technologies and systems (or the creation of new ones) in the development of new processes, products, and services, Differentiated Green companies leverage innovation and new product development best practices to support their initiatives.

   These practices include the adoption of green design standards, cross-functional teams, stage-gate reviews, open innovation practices, and the rising tide of green technology to rapidly expand initiatives and maximize their impact. For instance, when designers at Nike first tried to create shoes in a green way, they often included materials
and pattern specifications that could not be manufactured effectively. They overcame these problems by making the design process more collaborative and inviting manufacturing engineers to join design teams. Nike is currently applying Considered Design principles to the design and production of an increasing number of its shoes. The result of an efficient green initiative itself, Considered Design’s aim is to reduce environmental impact by eliminating waste, using environmentally sustainable materials, and eliminating toxins in manufacturing processes and the shoes themselves. Nike plans to apply Considered Design standards to all of its products by 2020 and estimates that doing so will reduce waste in its supply chain by 17 percent and increase its use of sustainable materials by 20 percent.

3. They view the entire product life cycle through a green lens. In its ultimate form, Differentiated Green seeks “cradle-to-cradle” life cycles in which products or their content can be used again and again with zero waste. A good example is Nike’s idealistic long-term vision of sustainability: “to design products that are fully closed loop: produced using the fewest possible materials, designed for easy disassembly while allowing them to be recycled into new product or safely returned to nature at the end of their life.”

At Dell, there is also a clear recognition of the need to consider the entire product life cycle. The company knows that electronic equipment affects the environment throughout its life, from raw material acquisition, manufacturing, and distribution through end-consumer use and disposal. As a result, Dell has embedded green in its products via its Design for the Environment program. This initiative includes design specifications that are part of corporate environmental policy and governance standards and are used by innovators as a foundation for continuously improving the environmental performance of products and operations. It also provides a methodology that enables designers to consider the full product life cycle and a platform for significant cross-functional collaboration, in which designers engage with suppliers, supply chain experts, external recycling experts, and other downstream partners to fully understand the environmental implications of their design decisions.

4. They consider green as they make major decisions. Differentiated Green companies explicitly assess the implications of their choices in terms of environmental impact and weigh the trade-offs involved in all major decisions, including green programs (see Exhibit 2, next page).

There have always been trade-offs involved in business decisions, but traditionally, green considerations, such as carbon emissions, the use of renewable energy sources and recycled materials, energy efficiency, and material yields, have not been given proper weight against risk,
Exhibit 2
Five dimensions of decision making

- **Growth**: Support the company’s overall growth strategy
- **Cost**: Deliver products at competitive costs
- **Service/quality**: Meet customer service-level demands
- **Risk**: Avoid undue risk of supply disruption or product failure
- **Green**: Have a positive environmental impact (e.g., reduce carbon emissions, increase the use of renewable energy sources and recycled materials and improve energy efficiency and material yields)

Source: Strategy&
cost, growth, and service/quality. Efficient Green companies include the green dimension in their decision process, but they rarely implement programs that do not have a positive or near neutral return on investment. Differentiated Green companies analyze the same factors, but they see the higher growth potential of green products and as a result are willing to undertake initiatives that may add incremental costs to the business. Additionally, decision makers may allow for longer payback periods for green projects.

PepsiCo has incorporated sustainability as a criterion in its capital expenditure filter. All capital expenditure requests over $5 million must include a review of the sustainability issues and opportunities surrounding the request. The goal, according to the company’s website, “is to incorporate sustainability aspects in projects right from the start and track sustainability-related capital spend across PepsiCo.”

5. They integrate sustainability into corporate and brand marketing and messaging. As companies pursue Differentiated Green, they develop consistent messaging about their sustainability efforts and incorporate them into their communications at all levels. In this way, they attract and inform stakeholders, including customers, employees, investors, and regulators.

The sustainability index for consumer products that Walmart recently announced is a good example of how green initiatives can be structured and communicated in ways that bolster corporate credibility. The company will not own the index, but it will participate in and finance its creation. “The index will bring about a more transparent supply chain, drive product innovation and, ultimately, provide consumers the information they need to assess the sustainability of products,” explained Walmart CEO Mike Duke. “If we work together, we can create a new retail standard for the 21st century.”

Communicating Differentiated Green is its final characteristic because it is a two-edged sword.

When companies promote their sustainability efforts, they must be prepared to have all of their practices and products scrutinized by the public and environmental advocates. To the extent that their practices and products do not live up to external expectations, companies can be accused of greenwashing, which can damage corporate and brand reputations. Some of the major oil companies have opened themselves to greenwashing charges by heavily advertising their commitment to renewable energy sources, when in reality their renewable initiatives receive little managerial attention and represent only a tiny fraction of their business.
To avoid such problems, companies should not exaggerate their green efforts or promote green initiatives if their companies cannot withstand the scrutiny that will ensue. Further, even environmentally aware companies should recognize that public expectations about corporate sustainability efforts are continually rising. A message might be positively received today, but could easily be perceived next year as too little, too late.
Green is a journey, not a destination

No matter which level of green companies seek, their leaders should recognize that everyone in the extended value chain from the producers of raw materials to individual consumers will have to accept responsibility for reducing the human impact on the environment. For this reason alone, sustainability has become a permanent priority on the corporate agenda and is best addressed in an enduring way with a capabilities-driven strategy.

Leaders must realize that the higher their company’s green aspirations, the greater the effort that will be demanded. The more advanced that green initiatives become, the longer they will take to plan, execute, and deliver measurable results. Further, to achieve the best results, companies will need to develop new capabilities that offer the knowledge, tools, and skills needed to meet the challenges of sustainability and capture the opportunities of green business.

The demand for going green and the requirements for success in that endeavor are substantial, but so are its potential rewards. Those companies whose leaders approach sustainability from an inclusive strategic perspective of cost competitiveness and value creation will open the doors to a more profitable future.
Endnotes


2 Edelman 2nd Annual goodpurpose Global Consumer Study.


6 “Environmental Sustainability,” www.pepsico.com/Purpose/Sustainability/Environmental-Sustainability.html.

Strategy& is a global team of practical strategists committed to helping you seize essential advantage.

We do that by working alongside you to solve your toughest problems and helping you capture your greatest opportunities.

These are complex and high-stakes undertakings — often game-changing transformations. We bring 100 years of strategy consulting experience and the unrivaled industry and functional capabilities of the PwC network to the task. Whether you’re charting your corporate strategy, transforming a function or business unit, or building critical capabilities, we’ll help you create the value you’re looking for with speed, confidence, and impact.

We are a member of the PwC network of firms in 157 countries with more than 184,000 people committed to delivering quality in assurance, tax, and advisory services. Tell us what matters to you and find out more by visiting us at strategyand.pwc.com.

This report was originally published by Booz & Company in 2009.