



THE BOSTON CONSULTING GROUP

# "Green" Competitive Advantages

How companies succeed in integrating sustainability goals with growth strategies

A Working Paper from The Boston Consulting Group

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# Preface

The Boston Consulting Group's "working papers" provide insight into everyday consulting practice and internal discussions of strategic topics and positions. They summarize concepts developed in the context of different individual projects on similar issues, with the goal of providing a wider audience with the respective findings. BCG working papers are works in progress and meant to serve as sources of inspiration for deeper specific discussions of strategic topics.

# Content

"Green" Competitive Advantages: How companies succeed in integrating sustainability goals with growth strategies	3
1. Looking in the crystal ball: trends, risks, and (new) business	6
2. Rising expectations: good profits with a good conscience	9
3. Competitive sustainability: clarity about position and direction	10
4. Values management: corporate integration of "green" goals	12
5. Using market opportunities: sustainability as an innovation driver	15
6. Conveying changes: communication paths and key messages	17

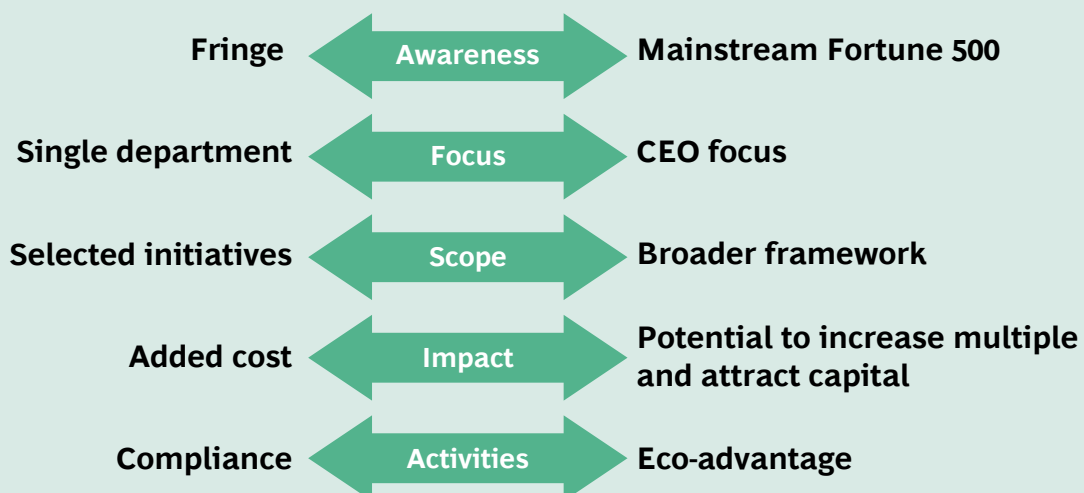
# "Green" Competitive Advantages

## How companies succeed in integrating sustainability goals with growth strategies

**T**he "inconvenient truth" about climate change and its grave consequences has changed the perception of environmental topics. Certainly since the fall of 2006, with the publication of the Stern Review estimating the damage caused by global warming at 5% of GDP, or when Al Gore was awarded the Nobel Peace Prize in October 2007, the integration of our environmental and economic future has stopped being considered a sideshow for "alternative" energies, products, and strategies. Regardless of their size, industry, or region, companies are

now developing "green" initiatives. And there is a new dimension. Companies are no longer mainly concerned with defending themselves against external demands or conducting PR-/CSR activities to preserve their reputation but are rather engaged in economic activities to ensure their future, out of self-interest. It is no longer a matter of launching isolated "eco" activities or optimizing business processes and divisions from the perspective of sustainability. Instead, it is strategically integrating sustainability in all corporate activities. Exhibit 1 shows recent shifts in the corporate response to sustainability topics.

**Exhibit 1: Five key shifts in corporate response to sustainability issues**



Source: BCG

In the consensus on general goals—sustainability, conserving non-renewable resources, energy efficiency—companies have to find their own ways to combine sustainability with growth and value-creation goals. Their ways can look very different, depending on the product, market context, industry, stakeholder interests, and strategic differentiation. They have numerous advantages—but hold just as many risks (see exhibit 2).

In the past few years, The Boston Consulting Group has coached numerous companies worldwide on understanding the expectations of different stakeholder groups, adopting sustainability aspects, integrating them with their corporate strategy, and effectively communicating them. Out of this experience, we have developed the "Green Transformation of Companies" concept. In analyzing and developing possible options, there are two intertwined perspectives: the inside-out view that illuminates market developments, stakeholder expectations, and competitive position, and the outside-in view, which considers the company's vision and goals, organizational conditions, and communication strategy.

In developing its own sustainability strategy, a company must answer six general questions:

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### From the outside-in view:

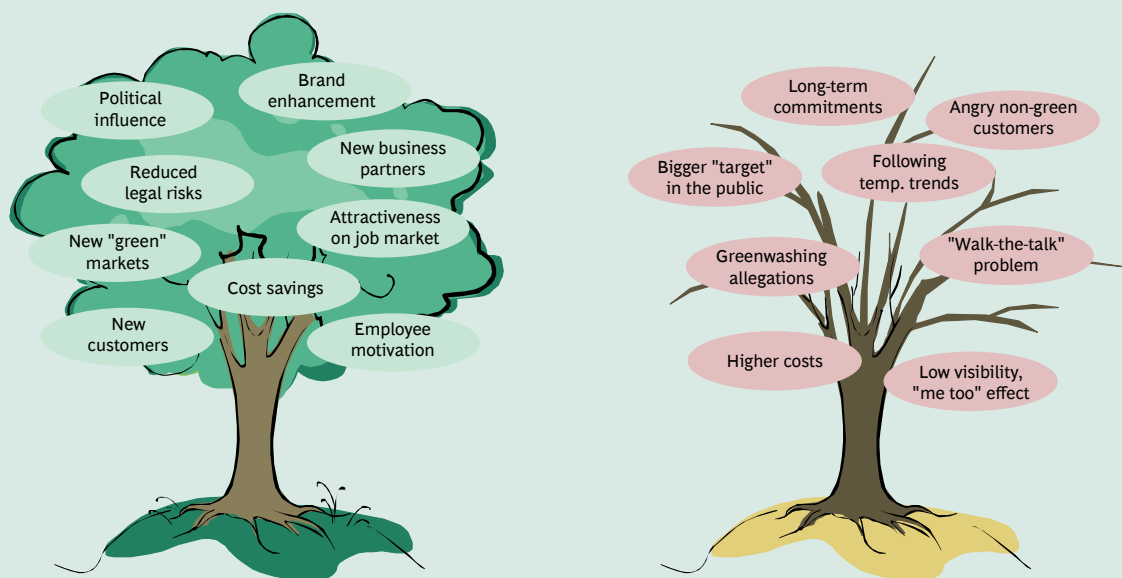
- 1 How will the framework conditions for the individual businesses and activities develop?
- 2 How will the expectations of relevant stakeholder groups change?
- 3 What are the competition's initiatives and positions—and which opportunities are there for differentiation?

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### From the inside-out view:

- 4 How do overall strategy and sustainability goals connect with each other?
- 5 What organizational changes are required and what form of cooperation would help to achieve the sustainability goals?
- 6 What are the key "green" messages and what is the appropriate communication strategy?

## Exhibit 2: Green initiatives drive advantages—and hold risks



## Exhibit 3: The BCG approach to green transformation

### Outside-in view

#### 1 Business context

- Environmental future scenarios
- Political/legal situation
- Business implications

#### 2 Stakeholder analysis

- Relevance of environmental issues
- Evaluation of stakeholder expectations
- Gap analysis

#### 3 Competitor/peer benchmarking

- Benchmarking scope
- Positioning landscape
- Differentiation, strategic options

### Inside-out view

#### 4 Overall direction

- Vision
- Mission
- Strategy

#### 5 Content development

- Market opportunities and commitments
- Environmental groups
- Implementation and institutionalization

#### 6 Communications

- Key messages
- Communication strategy
- Communication concept

Source: BCG

# 1. Looking in the crystal ball: trends, risks, and (new) business

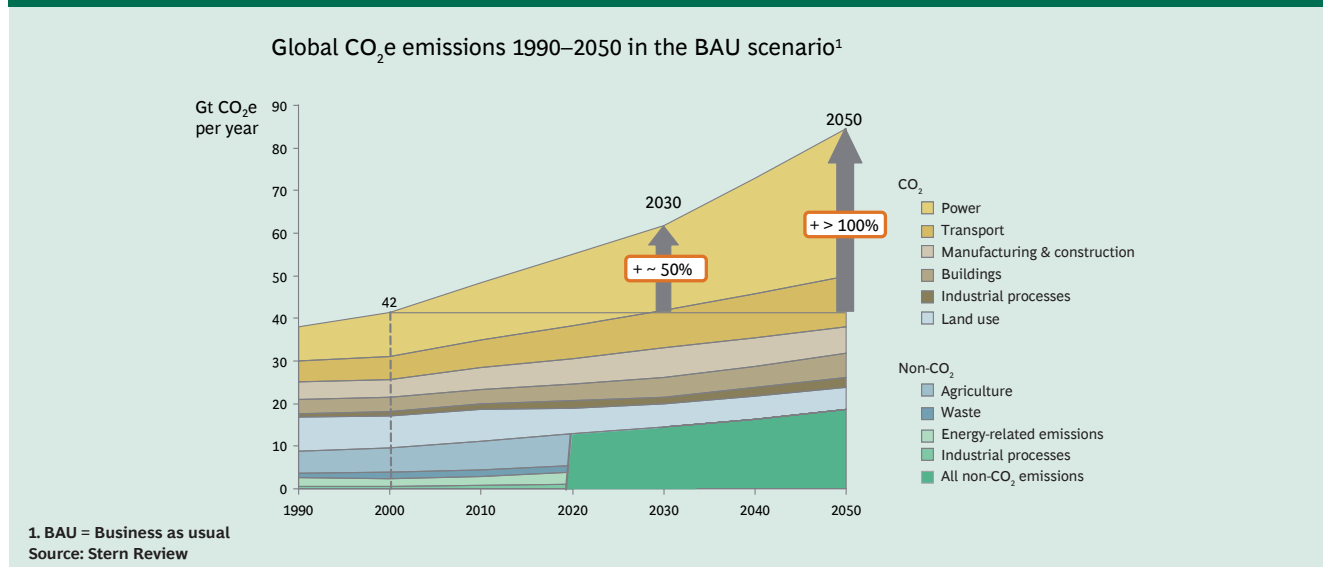
What if things continue as they are now: despite catastrophic scenarios, climate summit meetings, political slogans, NGO actions, and a flood of media stories, goals are formulated but continue to be missed. Worldwide CO<sub>2</sub> emissions remain unabated. By 2030 they increase by 50%, in 2050 they double compared to their 2000 level. Exhibits 4 and 5 show different scenarios and their costs.

It is extremely likely that regulatory measures will be imposed to slow down this increase. This is suggested by discussions already underway, as well as the change in public

opinion. Thus, surveys in the U.S. now count the issue of regional "air pollution" as one of the most urgent problems besides global warming; in the EU, rising numbers of people expect environmental problems to be solved only through stricter regulation, more severe penalties, and tighter controls. Governments in the U.S., the EU, and China are responding on different levels to demands for climate and environmental protection with new—or strengthened—regulatory efforts and legislation (see exhibit 6).

It is true that, depending on their products, processes, and sectors, companies are affected by regulation in extremely different ways. The emissions produced by an energy

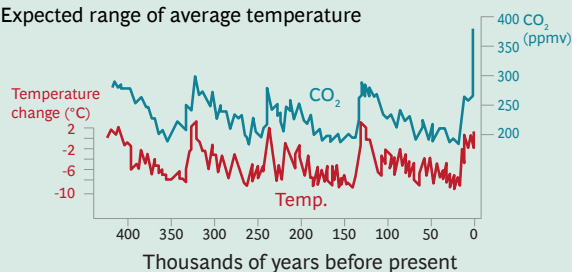
**Exhibit 4: The Stern-Review estimates rapid growth of greenhouse gas emissions**



## Exhibit 5: The costs of inaction by far outweigh the costs of action

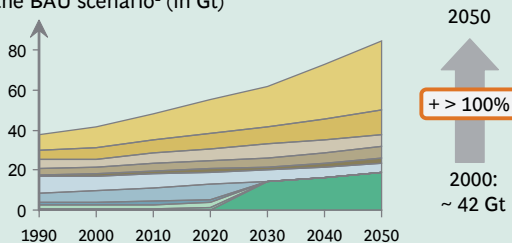
### Temperature has risen anomalously recently ...

Expected range of average temperature



### ... and will most likely continue to do so

Global CO<sub>2</sub>e emissions 1990–2050 in the BAU scenario<sup>1</sup> (in Gt)

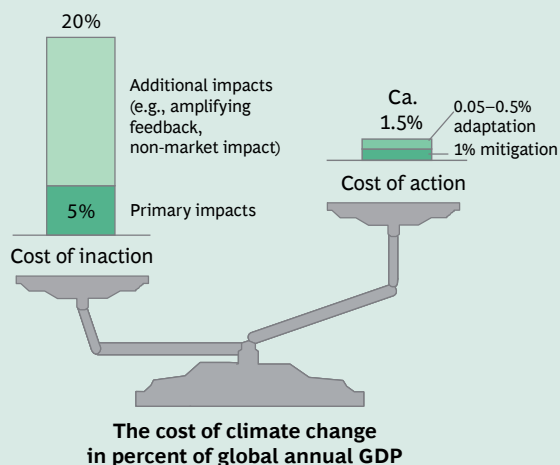


1. Assumed 5 °C temperature increase by 2050 2. Keep GHG between 500 and 550 CO<sub>2</sub>e ppm  
Source: Stern Review; Nature; IPCC

### If we don't act soon, the cost will be enormous

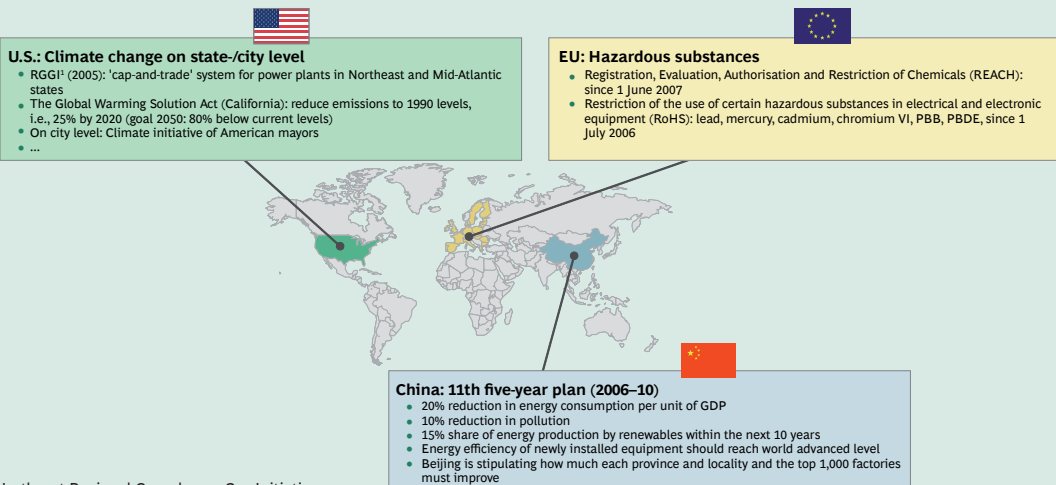
Business as usual scenario 2050<sup>1</sup>

Action scenario 2050<sup>2</sup>



## Exhibit 6: A comprehensive picture of the current legislation is vital

Example: selected legislation in China, the U.S., and Europe for various topics



1. RGGI: The Northeast Regional Greenhouse Gas Initiative  
Source: BCG; China 11th five-year-plan; europa.eu; gov.ca.gov



utility are of an entirely different magnitude than those from an industry conglomerate, a commercial firm, or a financial services provider. However, it is now relevant for every company to think beyond its individual environmental imprint and consider the possible consequences of further regulation and the resulting cost/benefit considerations. How are procurement, transportation and energy costs changing? What alternatives are there? How sustainable, energy-efficient and environmentally friendly are the activities throughout the value creation chain? And how do various scenarios impact investments?

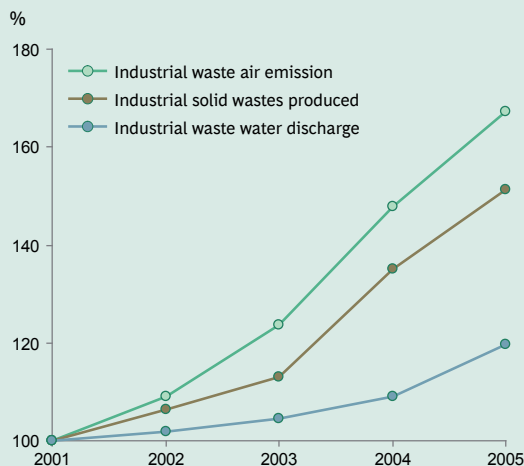
In addition to the necessity of analyzing and quantifying the risks resulting from sustainability, it is important to move from a defensive to an active position. What solutions can the company offer on its own? What sustainable products or services could have market potential? How

will the impact of the brand change (for good or bad)? Examples ranging from the development of compostable packaging to the development of "bio" brands prove that contributing to solving the problem cannot only have a positive influence on a company's reputation but also open up some very promising new business options.

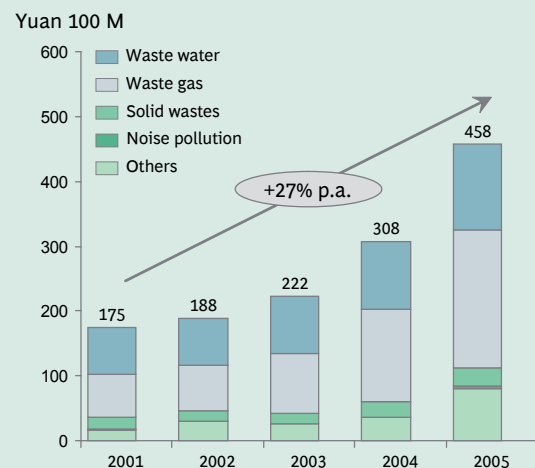
In China, whose rapid growth has made it one of the world's most active players in seeking solutions to global environmental issues, the market for products to reduce and prevent industrial air pollution has grown by 27% annually. In Germany, a traditional stronghold of environmental initiatives and leading international environmental technologies, the number of "green" consumers is growing. In the fiercely competitive retail industry, the "organic" or "fair-trade" segment has shown high growth rates.

## Exhibit 7: In China, all types of pollution have become a big problem ... and a big market

**Growth of industrial pollution in China 2001–05**



**Investment in the treatment of industrial pollution**



**In 2005, the market for treatment of industrial pollution was already more than €4B**

Source: National Bureau of Statistics of China



## 2. Rising expectations: good profits with a good conscience

**G**rowing network access and expanded use of media in the interactively networked "Web 2.0" world has transformed information demands and posed new—and much higher—requirements for corporate transparency and communications skills. When dealing with various groups of stakeholders, their differing expectations and influence must be considered when environmental aspects are involved.

Our analysis looks from the management perspective at the question of who is involved and what expectations distinguish each stakeholder group now and in the future. The first step involves identifying on the list of the groups directly involved in the company and indirectly affecting its business those whose influence must be considered especially high. This includes investors and owners, business partners and suppliers, local, regional and global political institutions, environmental lobby groups, and organizations of differing profiles, the general public, and those in the media who write about these subjects for them, as well as current employees and applicants that the company hopes to attract.

The priorities for attention and discussion with individual stakeholder groups are by no means obvious. For example, a Greenpeace campaign, such as a rating in the "Guide to Greener Electronics," requires an immediate response.

The differing perceptions of environmental issues in various markets—e.g., in Eastern and Western Europe—have direct impacts on sales projections and marketing strategies. Investor trends, such as the growth in the number and success of socially responsible mutual funds, are another factor that, despite being still only 10%, can be expected to play a more important role in the future.

Besides differentiating within stakeholder groups, it is important to clarify their expectations, with respect to both the company and its various markets and regions. Sustainability applies to products, processes, value creation, and supplier relationships, the role of the company in the public as well as its willingness (and ability) to provide environmental data on its activity, to set credible goals and accept responsibility for the company's contribution.

It is obvious that the expectations and value hierarchies of a highly industrialized, organized and informed European public are different than those in the highly dynamic growth markets of Asia. Especially for large global companies, finding the balance between adaptation to local requirements and brand consistency in a global market is an immense challenge. In the unregulated competition and global village of the Internet, companies are held responsible across borders—whether for a supplier's working conditions in a far-off factory or its environmental footprint at every location.

### 3. Competitive sustainability: clarity about position and direction

Two factors are decisive when a company finds itself competing on sustainability: timing and the intensity with which "green" goals are integrated and advanced. At what moment a competitor begins to analyze his business processes and strategies in order to focus on environmental criteria and what goals are adopted for acting (more) sustainably, will determine how its relative position within its industry changes. To estimate the strategic possibilities of using sustainability for differentiation, it is vital to have an overview of the situation and competitor activities (see exhibit 8).

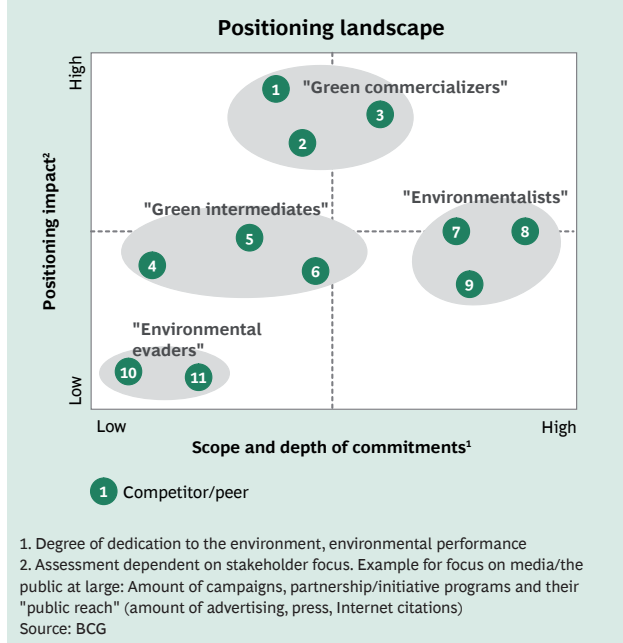
To make such an assessment, appropriate indicators for the sustainability commitment must be found and evaluated. These include, for example, eco-initiatives, public commitments such as membership in the United Nations Global Compact or other groups, environmental reporting or special sustainability initiatives by the company as well as positioning in the environmental rankings

of company performance, such as the Dow Jones Sustainability Index or the FTSE4Good.

A qualitative assessment of sustainability within a company can be made using criteria for the products and production processes. To give only a few examples: What share of sales comes from "green" products? How high are the investments in sustainability projects and energy efficiency? Are environmentally harmful substances used? For production processes, company efforts to reduce emissions and avoid waste, water and air pollution can be evaluated.

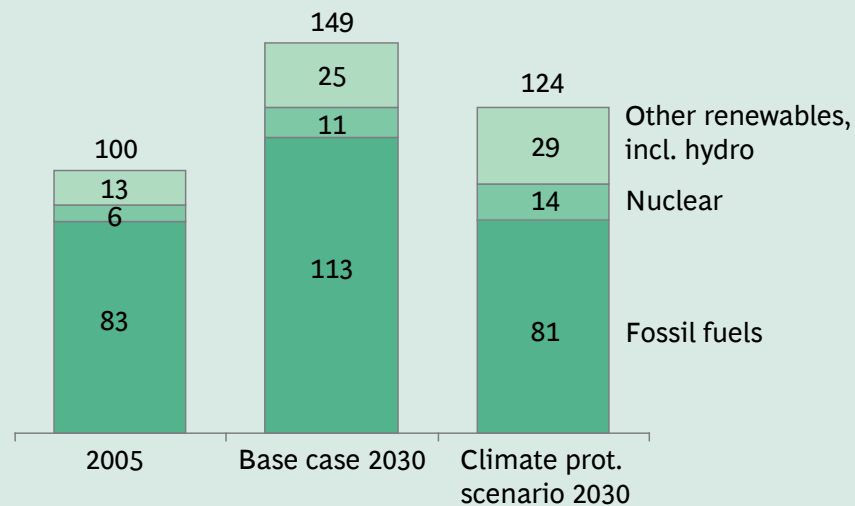
Analysis of the competitive context makes the company's position evident, as measured by the intensity of its efforts as well as already achieved differentiation and the available options for further development. Exhibit 9 shows the effects of different scenarios.

**Exhibit 8: Peers will likely form certain positioning patterns**



## Exhibit 9: Understand the dynamics that influence your business (example)

Primary energy consumption by source, 2005 and 2030 (index)



Scenarios can change a business

Should you invest in ...

... wind power?



... or cleaner coal?



Green transformation is no pure PR—  
it must make sense from a business perspective

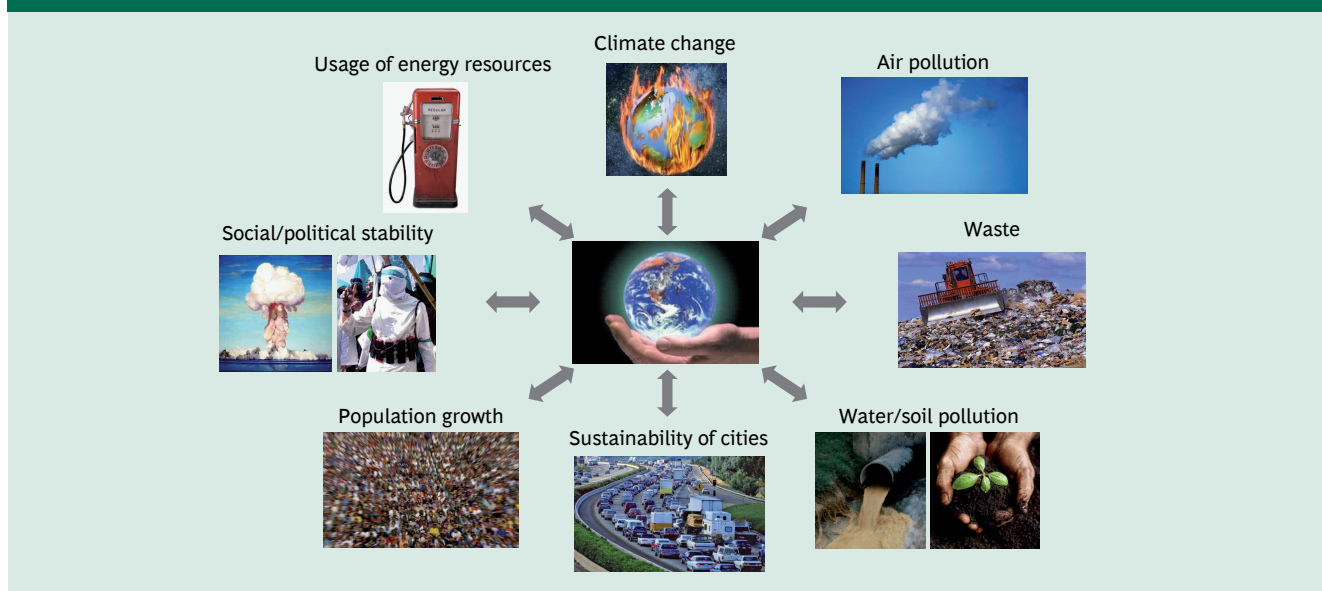
Source: BCG

## 4. Values management: corporate integration of "green" goals

**W**al-Mart saves the Planet" was the Fortune magazine teaser for a story about how an initially "green" PR campaign by the U.S. retail giant turned into a commitment reaching ever deeper into its business processes and became a new strategy. In an interview, CEO Lee Scott confirmed that what had been a defensive response to changing consumer expectations (and recurring complaints) turned into its exact opposite: the active inclusion of sustainability goals at all levels of the company and the insight that "there need not be any conflict between the environment and the economy."

Despite the skepticism with which many react to this transformation from "Saul to Paul," Wal-Mart is nevertheless serious about its "green campaign." It extends from new product lines (i.e., the "Baby George" collection made of organic cotton) to converting its truck fleet and achieving drastic energy savings of up to 30% in the operation of store business. The size of the company—Wal-Mart is the single largest user of electricity in the U.S.—and the visible implementation of its "green" strategy impose standards that extend well beyond its industry. They illustrate that as a corporate goal, sustainability (just like the ability to innovate) cannot be restricted to a single aspect such as energy

**Exhibit 10: Green initiatives circle around various environmental issues**



efficiency or waste reduction but rather changes the whole company—strategically and operationally (see exhibits 10 and 11).

The success of sustainability initiatives is closely tied to the commitment of top management. What forms the change

to a strong focus on "green" goals is the result of their degree of integration in the higher strategic goals and how the company views itself: vision, mission and strategy build on each other (see exhibit 12).

## Exhibit 11: Explore your company's main risks and opportunities

Probing questions to identify business-critical environmental aspects

Supply chain	Production/operations	Product use phase	Product end of life
Do your suppliers seriously harm the environment?	Does your production heavily pollute the environment?	Do your products pollute the environment?	Do your products result in significant amounts of waste?
Do you use dangerous raw materials?	Do you use large amounts of energy?	Do your products use large amounts of energy?	Do your products contain hazardous substances?
Are you affected by uncertain availability or prices in your supply chain?	Do you handle hazardous substances?	Are your products dangerous to use, or can they be misused?	Do you have to fulfill recycling quota?
...	Do you have significant transportation volumes?	Do your products protect the environment?	...
		Will an environmental trend significantly influence demand? 	
Source: BCG			

## Exhibit 12: Top management must agree on the overall direction



Source: BCG

Thus, every company faces the task of finding specific answers to the question of what levers can be used and where they can be found. This involves first anchoring sustainability goals in existing business processes and introducing changes. But beyond that, there is the issue of company

development: What new products or offerings can be developed to promote sustainability actively—and profitably? Exhibit 13 shows four basic questions to help guide a company's "green transformation."

### Exhibit 13: "Four S" approach proposed for the setup of a corporate green transformation

#### Scope

What businesses and geographies need to be involved in this program?

- Should it be initially focused regionally or globally?
- Should it be company-wide or focused on a few key businesses initially?

#### Scale

What set of activities should be done under such a program?

- Should it be more oriented towards increasing efficiency of products/processes, developing new green products, environmental reporting, or other?

#### Structure

What should be the process of managing this program?

- Should there be a separate structure/overlay or a lead by business units?
- How should the units be measured? What should be the metrics?

#### Sequence

What should be the implementation process?

- Should it be a phased approach, with milestones to check progress, or a "big bang"?

Source: BCG

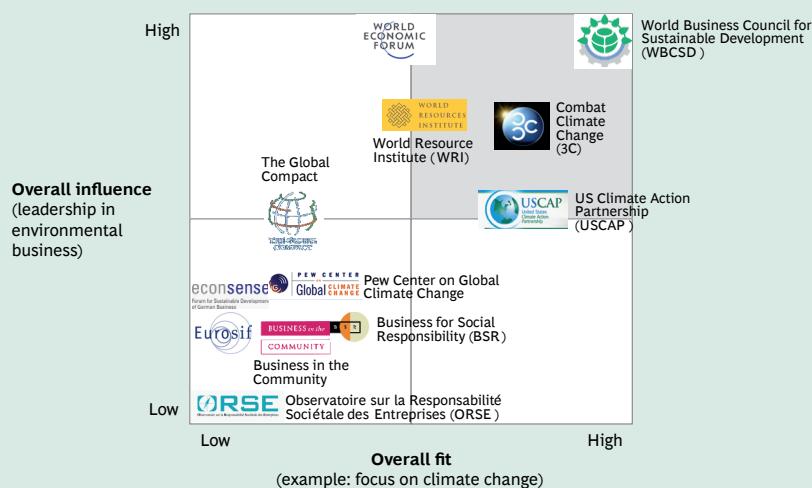
## 5. Using market opportunities: sustainability as an innovation driver

**A**nalysis of business products and processes from a "green" perspective can be an ideal starting point for innovation processes. The search for climate-friendly, waste-avoiding, energy-conserving alternatives, for example, can present opportunities for using existing competencies to actively advance development and open new markets. This can occur in the company's core area—think of BP's pioneering role in seeking renewable energy sources and commitment for biofuels. Equally promising are cooperative arrangements to combine competencies and enhance the potential for setting new standards and imposing new rules.

Thus, as part of the 2005 GE -wide "Ecomagination" project, GE Energy Financial Services started a joint venture with power plant operator AES that by 2010 is expected to reduce greenhouse gas emissions by 10 megatons from the use of "Ecomagination" products in the power plant industry. In July 2007, "GE AES Greenhouse Gas Services" announced it was developing standards for measuring emission reductions and would sell them to other companies.

Besides the targeted development of own offerings or products that are sustainability-oriented, there is a broad

**Exhibit 14: Identify high-priority groups for public involvement**



Source: BCG expert judgment



spectrum of other ways how companies can actively approach the challenges.

There is the option of considering a relationship with non-commercial environmental protection organizations (e.g., WWO Climate Savers) and deciding whether voluntary membership or more extended partnership would be worth taking into account and what consequences—and what costs—would result from it (see exhibit 14). Independent environmental organizations enjoy good reputations

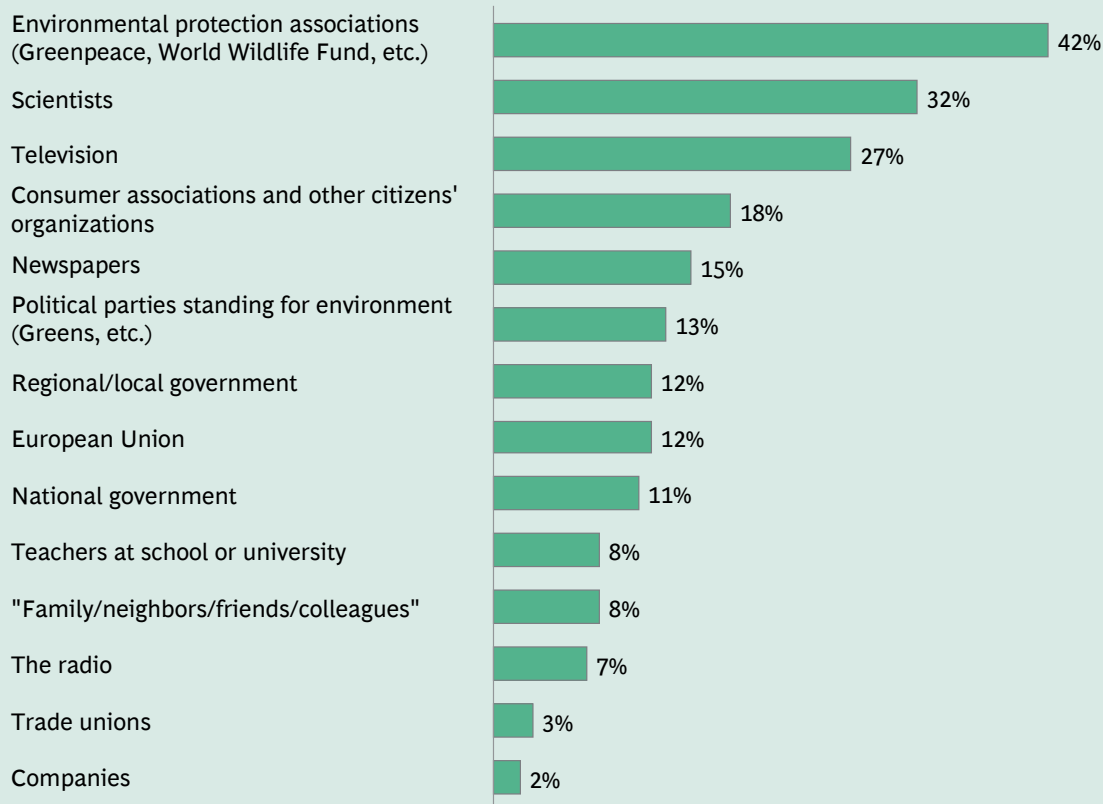
(exhibit 15) and can thus bolster trust in a company's green initiatives.

The more clearly and precisely the goals of the "green transformation" process are formulated, the more promising options can take shape. Scope and amplitude, time and resource needs as well as implementation and success measurements are the parameters that must be identified before the transformation process begins.

### Exhibit 15: If it fits into your strategy, try to profit from the positive image of environmental NGOs through partnerships

Survey of the New York Times and CBS News

Question: "From the following list, who do you trust most when it comes to environmental issues?"



Source: European Commission: Special Eurobarometer "The attitudes of European citizens towards environment," 2005

## 6. Conveying changes: communication paths and key messages

**T**he perspective has changed when sustainability is no longer considered mainly a PR topic and environmental issues are no longer limited to reactive measures but are instead seen to be in the interest of the company and actively integrated in its value creation and strategy (see exhibit 16). This transformation must, however, be suitably and credibly conveyed in the company's external image and in its communication with various stakeholder groups. This means formulating key "green" messages and presenting them as part of brand management, consistently and with appropriate differentiation.

Various communication strategies can work, and they can be successfully combined. They can range from a major brand relaunch to the inclusion of sustainability goals in existing campaigns, from R&D contributions to Web sites and participation in global platforms like environmental conferences (see exhibit 17).

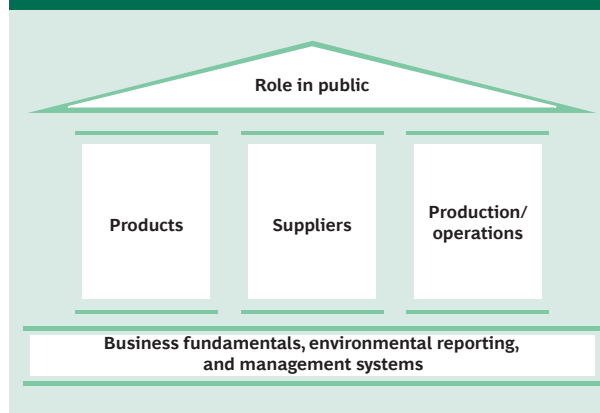
Formulating clear key messages that offer competitive differentiation and communicate understandable goals and measurable results is a prerequisite for being perceived consistently in various communication channels. They offer no insurance against conflicts between the company's standard and what is asked of it. Unpredictable isolated events, such as accidents or problems in individual business units, a fire in a

production facility, a leak from a single tanker, represent an immense challenge to an emphatically "green" sustainable corporate message, given the contrast between high, general expectations and appropriate responsibility for events.


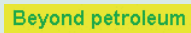


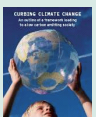

The logic of the media as they compete for sensation and attention can transform what are for the company unavoidable or immaterial events into contradictory and persistently negative effects. Developing a communication strategy that is coordinated throughout the whole company and also works in a crisis is not a secondary but rather an essential aspect of the "green transformation" process, in order to achieve not only short-term effects but also long-term competitive advantages.

Today—and even more in the years to come—sustainability and "green" topics are no longer sideshows at which citizen initiatives, environmental leaders and disaster-obsessed media make noisy demands. No longer treating sustainability reactively but instead actively promoting it as part of a corporate strategy is increasingly a precondition for growth that is healthy—in its dual meaning of offering good living and economic conditions and allowing sound profit-making—and able to maintain influential, globally respected and responsible corporate citizens (see exhibit 18).

### Exhibit 16: Environmental issues can be structured along five dimensions



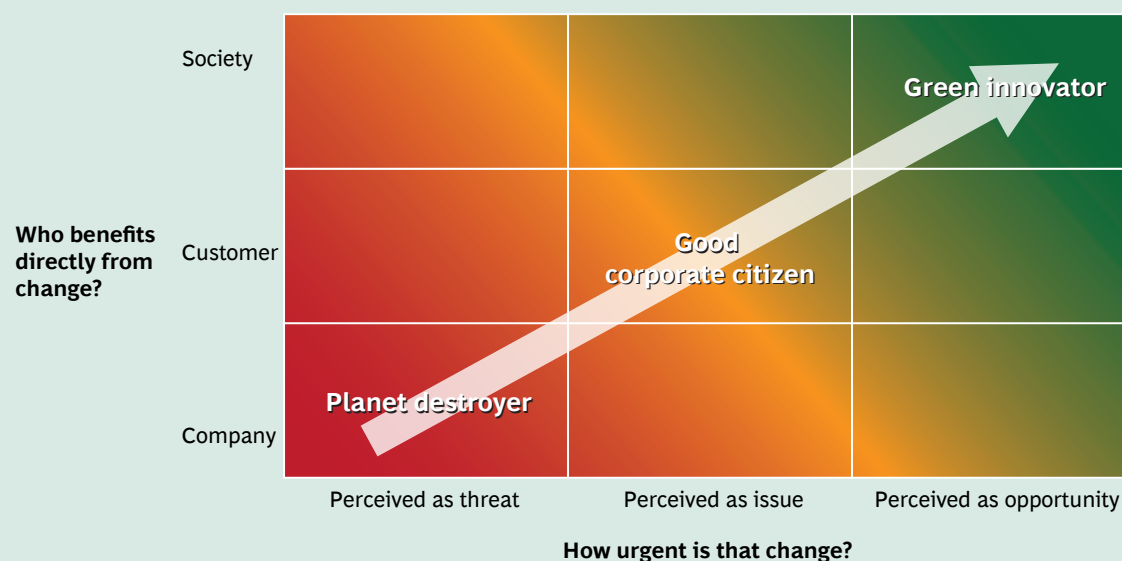
## Exhibit 17: Decide on your communication strategy

	Characteristics	Examples
Green image campaign	<ul style="list-style-type: none"> <li>Geared towards the public at large</li> <li>Includes a shift of the corporate brand to being "green"</li> <li>Heavily relies on mass media communication</li> </ul>	GE:  BP: 
Green product promotion	<ul style="list-style-type: none"> <li>Promotion of green products through different channels, e.g., Web sites, green labels, etc.</li> <li>Very common with consumer businesses</li> </ul>	Philips:  
Topic leadership, public contribution	<ul style="list-style-type: none"> <li>Leadership in scientific or public debate</li> <li>Contribution through research projects, political engagement, voluntary agreements, etc.</li> </ul>	Vattenfall:  Total: 

Different strategies can be combined

Source: BCG

## Exhibit 18: Being "green" takes more than good corporate citizenship How far do you want to go?



Source: BCG

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