THE SUSTAINABLE ENTERPRISE
Learning from DJSI Leaders

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Preface

A few years ago, most of my colleagues considered the concepts *sustainability* and "responsibility" nothing but fads. They thought that after a while in the headlines, these ideas would fade and everything would return to *business as usual.* Nowadays, executives who are still not taking these terms seriously are in real danger of disappearing.

In my opinion, it has become clear that responsible business cannot be limited to the creation of value for shareholders. The world is becoming increasingly aware that businesses have to contribute to society's sustainability, as well as the physical environment. There is no other real way forward. But, of course, we can still discuss the wide scope of these ideas and how to best embed them in our decision making. In this sense, this book is an important step forward.

The basic objective of the authors is to contribute to the definition of a sustainable enterprise. In doing so, they have analyzed in depth the 18 market sector leaders of the Dow Jones Sustainability World Index (DJSWI). I consider this system of benchmarking excellent, because instead of trying to find out the average behavior of most companies, they look directly at the best ones. Of course, this approach does not provide a full picture of the current situation. That kind of analysis would be good for journalists, or for business leaders with limited foresight. This book provides an image that, even if it's not perfect, reflects a vision of the future. And I have always considered this approach much more compelling and helpful. This is good information that helps proactive business people to make forward-looking decisions.

I would like to highlight the academic rigor and relevance of the book. It is the result of years of research. In pursuing their objectives, the authors have employed a clear method and carried out a precise analysis. Nevertheless, this is not a book written by academics for academics, but one which takes a practical approach based upon an academic foundation. As a result, the book provides practitioners with useful examples and best practices, as well as food for thought.

In the introductory chapter, the authors set up the rationale of their work explaining in detail the concepts of *sustainable enterprise, stakeholders, sustainable development,* etc., and their interrelationships. The following four chapters deal with important aspects of the sustainable enterprise: governance, strategy, dialogue with stakeholders and systems and procedures. In the closing chapter, the authors present a model of sustainable enterprise and summarize the most important conclusions of their research. Although it is worthwhile reading the book from the beginning to the end, this structure gives readers the option of focusing first on the subjects that appeal to them the most.

I wouldn't like to finish this short preface without thanking the authors for their contribution to the conceptualization of sustainability and for their efforts to help companies understand its challenges and practical ways of achieving them.

EDUARDO MONTES
Chairman of the Club of Excellence in Sustainability

Introduction [1]

THE relationship between the worlds of business and the physical environment has traditionally been one of indifference and even oblivion. Nature, and in particular the biosphere, has been looked upon as an inexhaustible fountain of resources and a waste basket in which to dump the massive amounts and types of waste produced by business activities. Likewise, and even in the best of cases, companies have not given more than a cursory glance to social responsibility, or at least they have not integrated it into their strategy or routine activities.

This view of the world and of business activity was based on the following: a belief, be it conscious or unconscious, that the world and its resources are infinite; an ignorance of the network of temporal and spatial relationships between all forms of life on this planet; and indifference to the critical role that companies play in society. For these reasons, companies have viewed their impact on the environment and on society as nothing more than externalities.

Fortunately today, humankind in general and the business world in particular is starting to wake up to the fact that this view of the world is too simplistic and optimistic. The planet's carrying capacity is limited. Resources are finite. Technology does not have all the answers. Our actions have consequences for ourselves and for future generations. Social responsibility does not recognize either spatial

[1] This project has been made possible thanks to the generous support of BBVA Foundation. This is a research project of the Center for Business in Society (CBS) and the Center of Globalization of IESE Business School, in collaboration with SAM Research Inc., the research company of SAM Group Holding in Zurich. We would like to acknowledge SAM's support and in particular the kind collaboration of Edoardo Gai, Stéphanie Capdeville, Carl-Johan Francke and Niki Rosinski.

or temporal borders. The paradigm is changing, and one result of this change is the growing dialogue between firms and their social context. The need to move towards sustainable development is an idea that is gaining ground.

Although government, consumers, and society at large must all assume some responsibility for the current state of the social and natural system, it is clear that business plays a pivotal role in the development of society and nature, and as a result, in the state of the system. Therefore, to advance towards sustainable development we need sustainable companies. However, due to its relative novelty, the concept *sustainable enterprise* has not yet been well defined in management literature. As a result, company top executives and managers are to a large extent ill equipped to deal with the challenge.

The basic aim of this research project has been to shed some light on the concept *sustainable enterprise.* In short, we have tried to answer questions such as what a sustainable enterprise is, what its main characteristics are, and in which way it differs from the traditional enterprise model.

Our final objective has been theory building within the field of sustainable enterprise, to provide insight that is relevant for both practitioners and academia. Given the relatively new and unexplored nature of the concept *sustainable enterprise,* this study adopted an inductive research strategy (Eisenhardt, 1989; Yin, 1984). In such situations, an exploratory approach through case studies is most appropriate (Eisenhardt, 1989). We decided to study in depth the 18 market sector leaders of the Dow Jones Sustainability Indexes World. The rationale for selecting these companies was threefold:

1. Our aim was not to conduct a statistical study on the sustainability of the business world, but to learn from those companies with the greatest experience in and commitment to sustainability management.
2. The selection of DJSWI leaders.
   — The Research Division of Sustainable Asset Management (SAM) invites every year the 2,500 largest corporations included in the Dow Jones World Index (DJWI) to

participate in the Dow Jones Sustainability Indexes assessment.

— In Annex 1 we include the questionnaire that SAM Research sends to these companies. This questionnaire is based on SAM's definition of corporate sustainability: "corporate sustainability is a business approach that creates long-term shareholder value by embracing opportunities and managing risks deriving from economic, environmental and social developments".

— An average of more than 800 companies is analyzed every year. SAM Research, according to its methodology, selects those companies that are best managed from an economic, environmental, and social point of view, for the Dow Jones Sustainability Indexes. The identification of sustainability leaders for the Dow Jones Sustainability Indexes (DJSI) is based on the Corporate Sustainability Assessment of SAM Research, a defined set of criteria and weightings that is used to assess the opportunities and risks deriving from economic, environmental and social developments for the eligible companies.

— Only 10% of the companies in each business sector are chosen and, among them, the sector-leading company. In this way, we could be sure that we would focus our in-depth analysis on best-in-class companies and that, as a result, the outcomes of our study would be valuable for our target audiences.

3. The size of the sample (18 companies) and the fact that each of them represented different business sectors guaranteed the diversity of the information collected and, hopefully, the richness of our conclusions. In Annex 2 we include some details on these 18 companies.

As we will explain in more detail in Chapter 1, sustainable development implies a change in companies' value systems. Instead of maximizing shareholder value, sustainability becomes the ultimate goal. In this context, sustainability has a double meaning: as is the case with any living system, the basic objective of a company is to survive, but not at any price; as is also the case with any living system, this will to survive goes along with the ability of the company to contribute to the well-being of the social and natural system to which it belongs. From the feeling of belonging to the system and the willingness to contribute to it, another important attribute of sustainable enterprises follows—openness. Sustainable enterprises remain open to the social and natural system and, therefore, to a diverse array of stakeholders. As a result, sustainability has a deep effect on sustainable enterprises. With these ideas in mind, we built a framework that served as a guide for our research into the 18 companies. The framework consists of the following four components:

1. Sustainability has to be reflected in the attributes and roles of top corporate governance bodies.
2. Sustainability has to be embedded in companies' strategies.
3. Sustainable enterprises establish an open, honest and fluid dialogue with stakeholders.
4. Sustainability has to be reflected in companies' managing systems.

In our research we have followed three phases:

1. *Data collection.* This first phase involved several overlapping steps (Yin, 1984). Our research framework provided guidance for this study and allowed us to concentrate on identifying *meaningful events* or activities (Yin, 1981). To gather the necessary information to write the 18 research cases, we conducted a thorough search of publicly available sources. In particular, we carefully studied the information included in the companies' web pages. After analyzing the information gathered, we prepared a tailored questionnaire and sent it to each of the 18 companies (see the basic questionnaire in Annex 3). Finally, SAM has helped us to gather additional data that allowed us to complete most of the missing information. Also, SAM provided us with aggregated data on the 18 leading companies and the more than 800 companies that were analyzed in 2003. In this way, we could compare some of the practices of the 18 leading companies with those of the universe of firms analyzed by SAM

(see the questionnaires we sent to SAM in Annex 4). Although we present these three steps as consecutive, this phase has been a highly iterative process.

2. *Information analysis.* After collecting as much information as possible on the four components of our research framework, we carried out a deep analysis of it in the second phase. This analysis allowed us to gain some important insights into the main characteristics of a sustainable enterprise.
3. *Report writing.* In the third phase we wrote the four chapters that correspond to the body of this research and drew the most important conclusions.

In Chapter 1 we review the literature relevant to our research and present the conceptual framework on which the research is based. The next four chapters of this research report relate to the four components of our research framework mentioned above. Obviously, we are talking about sustainable enterprises, which, by definition, are systems that belong to the global system. In this sense, it is impossible to make clear distinctions among the components of the sustainable enterprise system without overlooking a crucial feature—the interrelationships among the components. Therefore, it should be kept in mind that the issues considered in each of the four chapters are closely related to each other.

The aim of Chapter 2 is to explore what the leading companies of the DJSI World's market sectors are doing to advance towards sustainable corporate governance and how they are doing it. After considering to what extent sustainability has permeated their values, we explain how sustainable development has affected the three basic attributes of top corporate governance bodies: composition, structure and process. In addition, we study the emergence of three core roles: embedding sustainable development into the firm's strategy, developing policies for enabling stakeholder dialogue, and internalizing and promoting corporate values.

In Chapter 3 we analyze how leading companies embody sustainability in their strategies. To do so, we first examine how these firms are integrating the concept of sustainable development into their strategy formulation process. Specifically, we study the structure that supports the integration of sustainability into the strategy formulation process. We also consider as equally important the identification of the mechanisms, policies, and tools used to implement these sustainable strategies. To explore this issue, we focus on how these leading companies are modifying their *balanced scorecards* (although other systems are also considered) to embrace sustainability.

Chapter 4 aims to explore the ways in which DJSI sector leaders are establishing a fruitful dialogue with their stakeholders and the main benefits they are obtaining from it. First, we identify and discuss the groups who have the biggest influence in firms' decisions. Second, we explore the different stakeholder engagement processes and mechanisms most commonly used by DJSI sector leaders. Finally, we observe how these activities benefit the development of a valuable and essential capability—the innovation capability.

In Chapter 5 we analyze how different managing systems and procedures can be aligned with the new sustainability approach. First, and probably most importantly, we examine human resource management systems, because they are essential in enabling people to feel engaged with the organization's mission and to build a unity of purpose. We also consider other systems, such as those related to environment, health and safety management, research and development processes, and supply chain management.

Finally, in the last chapter (Chaper 6), we highlight the main conclusions we have drawn from this research project. From them emerges what could be considered a paradigm of the sustainable enterprise.

1. The sustainable enterprise and its governance

THE objective of this chapter is to present the theoretical framework we have followed in this research. First, we review the literature on sustainable development in order to clarify the concept. Next, we summarize the main contributions of the sustainable enterprise and stakeholder management literatures. Then we revise the strategy theories relevant to this research and our view of the sustainable enterprise. Finally, we reproduce Chapter 3 of the *Code of governance for sustainable business* that constitutes the conceptual framework we have used throughout our research.

1.1. What is sustainable development?

The most widely known definition of sustainable development is the one coined by the Bruntland Commission in 1992: satisfying the needs of current generations without diminishing the potential for future generations to satisfy theirs. Since the Bruntland Report, scores of alternative definitions of sustainable development, sustainable economies, and sustainable societies have been proposed. The construct is fundamentally infused with multiple objectives and ingredients, complex interdependencies, and considerable moral thickness (Williams, 1985). As a consequence, some observers forecast that the notion of sustainable development will remain fuzzy, elusive, contestable, and/or ideologically controversial for some time to come (Beckerman, 1994; Levin, 1993). Yet definitional diversity is to be expected during the emergent phase of any potentially big idea of general usefulness; sustainability is akin to democracy, liberty, equality or security in this regard (Gladwin, Kennelly and Krause, 1995).

Gladwin, Kennelly and Krause (1995) propose a definition of sustainable development that includes the principal components of the ideas shared by a majority of definitions. In their view,

> sustainable development is a process of achieving human development [...] in an *inclusive, connected, equitable, prudent, and secure manner. Inclusiveness* implies human development over time and space. *Connectivity* entails an embrace of ecological, social, and economic interdependence. *Equity* suggests intergenerational, intra-generational, and interspecies fairness. *Prudence* connotes duties of care and prevention: technologically, scientifically, and politically. *Security* demands safety from chronic threats and protection from harmful disruption (p. 878).

The Bruntland Report definition has the advantage of simplicity, since in a few words it manages to define the elusive concept of sustainable development. However, its very simplicity carries with it a certain ambiguity, as is shown by the many re-readings and interpretations that it has provoked. In this sense, Gladwin, Kennelly and Krause's definition is more precise.

Instead of adding to the confusion by creating a new definition and in order to prepare the ground for its managerial implications, we will set out the elements that we believe are fundamental to sustainable development. In our opinion, sustainable development, in essence, involves *progress* towards *development* that *simultaneously* takes *economic, environmental and social elements* into account. It also requires *temporal and spatial depth.*

We use the word *progress* because, although we are talking about sustainable development, we are implicitly referring to a final objective which fundamentally involves a process of change from the current development model to another that has yet to be invented. Use of the word *development* is also important, firstly because it is a conscious attempt to avoid the use of the word *growth.* Does this mean that we have returned to the days of the apocalyptic prophets of zero growth? Does it mean that these harbingers of doom are now using the concept of sustainable development as a form of sheep's clothing? Not at all.

What it does mean is that emphasis and priority are now placed on an increase in general welfare and not an increase in the production of material wealth, though the two ideas are not mutually exclusive.

What do we mean by taking *economic, environmental and social* variables into account *at the same time*? Throughout its history, our current development model has treated financial capital as its ultimate (some might say sole) objective. Without going into some of the shadier areas, the accumulation of capital and, as a result, its proper rewards have been, and continue to be, a fundamental element in the financing of the Industrial Revolution and our current industrial era. What is called into question by the idea of sustainable development is whether this preeminence of financial capital over environmental and social capital has a place in today's society. Does it have a place in an era in which vast amounts of money are moved around every day, every second, on the financial markets? Does it have a place in an era in which our consumption of natural resources means, by definition, a growing consumption of nature itself rather than the yield that it creates? [2]. Finally, does it have a place when less than a quarter of the world's population is fortunate enough to be able to satisfy its needs with any kind of dignity? [3]. Some readers may ask if this means that companies should try not to earn money. This is, of course, not the case. The first premise for sustainable development is that there is no point in a company being supposedly consistent in its principles unless it is successful from a financial point of view. In other words, if companies do not make a profit, how can they be sustainable? In short, the main point is that neither the financial, nor the environmental, nor the social take special precedence. This means that financial prosperity cannot be achieved at the expense of the environment or society; nor, by the same token, can social or environmental progress be made at the expense of other variables.

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[2] The ecological footprint is a measure of the average area of land and water that we occupy in order to produce resources and absorb the waste generated. In 1998 it was calculated that the planet provided the equivalent of an average of two hectares per person per year. In the same year, the average ecological footprint was 2.6 hectares while in 1992 the figure was 2.5.

[3] For more information on this subject, see the *UN Report on Human Development*, published in 2003.

Finally, we have indicated that sustainable development involves the idea of *temporal and spatial depth.* With this we wish to underline the fact that current development must (or to be more precise, should) not only take into account the effect on current generations of people and the maintenance of current ecological systems, it must also provide the possibility of maintaining these systems indefinitely and contributing positively to the welfare of future generations. As regards spatial depth, the implication is that development must be considered as a necessity and the right of all human beings, not only those of us who have had the good fortune to be born in the first world.

1.2. Sustainable enterprise and stakeholder theories

In the management field, sustainable development theory has attempted to broadly redefine the global societal role of the business corporation (Gladwin, Kennelly and Krause, 1995; Hart, 1997; Sharma, Vredenburg and Westley, 1994; Shrivastava, 1995; Starik and Rands, 1995; Westley and Vredenburg, 1996). Researchers have proposed that our future lies in building sustainable enterprises and an economic reality that connects industry, society and the environment (Hart, 1997; Senge and Carstedt, 2001). According to Elkington (1997), the firm's ultimate objective is not singular (create value for its shareholders) but rather three-fold (create economic, ecological and social value). Therefore, the central value of the sustainable firm is not economic growth but rather sustainable development. In other words, one fundamental aspect to succeed in this endeavor is to develop business models and products that work financially, in addition to being socially, ecologically and ethically correct. Another stream of literature has made the attempt to demonstrate how firms might gain competitive advantage from sustainability strategies through efficiency cost savings and product stewardship (Hart and Ahuja, 1996; Porter and van der Linde, 1995; Shrivastava, 1995), acquisition of strategic resources and capabilities (Hart, 1995; Rodríguez, Ricart and Sánchez, 2002), and development of learning and dynamic capabilities (Hart and Sharma, 2004).

Although corporate governance is studied in the literature from different perspectives, agency theory plays a pivotal role. While producing valuable insights into many aspects of the manager-shareholder conflict, agency theory has overlooked important interdependencies among other stakeholders of the firm (Aguilera and Jackson, 2003). Thus, this dominant approach has impeded a profound analysis of the new idiosyncratic relationships of today's firms.

Stakeholder theory posits that the capacity of a firm to generate sustainable wealth over time, and hence its long-term value, is determined by its relationships with critical stakeholders (e.g., Carroll, 1989; Donaldson and Preston, 1995; Freeman, 1984; Jones, 1995; Jones and Wicks, 1999; Mitchell, Agle and Wood, 1997; Post, Preston and Sachs, 2002). In this theory, the corporation is defined as a socio-economic organization built *to create wealth for its multiple constituencies.* The stakeholders [4] of any firm are usually quite diverse, but relationships between the firm and each of its stakeholders have many common features; in addition, stakeholders have common interests (as well as potential conflicts) among themselves (Mitchell *et al.*, 1997).

According to the *Code of governance for sustainable business,* the stakeholders that are common, to a lesser or greater extent, in most businesses are as follows: shareholders and investors, public administration, customers, local communities, countries and societies, opinion makers, employees, financial institutions, suppliers and sub-contractors and strategic partners. Evidently, the relations between businesses and stakeholders are not, and could not be expected to be, always of the same kind. Depending on the nature of these relationships, and without the following being interpreted as an assessment of the importance of each stakeholder, we can classify them into three main groups or levels: consubstantial, contractual and contextual. *Consubstantial stakeholders* are essential for the business itself to exist. *Contractual stakeholders* have some kind of formal contract with the business. *Contextual stakeholders* play

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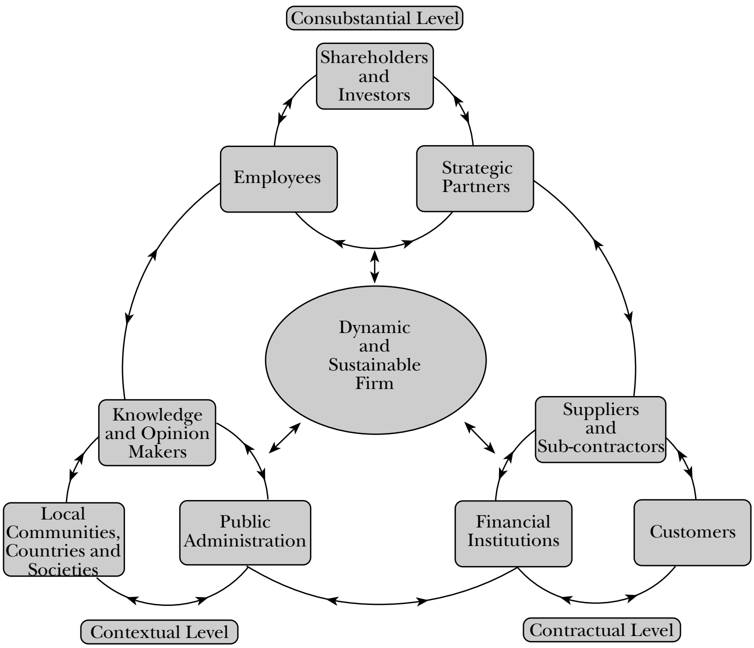
[4] Post, Preston and Sachs (2002) propose the following definition of stakeholders: "The stakeholders in a firm are individuals and constituencies that contribute, either voluntarily or involuntarily, to its wealth-creating capacity and activities, and who are therefore its potential beneficiaries and/or risk bearers."

a fundamental role in the credibility necessary to the business and ultimately in the acceptance of the business activity (business license). The latter represent the strongest and safest defense of common assets such as the environment, peace, safety, freedom and justice. Figure 1.1 shows stakeholders classified by type of relationship, although this will ultimately depend on the specific circumstances of each case (e.g. in some circumstances, the relationship between a business and its customers, or one customer in particular, may be more consubstantial than contractual). It can also be seen how, in addition to bi-directional business-stakeholder relationships, there are also other inter-relationships that businesses have to take into consideration.

FIGURE 1.1: **The business and its stakeholders**



According to this view, the critical challenge for contemporary management is recognizing the mutual interests between the firm and its stakeholders. Following this argument, Jones and Hill (1992) developed a *stakeholder agency* model and argued that managers should act as *agents* for stakeholders (the relevant *principals).* However, the multiple-valued objective implicit in stakeholder theory has led to much controversy and criticism (Jensen, 2000). Jensen considers that if widely adopted, stakeholder theory will reduce social welfare because it increases agency costs in economic systems. Surprisingly, in this same article Jensen asserts that "we cannot maximize the long-term market value of an organization if we ignore or mistreat any important constituency".

Building upon these previously discussed research streams, our approach to stakeholder theory is both normative and instrumental. The first argument is rooted in the idea that through business activities—and responsible business leaders—individual welfare and society in general can be improved. Thus, considering that corporations have a critical role and responsibility in social development, stakeholders have a legitimate interest in procedural and/or substantive aspects of corporate activity (Donaldson and Preston, 1995). Second, engaging with stakeholders through dialogue can be a way of obtaining legitimacy, or "a license to operate", as well as a way of gaining strategic sources of sustainable competitive advantage such as trust, reputation and innovation (Jones, 1995; Rodríguez, Ricart and Sánchez, 2002), or generating disruptive business models and innovations (Hart and Sharma, 2004).

As Arie de Geus explains in his book *The Living Company,* written after being a senior manager of Shell, in 1983 this company set up a team directed by De Geus to analyze those companies that had survived for over a century. After studying the 27 European, American and Japanese companies that met this criterion, they observed that all of them shared four traits that made them similar to living systems:

— Long-lived companies were sensitive to their environment. Whether they had built their fortunes on knowledge or on natural resources, they remained in harmony with the world around them. They managed to react in timely fashion to the conditions of the society around them.
— Long-lived companies were cohesive, with a strong sense of identity. No matter how widely diversified they were, their employees felt they were all part of one entity.
— Long-lived companies were tolerant. These companies were particularly tolerant of activities on the margin: outliers, ex-

periments, and eccentricities within the boundaries of the cohesive firm, which kept stretching their understanding of new possibilities.

— Long-lived companies were conservative in financing. They were frugal and did not risk their capital gratuitously. They understood the meaning of money in an old-fashioned way; they knew the usefulness of having spare cash in the kitty.

De Geus contrasts the values of the learning company, whose basic purpose is survival and progress in the long run, with those of the conventional company, whose priorities are determined by single minded financial criteria. In the former people come first, while in the latter people are mere cogs in a money-making machine.

In their work on visionary companies, James Collins and Jerry Porras found that "contrary to business school doctrine, 'maximising shareholder wealth' or 'profit maximisation' were not the dominant driving force or the primary objective of most visionary companies". What was found to be dominant was a core ideology that went beyond purely economic considerations, and in their interpretation, this is made up of core values and purpose. In the same way that individuals make decisions based on their beliefs or values, so do organisations. However within an organisation these values are collective. In cases where employees within an organisation share their values with those of the company, that company is more likely to be a successful, visionary and long-term organisation.

In their work on companies and the environmental challenge, Bansal and Roth (2000) identify the four following drivers: legislation, stakeholder pressures, economic opportunities and ethical motives. Legislation has been recognised to induce corporate ecological responsiveness (Lampe, Ellis and Drummond, 1991; Vredenburg and Westley, 1993). Penalties and fines have enforced the importance of complying with legislation (Cordano, 1993). Also, firms can be proactive and be ahead of legislation (Lampe, Ellis and Drummond, 1991). Stakeholder pressures, in particular from customers, local communities and environmental groups, can convince companies to consider ecological impact in their decision-making (Berry and Rondinelli, 1998; Starik and Rands, 1995). Economic opportunities also drive corporate ecological responsiveness. Firms can reduce their environmental impacts while simultaneously lowering the costs of inputs and waste disposal by intensifying production processes (Cordano, 1993; Porter and van der Linde, 1995). Rent-earning firm-based resources, such as corporate reputation, learning capabilities (Hart, 1995) and product quality (Shrivastava, 1995) can be developed through corporate ecological activities. Revenues can increase through green marketing, the sale of waste products and outsourcing a firm's environmental expertise (Cordano, 1993). Ethically motivated firms can be ecologically responsive because it is the "right thing to do" (Lampe, Ellis and Drummond, 1991; Wood, 1991).

1.3. Sustainable development and strategy theories

Following these theories and thoughts, we base our research of the DJSWI leading companies on two basic assumptions regarding the path towards sustainable development. First, firms must change their values, strategies and businesses models in order to embed sustainable development dimensions. Second, firms must open their boundaries through the establishment of a fluid, honest, and transparent dialogue with their stakeholders. We will now go on to explain the rationale for a sustainable and stakeholder centered enterprise drawing from the strategy theories *resourced-based-view of the firm, knowledge-based-view of the firm* and *dynamic capabilities.*

The resource-based view (RBV) (Barney, 1991; Wernerfelt, 1984) is an attempt to integrate the internal capabilities of the firm (Prahalad and Hamel, 1990) and environmental factors (Hannan and Freeman, 1977; Pfeffer and Salancik, 1978; Porter, 1980). Basically, the objective is to gain a competitive advantage by matching internal resources and capabilities with external circumstances (Andrews, 1971). RBV examines the resources and capabilities of companies that enable them to generate above-normal rates of return and a sustainable competitive advantage. Firm heterogeneity in acquiring and deploying resources and capabilities accounts for the generation of economic rents (Oliver, 1997). According to RBV, it is the rational identification and use of resources that are valuable, rare, difficult to copy and non-substitutable which lead to a firm's enduring variation and above-normal rates of return

(Barney, 1991). In other words, the resources must be tacit (causally ambiguous), socially complex, or rare (firm specific).

Some work on the resource-based view of the firm has differentiated tangible resources, such as people, machinery, financial capital, and intangible resources that are *knowledge-based* (Barney, 1991; Kogut and Zander, 1992; Nonaka and Takeuchi, 1995). Knowledge-based resources, for example, allow the use of tangible resources for yielding services (Teece, Pisano and Shuen, 1997) and skills (Kogut and Zander, 1992). Some authors use the word "resources" to describe tangible inputs such as people, property, and capital, which can be easily acquired from the market, and "capabilities" to describe intangible resources, such as know-how and skills, which are developed by people within the organization around tangible resources.

One notable attempt to take into account the RBV and the environmental challenge was the natural-based view of the firm (Hart, 1995), which is based on the resource-based view but taking nature into account. For Hart, strategy and competitive advantage will have their roots in facilitating environmentally sustainable economic activity. His conceptual framework was composed of three interconnected strategies: pollution prevention, product stewardship and sustainable development. Prior literature had identified ecological factors as determinants of sustainability. If sustainability is to be achieved, corporations must be reformed, redesigned and restructured to minimize their negative ecological impacts (Gladwin, 1992).

There are barriers to creating sustainable corporations. First, existing economic systems make many polluting and wasteful goods seem alluringly inexpensive, because they do not incorporate the full ecological costs of their production or use. Second, consumers in the developed countries have become accustomed to unsustainable levels and types of consumption. Third, vested interests, financial realities, and organizational inertia prevent radical restructuring of corporations toward sustainability (Shrivastava, 1995).

From our conception of the sustainable enterprise, the sustainable development challenge implies more focus on resources and competences oriented toward environmental and social problems. Managing the knowledge of the firm in these areas is key to meeting the challenge. Let's now review the characteristics of the knowledge-based view of the corporation.

Work on the resource-based view of the firm has tried to differentiate between tangible resources and intangible knowledge-based resources (Barney, 1991; Kogut and Zander, 1992; Nonaka and Takeuchi, 1995). To many authors, the most important resource is the knowledge embedded in the firm's employees and systems (Senge, 1990; Nonaka and Takeuchi, 1995; Conner and Prahalad, 1996). A view of the firm centred on the knowledge it bears is a concept that was initially developed by Polanyi (1966).

According to Kogut and Zander (1996), organizations exist because they can outperform the market in terms of sharing and transferring the knowledge, mainly information and know-how, that individuals or groups of individuals have within their boundaries. This knowledge is held at the employee level or group level and is inseparable from the firm since it is embedded within it. To gain competitive advantage, a firm will focus on managing its knowledge, in particular on its utilization and creation (Grant, 1997).

In the context of the move towards a sustainable development organization, creation and learning are important aspects of knowledge management. Nonaka and Takeuchi (1995) addressed these issues of creation of learning and knowledge. They explained that there are four aspects to the process of creation and learning. The first one is socialization, which consists in sharing the tacit knowledge of the organization. The second one is externalization, which consists in converting tacit knowledge into explicit knowledge. The third one is a combination, which consists in converting individual knowledge into organizational knowledge, and in then transferring it back into a different form. The fourth and last is internalization, which consists in converting explicit knowledge into tacit knowledge. He called this process the knowledge spiral in which knowledge is created and processed through the four steps.

In our summary of the proposals of the resource-based-view and knowledge-based-view we have seen their rationale and main contributions. The limitations of both approaches focusing on resources or knowledge are that, to some extent, they are static. To gain and maintain competitive advantage within a changing environment, it is necessary to build the capability of managing them in an evolving context. Our next step, then, will be to explore the dynamic capabilities of the firm.

As the name indicates, resources are central to the resource-based view. They constitute the basis of unique value-creating strategies and their related activity systems that address specific markets and customers in distinctive ways to achieve competitive advantage (Collis and Montgomery, 1995; Porter, 1996; Prahalad and Hamel, 1990). Dynamic capabilities are organizational and strategic routines by which managers acquire resources, modify them, integrate them and recombine them to generate new value-creating strategies (Grant, 1996; Pisano, 1994). They are the drivers behind the creation, evolution and recombination of other resources into new sources of competitive advantage (Teece, Pisano and Shuen, 1997).

Einsenhardt and Martin define (2000) dynamic capabilities as "the firm's processes that use resources—specifically the processes to integrate, reconfigure, gain and release resources, match and even create market change. Dynamic capabilities thus are the organizational and strategic routines by which firms achieve new resource configurations as markets emerge, collide, split, evolve and die". This definition is similar to the concept of "combinative capabilities" (Kogut and Zander, 1992).

In the context of sustainable development, firms should integrate in their vision the relevant values for implementing sustainable behaviour. Based on the definitions that we have seen earlier in this chapter, these values could reflect the necessity to respect the environment and the social context of the company, in addition to achieving superior performance in implementing its sustainable strategies, taking into account all stakeholders' multiple interests. Then the infusion of these values comes through the behaviour and the routines of the organisation. As we have seen, the top management team has a key role in spreading values by inspiring and encouraging their promotion. In addition, encouraging employees to innovate for better corporate sustainable development facilitates and strengthens the sustainable culture and mindset of the firm. All these converging efforts to acquire and practice sustainable routines will give idiosyncratic dynamic capabilities to the firm.

Some firms, in meeting the sustainable development challenge, will use dynamic capabilities sooner or better than their competitors, to create a resource configuration that gives them an advantage. The latter will be even stronger in the case of tightly woven activities (Prahalad and Hamel, 1990; Collis and Montgomery, 1995; Porter, 1996). Long-term advantage is reached through the resource configurations that managers build using dynamic capabilities, not just through the capabilities themselves. Effective dynamic capabilities are necessary, but not sufficient conditions for competitive advantage (Eisenhardt and Martin, 2000).

1.4. *Code of governance for sustainable business:* sustainable development and the persistent creation of value

After reviewing the literature on sustainability and strategy, in this sub-heading, we reproduce Chapter 4 of the *Code of governance for sustainable business* [5]. Its text constitutes the conceptual framework on which our analysis of the 18 market sector leaders of the DJSWI is based. As we will see, it draws heavily on the concepts and theories we have summarized above.

Introduction

1.4.1. It is well known that the purpose of all business strategies is to show companies how to create more value in a persistent manner. This depends basically on how attractive the industry is and how well-pitched the business model is. The success of the business model will also depend on the persistence of the competitive advantages on which it is based.

1.4.2. Both industry attractiveness and the suitability of the business model are decisively influenced by the concept of sustainable development. However, since this is the corner-

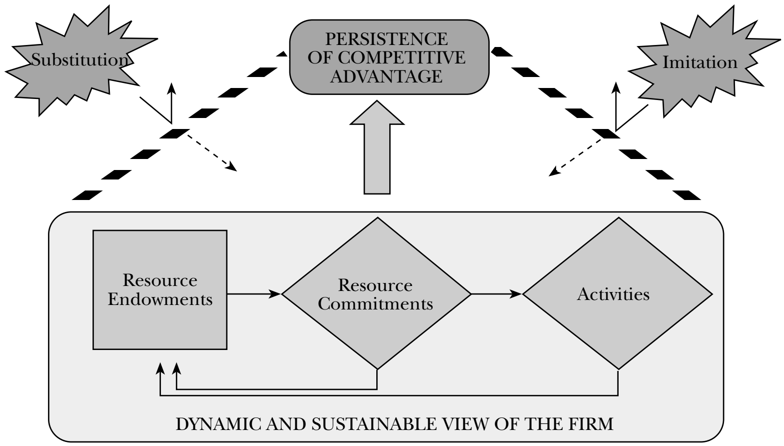
[5] The *Code of governance for sustainable business* is the result of a two-year close collaboration between two bodies: the Editing Committee and the Executive Council. The Editing Committee included members from the three organisations backing the project: IESE, Fundación Entorno and Pricewaterhouse Coopers. Under the presidency of Mr. Ricardo Diez Hochleitner (the Executive President of the Club of Rome until the end of 2000), the Executive Council included more than 50 presidents and CEOs of Spanish companies and top level representatives of the administration and civil society.

stone of all successful strategies, in this chapter we will focus on the impact of sustainable development on the persistence of competitive advantages (Rodríguez and Ricart, 2000) [6].

1.4.3. Business management literature has analyzed the persistence of competitive advantages by means of two theories: the resource-based view of the firm and the activity-based view of the firm. Generally speaking the former emphasizes the portfolio of resources and capabilities that businesses generate and the latter the activities that they perform. Both lines of thought have been successfully inter-related under the creation of value concept in the "dynamic view of the firm" (Ghemawat, 1999).

1.4.4. As Figure 1.2 shows, whether we refer to resources or activities, their capacity to act as the basis for the creation of persistent competitive advantages will depend on their ability to defend themselves from being copied by current competitors and replaced by potential competitors.

FIGURE 1.2: **The dynamic view of the firm and the persistence of competitive advantages**



[6] This article provides a large number of examples showing the impact of the environment on industry attractiveness, business model suitability and competitive advantage persistence.

In this chapter, we will be seeing how the development of capabilities and activities, the possibility of them being copied and replaced, and the persistence of competitive advantages are influenced by the idea of sustainable development. In the first place, we will see what changes sustainable development brings to the competitive situation. We will then go on to analyze how sustainable development influences the dynamic view of the firm and therefore the way in which businesses develop their capabilities and activities, and their possibility of being copied and replaced. Finally, we will see how all this affects business reputation and innovation capability and consequently the possibility of creating value in a persistent manner.

Sustainable development and changes in the competitive landscape

1.4.5. The speed and depth of technological changes and discontinuities have not really heralded the end of the industrial era, but its acceleration and growth. References to the post-industrial era, as proposed by sustainable development, imply fundamental changes in how the economic system affects and is related to the two major systems in which it resides, the social and natural systems. In this regard, sustainable development introduces the notion of scarcity of natural resources and the co-responsibility of businesses and societies where they operate in the development and use of social resources.

1.4.6. *Scarcity of natural resources* (Senge, 2001; Hart, 1995 and 1997; Porter and van der Linde, 1995). The industrial era started, developed and continues to operate on the implicit idea of unlimited natural resources. This has led the industrial system to be a linear one in which the basic elements follow an extraction-manufacture-sale-use-elimination sequence, generating waste at each link in the chain. The consequences of this system were not too serious as long as the level of development remained within certain limits. However, the acceleration and growth of the number of its beneficiaries, plus the ethical need for it to be broadened to encompass the planet's inhabitants, has called our attention to the intrinsically non-sustainable nature of this development model. In this sense, acceptance of the scarcity of natural resources and therefore of the need to reduce the use of resources and the generation of waste by business activities could be one of the prime movers of the development of new capabilities and activities that can give rise to persistent competitive advantages.

1.4.7. *Business-society co-responsibility in the development of social resources.* In practice, too many businesses disregard the social system of which they are part. Sustainable development introduces the need to change this situation both with regard to business operations in developed countries and especially in underdeveloped and developing countries. And there are two reasons for this: the increasing transfer of power, and therefore responsibility, from society to the business world conveyed by the globalization phenomenon; and because of the possibilities to create economic value for shareholders (e.g., Prahalad and Hart, 2000) [7] generated by this behavior.

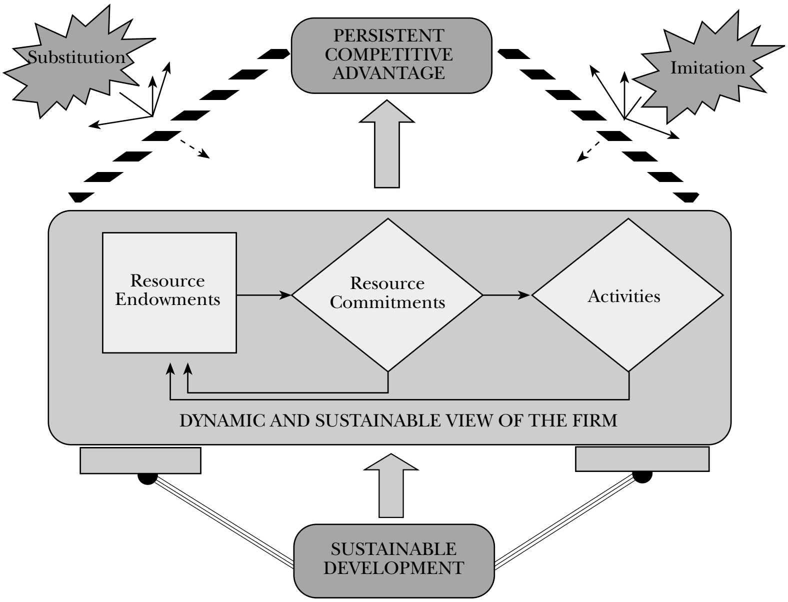
From the dynamic view of the firm to the dynamic and sustainable view of the firm

1.4.8. Companies have to develop new capabilities and activities for the acceptance of the notions of the scarcity of natural resources and the co-responsibilities of societies and businesses in the development of social resources to give rise to persistent competitive advantages. To be specific, and always bearing their concrete characteristics and circumstances in mind, it would seem to be convenient for them to develop the following: new relationships with their consubstantial stakeholders, new relationships with their contractual stakeholders and new relationships with their contextual stakeholders. This is evidently not a radically new issue, since

[7] The examples provided by these authors show that there are great possibilities of creating value.

companies have rich and varied experiences in the field. What we are suggesting is for new forms to be adopted and new content to be considered. Considering the tacit, path-dependent and socially complex nature of these capabilities and activities, they will be substantially more difficult to imitate and substitute. This idea is illustrated graphically in Figure 1.3.

FIGURE 1.3: **The dynamic and sustainable view of the firm and the persistence of competitive advantages**



1.4.9. *New relationships with consubstantial stakeholders.* In this section we will be referring specifically to employees. The image of the machine as the organizational paradigm of the industrial era has led to impressive productivity rates. However, the process has also led to the dehumanization of labor relations and consequently to a lack of employee interest in their businesses. Although people are born with intrinsic motivation, self-esteem, dignity and willingness to learn (Deming, 1993), the fact is that employees are not part of their companies, but hire part of their time out to them. In the so-called knowledge society, it is essential to change this state of things and cultivate people's natural interest in learning. For the learning culture to become a reality, resulting in an increase in creativity and imaginative power in general, the control-oriented system in most firms needs to be replaced by a system driven by trust and self-control. As a large number of companies have had the opportunity to discover, no idea is as powerful in obtaining employee satisfaction, and therefore commitment and integral involvement, as the idea of sustainable development, because of the strong alignment with personal values (Senge, 2001) implied by it. Evidently, obtaining such a culture requires, among other things, changes in aspects such as management style, structure, transparency information policies, recruitment and salary systems, job security, etc., and time (Pfeffer and Veiga, 1999). But the results justify the effort [8] (Huselid, 1995; Pfeffer, 1998).

1.4.10. *New relationships with contractual stakeholders.* This section refers specifically to customers, suppliers and sub-contractors. Traditionally, these relations have been seen as basically competitive ones. Even business management literature has emphasized the bargaining power of the different actors in the value creation chain. In this respect, their capacity for claiming value was more important than their capacity for creating, and therefore deserving value. The new competitive landscape assumed by sustainable development implies that businesses are capable of establishing new relationships with them in order to develop the products and services that the markets and society require and, therefore, value and accept. For the reasons defined earlier (1.4.9), these relationships have to be based on trust rather than control. It will also be necessary to boost sharing information, training and technologies, etc., in addition to long-term commitments. Although these re-

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[8] In these articles and others, it is shown how changes along these lines can lead to spectacular increases in a firm's sales, profits and market value.

lationships may formally be of a contractual nature, increasingly diffuse business borders mean that the most important, if not all of them, can ultimately be considered as partners in the innovation and creation of value process. Obtaining this kind of collaborative relationships, even considering that there will evidently be some level of competitive tension, will become fundamental in firms' corporate and business strategies (Champy and Nohria, 1996).

1.4.11. *New relationships with contextual stakeholders.* These stakeholders include the public administration, knowledge and opinion makers (the media, NGOs, universities, scientific community, etc.) and the communities, countries and societies where firms operate or which are affected by their operations. The practical conviction that the business system resides in, and forms part of the ecological and social systems has important consequences for the nature of the relationship between firms and their contextual stakeholders. It implies not only that businesses and society are not independent, or merely inter-related, but also that they are indeed inter-dependent (Svendsen, 1998). It implies, therefore, shedding the belief that the only mission of firms, and therefore of their executives is to generate profit for shareholders, and starting to believe that the mission of firms is to discover opportunities that are beneficial both for the firms themselves and for society in general. It implies that since stakeholder relationships are a vital source of diversity and involvement that give firms meaning and valuable resources (Kennelly, 1995), executives have to cease to be mere shareholder agents to become also builders of stakeholder relationships. They will thus be able to predict, understand and respond better, faster and easier to changing situations.

1.4.12. *Strategic nature of the new capabilities and activities.* For capabilities and activities to have strategic value, and therefore generate persistent competitive advantages, they have to comply with the following conditions: they have to be difficult to imitate by our present competitors; they have to be difficult to replace by our present and future competitors, and they have to be valuable, that is, positively valued by the markets (Barney, 1991). We will now see how the capabilities and activities proposed above help us to comply with these conditions.

1.4.13. *Difficult to imitate.* Certain capabilities related to issues such as location, technologies, products or productive processes can be difficult to imitate. However, they are all more or less subject to the possibility of our competitors copying them, or merely acquiring them sooner or later and to a greater or lesser extent. However, capabilities and activities that are socially complex because a large number of people are involved in their development and maintenance, in which history and experience are important, in the sense that their present status depends on their prior status, and which have a tacit nature, that is, are characterized by the fact that they can not be verbalized or formalized, are in practice inimitable. The types of relationships proposed (1.4.9 - 1.4.11) are perfectly compliant with these premises. It can be said that they are difficult to imitate because they are intangible assets based on practical learning obtained through experience and refined by practice, and also because they depend on a large number of people or teams. Because they are socially complex and tacit, our competitors will not be able to obtain them by hiring our employees.

1.4.14. *Difficult to substitute.* All business models run the risk of being replaced by another sooner or later. Internalizing the changes produced by sustainable development on the competitive landscape (1.4.5 - 1.4.7) and the development of the proposed stakeholder relationships (1.4.8 - 1.4.11) does not completely protect firms against this risk, although it is considerably reduced. In the first place because the information and knowledge involved will be considerable and constantly more complete. In the second place because most of the risk of capability and activity replacement will be increasingly related to the new implications introduced by the need for sustainable development.

1.4.15. *Valuable.* Sustainable development helps to develop capabilities and activities that are difficult to imitate and substitute. But they will also be valuable if, in addition to distinguishing our business model from that of our competitors, they also support and increase the persistence of competitive advantages. This partially depends on the evolution of society. And it is becoming increasingly unquestionable that society is moving towards demanding business conduct that permits sustainable development [9].

Sustainable development, innovation and reputation as the source of persistent competitive advantages

1.4.16. Acceptance of the changes in the competitive landscape implied by sustainable development and the development of the capabilities and activities presented above leads, primarily, to promoting two unquestionable sources of persistent competitive advantages: innovation and reputation. As we shall see, both will help us to prepare a business model that is different from that of our competitors which, as we all know, is essential for any strategy.

1.4.17. *Innovation.* Innovation, understood as the result of basic and applied research and development (R&D and innovation) has become an essential condition for competitive success. In a discontinuous world, strategic innovation is a key factor of the creation of wealth. Strategic innovation is the capacity to re-conceive the existing industrial model to create new value for customers, outwit competitors and produce new wealth for all stakeholders (Hamel, 1988). In this respect, a great deal has been said and written (and much less applied) of the importance of intellectual capital as food for R&D and innovation processes. Well, the challenges derived from the demand to move towards sustainable development help firms to question their usual ways of thinking and acting and to approach the need to develop new products, services and technologies, so they are an invigorating organizational shake-up and an undeniable

[9] See, for example, the results of the macrosurveys "The Millenium Poll on Corporate Social Responsibility", Environics, The Prince of Wales Business Leaders Forum and The Conference Board, May 1999.

source of innovation opportunities. Establishing new relationships with different stakeholders leads companies to possess the broadest range of present and future outlooks on the world, to obtain information and knowledge relating to the opportunities concerned and to establish the collaborations that are essential to make them come true, besides providing them with the credibility required to secure social approval for their innovations.

1.4.18. *Reputation.* The asset of a good reputation is evidently one of the reasons for the difference between the book value and the market value of many companies. A large number of studies confirms this (Shrivastava, 2000; Vergin and Qoronfleh, 1998; Black, 2000). In all the studies that aim to analyze what is behind different business reputations, one fundamental variable is their environmental and social conduct, and therefore their contribution to sustainable development (Slocun and Turner, 1999) [10]. A good reputation allows firms to obtain the loyalty of present customers and attract new ones, to attract and retain the best employees, to gain a good brand image, to have preferential relationships with the administration, to see how their products, services and proposals in different fields are accepted by society, to have lower capital and insurance costs, to obtain preferential treatment in the growing market of socially responsible investment funds, and to obtain a greater license to innovate and, in general, more credibility when explaining their points of view to stakeholders. Like innovation, it is an unquestionable source of persistent competitive advantages. It may not guarantee success, but it certainly increases firms' likelihood of success and survival.

1.4.19. We have seen how innovation and reputation depend on the development of new capabilities and activities linked to stakeholder relationships. Figure 1.4 shows how adequate management of new capabilities and activities, reputation

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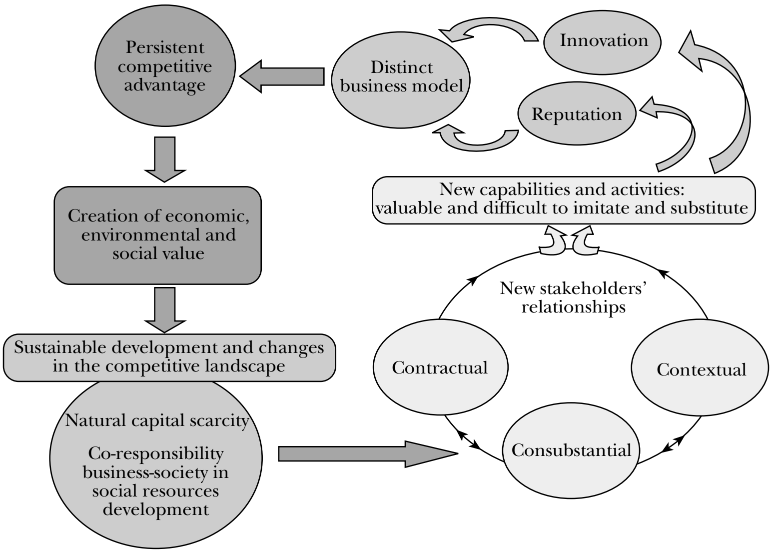
[10] See, for example, the annual studies conducted by *Fortune* magazine on *America's Most Admired Companies*; the work of the Reputation Institute; or the recent MERCO index published by the *5 Días* newspaper.

and innovation leads to a business model different from our competitors', creating a value in which economic, environmental and social factors are inextricably bound together.

FIGURE 1.4: **Sustainable development and creation of economic, environmental and social value**

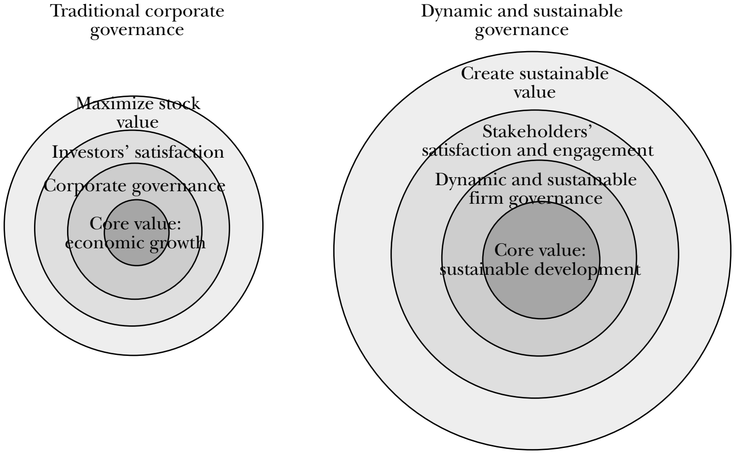


From the traditional view of corporate governance to sustainable corporate governance

1.4.20. The ideas described in this chapter imply the introduction of fundamental changes in the concept of corporate governance and the goals it should target. The following figure shows a diagram of the fundamental aspects of this change:

1.4.21. Since the central value that has traditionally guided corporate governance is basically economic, the aim of firms' activities has been to maximize share value by obtaining investor satisfaction. In the new concept of corporate governance presented in this Code, the central value is not economic growth but sustainable development. Therefore, the governance of sustainable businesses aims ultimately at creating value in a persistent manner, for shareholders and for society in general, by means of both investor and stakeholder satisfaction.

FIGURE 1.5: From corporate governance to sustainable corporate governance



1.4.22. To summarize, the work carried out by top corporate governance bodies to obtain shareholder satisfaction and, therefore, their companies' survival, is inevitably linked to obtaining stakeholder satisfaction, and thence to accepting the principles of sustainable development.

1.5. Summary

Sustainable development seems to have spawned a whole new language. The growing amount of sustainable-development focused literature is frequently littered with terms such as corporate citizenship, good governance, corporate social responsibility (CSR), and so on. In our approach to the sustainable enterprise, we have avoided differentiating among all these terms. The main reason is that, in our opinion, all of these terms, although coming from diverse strands of thought, refer to the broader societal role that contemporary enterprises should play. In this sense, it is not the objective of this research to go into the possible differences among all these terms. Rather, our goal is to identify how leading firms, in assuming this broader societal role, are integrating this idea in their corporate governance and strategies.

2. Corporate governance

BROADLY speaking, governance systems consist of three parts of an interactive process: information generation and sharing; decision-making and accountability; and distribution of resources and wealth (Doppelt, 2003). More specifically, the term *corporate governance* refers to the structures associated with the decision-making and monitoring processes in a firm. The board of directors, the executive board and the chief executive officer are considered the bodies with the highest responsibilities in decision-making and control processes. The OECD Principles of Corporate Governance clearly defines these functions:

> The corporate governance framework should ensure the strategic guidance of the company, the effective monitoring of management by the board, and the board's accountability to the company and the shareholders [...]. In addition, boards are expected to take due regard of, and deal fairly with, other stakeholder interests including those of employees, creditors, customers, suppliers and local communities. Observance of environmental and social standards is relevant in this context.

As is explicitly mentioned in the OECD Principles, the board of directors plays a vital role in organizations, as its main duty is to protect the shareholders' interests and to harmonize firms' objectives with stakeholders' concerns and aspirations. In other words, *the main role of the board of directors is to ensure the long-term sustainability of the firm.* For this reason, we focused our attention on the analysis of several attributes of the board of directors when studying corporate governance issues.

The field of corporate governance has received abundant attention of late. Several codes or principles of corporate governance have been released to foster the higher transparency and accountability of managerial practices and ensure a better protection of shareholders' interests. However, less attention has been paid to the role of boards of directors in promoting sustainability values, strategies and practices within their companies. For this reason, the aim of this section is to explore *what* the leading companies of the DJSI World's market sectors are doing to advance towards *sustainable corporate governance* and *how* they are achieving it. Sustainable corporate governance implies that the members of firms' top corporate governance bodies have to accept and internalize certain values related with sustainable development, and consider them in their decision-making processes [11].

The framework used to analyze in depth sustainable corporate governance practices was the one proposed by the Code of Governance for Sustainable Business [12] (CGSB). The CGSB was the result of close collaboration between an Editing Committee, formed by members of IESE Business School, Fundación Entorno and Pricewaterhouse Coopers, and an Executive Council, which was comprised of more than 60 personalities of acknowledged prestige from the business, administrative, academic and social world of Spain. The CGSB gathered and widened the different board attributes and roles considered by the mainstreams of corporate governance research. After reviewing the contributions of four theoretical perspectives, Zahra and Pearce (1989) proposed an integrative model that identified four board attributes—composition, characteristics, structure and process—and three critical roles—service, strategy and control. This model successfully integrated visions from agency theory (Fama and Jensen, 1983; Jensen and Meckling, 1976), the legalistic perspective (Berle and Means, 1968; Mace, 1971; Williamson, 1964), resource dependence (Pfeffer, 1972; 1973), and class hegemony (Mills, 1956; Domhoff, 1969). Based on this model and adding "values" as a key

[11] A set of values for the governance of the sustainable enterprise is proposed in subheading 2.4.

[12] An English and Spanish version of this code are available at: http://www.iese.edu/cges/CGES_Vers_Eng.pdf and http://www.iese.edu/cges/CGES_Vers_Esp.pdf

foundation of the sustainable enterprise, the CGSB breaks down sustainable corporate governance into five essential components:

- *Values.* Definition of corporate values inherently related to sustainable development.
- *Composition.* Board members with expertise in sustainable development and inclusion of induction training in this field.
- *Structure.* Board structures to deal with corporate social responsibility (CSR) or sustainable development issues.
- *Process.* Internal board processes to ensure consideration of sustainable development issues and stakeholders' concerns.
- *Roles.* Consideration of new roles for embedding sustainable development into the firm's strategy, developing policies for enabling stakeholder dialogue, and internalizing and promoting corporate values.

In order to obtain a precise knowledge about the corporate governance practices of the leading sustainability companies, the rest of this section is devoted to the analysis of these five components. As an annex to this chapter, we include a selection of some best practices in order to illustrate how DJSI sector market leaders are tackling the challenging process of achieving sustainable corporate governance.

2.1. Values

Individuals in firms have bounded rationality, cognitive biases, and personal values that direct their actions (Cyert and March, 1963; Hambrick and Mason, 1984; March and Simon, 1958). When fully experienced, shared values lie at the core of a firm's culture and make it possible to successfully and safely decentralize the decision-making process. Values reflect beliefs about what is truly important. For this reason, the acceptance of values tightly coupled with the principles of sustainable development is essential for achieving real progress towards a sustainable organization.

Usually, cultures are deeply rooted and change can be very difficult. Resistance to change is a natural reaction and arises due to a perceived threat to the current *status quo.* To overcome resistance and transform organizational culture, sustainability-change leaders must find key leverage points. In this sense, the assumption and internalization of values in top corporate governance bodies is primary, as changes in governance provide the greatest overall leverage for transformation towards sustainability (Doppelt, 2003).

Our aim was to observe if sustainability leading companies are internalizing sustainability principles into their corporate values. To analyze this issue, we followed the proposal of the CGSB. This code considers that the values upon which sustainable corporate governance must rest are *sustainability, long-term vision, diversity, stakeholder dialogue, integrity and responsibility*. Some of these values have already been considered in other codes of governance, others represent a reconsideration of well-known values and several are clearly new. In any event, it must be mentioned that the values developed should not be considered infinitely valid. Quite the opposite is true, in fact, since they are all subject to possible changes derived from the evolution of the notion of sustainable development. In any case, their very nature guarantees their ability to adjust to changing needs and therefore to ensure as much as possible the survival of the firms that adopt them.

Our results show that corporate core values from DJSI market sector leaders are quite consistent with the values proposed in the CGSB. However, some values have more acceptance than others (see Table 2.1).

TABLE 2.1: **Corporate values (18 DJSI Sector Leaders)**

	Values	**DJSI Leading Companies**	**Percentage**
Values proposed by the *Code of governance for sustainable business*	Responsibility	12	67%
	Sustainability	12	67%
	Integrity	11	61%
	Dialogue with stakeholders	8	44%
	Diversity	8	44%
	Long term vision	5	28%
Other common values	Health, Safety & Environ.	10	56%
	Innovation	10	56%
	Team Work	6	33%
	Profitability	5	28%
	Transparency	4	22%

As we can see, *responsibility* and *sustainability* are the most accepted core values with 67%. *Integrity* follows with 61%. The values *dialogue with stakeholders* and *diversity* also have a wide acceptance with 44% of companies adopting them. The value of *long term vision* is less, because only 28% of the companies consider it a core value. On the other hand, there are other values commonly accepted by these companies. This is the case of *Health, Safety & Environment*—which can be considered as a specific dimension of the broader value of sustainability—and *innovation*. Interestingly, we can see that 56% of DJSI leading companies consider innovation as a core value. This can be interpreted as the importance of innovation for remaining competitive, but we can also infer that innovation can be considered as a sustainability driver. Other values that appear with less frequency are *team work, profitability* and *transparency*.

While the formal approval of a set of values is vital, equally important is that the whole organization shares those values. Needless to say, the board of directors has an important role in spreading the knowledge and acceptance of corporate values. For this reason, we will analyze in subheading 2.4, among other issues, the role undertaken by the board of directors in contributing to the achievement of a common understanding of corporate values throughout the organization.

2.2. Composition of the board

Board composition denotes size (number of directors), director types (inside and outside directors), minority representation (ethnic minorities and females), and the directors' background (educational background, values and experience). The resource dependence perspective has emphasized the relevance of this attribute because it considers boards as important boundary spanners that give essential resources or secure those resources through linkages to the external environment. Furthermore, because of their prestige in their communities and professions, directors help to enhance the firm's legitimacy in society (Boyd, 1990; Pfeffer, 1972, 1973; Pfeffer and Salancik, 1978; Price, 1963; Provan, 1980). Some authors have seen a positive relationship between board composition (e.g., ratio of insiders to outsiders or proportion of female and minority board members) and actions of social responsibility (Zahra and Stanton, 1988) or corporate philanthropy (Wang and Coffey, 1992), while others have observed that firms strategically alter board composition in order to respond to significant changes in their external environment (Hillman, Cannella and Paetzol, 2000).

Board members should have the skills, experience and capabilities required for developing as effectively as possible their specific responsibilities. In this sense, we might expect that leading sustainability companies would have in their board-rooms members and executives capable of providing essential new viewpoints and expertise on sustainable development topics. At the same time, due to the novelty of the field, we wanted to find out if board directors receive some kind of induction training to improve their understanding of the implications of sustainable development for the firm.

Our results show that 72% of boards are adequately conversant with and aware of the questions related to sustainable development. However, just 22% of companies have formal training programs on CSR for their directors. Table 2.2 shows the results of the composition of the board.

TABLE 2.2: Composition of the board (18 DJSI Sector Leaders)

		Yes (%)	No (%)	Not known (%)
Composition	One or more directors knowledgeable in sustainable development	72	6	22
	Induction training in CSR	22	33	45

The cases of Dupont and Dofasco help us to show the strong commitment and experience of board directors in the field of sustainable development.

The board of directors of DuPont has 13 members, and 5 of them have a relevant professional history in the field of corporate social responsibility or sustainable development. Just to mention one, Chad Holliday, CEO and Chairman, is a promoter of sustainable development within his company. He has written the article "Sustainable Growth, the DuPont Way", published in *Harvard Business Review* and he is also co-author of the book *Walking the Talk: The Business Case for Sustainable Development*, published by Greenleaf.

The Dofasco company is a Founding Sponsor of the Sustainable Enterprise Academy (SEA) at the Schulich School of Business at York University. The SEA's mission is to provide senior executives with the vision, education, tools and support to champion sustainable development in their organizations. Dofasco President and CEO John Mayberry as well as other Dofasco senior executives completed the program in 2001. The Dean of the Schulich School Business has been a member of Dofasco's Board of Directors since 1985, and supported the creation of the Sustainability Enterprise Academy.

2.3. Structure of the board

Board structure refers to the different dimensions of the board's organization. It covers the number and types of committees, committee membership, the flow of information among these committees and board leadership. In order to protect shareholders' rights, researchers from the agency theory have recommended the creation of compensation and appointment committees, audit committees and shareholder relations committees (Demsetz and Lehn, 1985; Jensen and Meckling, 1976). These committees should be chaired by outside directors to ensure a real and effective supervision (Davis, Schoorman and Donaldson, 1997). The setting-up of board sub-committees—such as remuneration, audit, nomination and so on—has permitted the board of directors to deal more specifically with relevant issues affecting the corporation. Considering the implications of sustainable development for the firm, it might seem reasonable for top corporate governance bodies to have a board sub-committee which, under the responsibility of one of its members, takes charge of promoting, supervising and assessing the incorporation of these aspects in the firm's strategy and operation, and in the activities of its top corporate governance body.

We reviewed the board structures of the DJSI market sector leading companies looking for *board sub-committees* with formal responsibilities in CSR or similar (CSR committees henceforth). We distinguished among the CSR committees with only non-executive members from those with executive and non-executive members.

Our results show that 55% of companies have already appointed a CSR committee to integrate sustainable development topics into their firm's strategy and operations. There are a higher number of board sub-committees with only non-executives members than with executive and non-executive members, although the difference is not significant. We also observed that the firm's CEO is always present in the CSR committees made up of executive and non-executive members.

Whereas we can find as many names for CSR committees as companies we have in the sample, most of these committees have similar responsibilities. These can be summarized as follows:

- Consider, review, evaluate and monitor environmental, social and ethical policies.
- In collaboration with top management, ensure that strategy considers sustainable development dimensions.
- Advise the board on sustainable development or CSR policies.

But what happens with those companies without any CSR committee? How do they consider and manage sustainability? In this case we identified two systems that allow the board of directors to track the progress of the company towards sustainability:

- Five companies integrate sustainability issues and CSR policies in *existing* board committees (e.g., audit, accountability and risk management committees). In this case, some of the board committees assume new responsibilities in relation to sustainable development.
- Two companies have appointed one director of the board with specific responsibilities for reviewing and monitoring environmental, social and ethical policies.

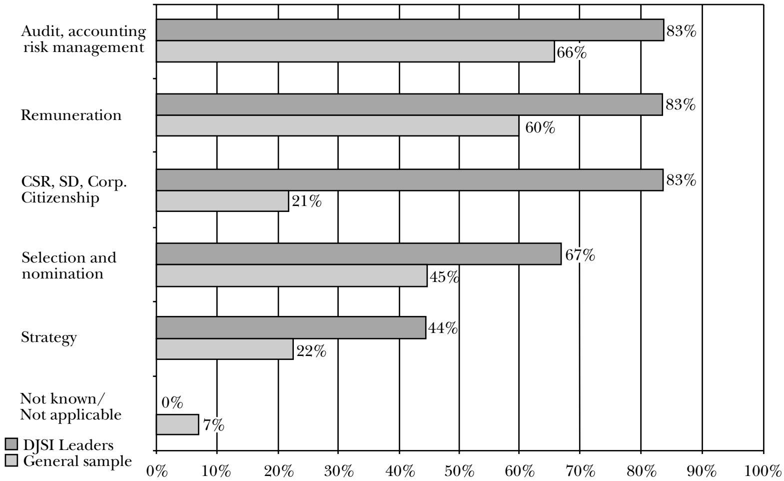
Considering all the different types of corporate governance structures and systems mentioned above, we can say that all companies except one have some type of governance structure that allows the board of directors to review, supervise and assess the firm's *triple bottom line*. We found just one company in which we could not identify any mechanism for integrating CSR topics into governance structure. Table 2.3 shows these results.

TABLE 2.3: Structure of the board for integrating sustainability into strategy (18 DJSI Sector Leaders)

<table>
<tr><th colspan="4">Governance Structures</th><th>DJSI Leading Companies</th><th>%</th></tr>
<tr><td rowspan="5">Structure</td><td rowspan="2">Formal CSR Board Committee</td><td>Made up of only non-executive members</td><td>6</td><td rowspan="2">10</td><td rowspan="2">55</td></tr>
<tr><td>Made up of executive and non-executive members</td><td>4</td></tr>
<tr><td rowspan="2">Other governance structures</td><td>Integration of CSR, SD in existing board committees</td><td>5</td><td rowspan="2">7</td><td rowspan="2">39</td></tr>
<tr><td>Appointment of a board director with specific responsibilities in CSR, SD</td><td>2</td></tr>
<tr><td>Without any kind of structure</td><td></td><td></td><td>1</td><td>6</td></tr>
</table>

As we will see later, the structure of the board is a key factor for ensuring the integration of sustainable development into the firm's strategy. The appointment of CSR committees or the assumption of responsibilities related to sustainable development in existing committees provides a strong mechanism to strengthen sustainability strategy. As a matter of fact, comparing the different committees appointed by DJSI leading companies with all the companies analyzed by SAM (approximately 800 companies), we can observe that the biggest difference resides precisely in the appointment of CSR committees (see Graph 2.1). While 83% of DJSI leading companies have appointed a CSR committee [13], only 21% of the universe of firms analyzed by SAM has formalized sustainable development responsibilities within a board committee. Thus, the adaptation of the structure of the board to sustainability aspects turns into a fundamental factor for ensuring a better quality and depth of overall formulation and implementation of sustainability strategy.

GRAPH 2.1: Appointment of board committees



Source: SAM Research, 2003.

Furthermore, Graph 2.1 shows that DJSI leading companies always have better governance structures to deal with typical board responsibilities than ordinary companies. Corporate governance reports and codes—e.g., Winter report (EU), Higgs report (UK), Aldama report (Spain), Cromme code (Germany)—always recommend the appointment of specific committees to undertake some of the key responsibilities of the board, such as selection, nomination and compensation of key executives, audit and information disclosure.

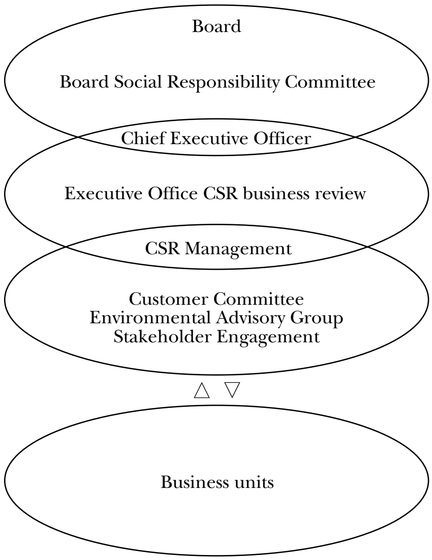
[13] This percentage comes from the sum of those DJSI leading companies with a specific CSR board committee and those that have integrated CSR policies and responsibility within an existing board committee. The former are 55% and the latter are 28%.

In Graph 2.1, we can observe how DJSI leading companies follow these recommendations on corporate governance in a more precise way than ordinary companies. However, we would like to insist that, although these differences in the degree of fulfillment of good corporate governance codes can be considerable, the most important and noteworthy difference resides in the appointment of CSR committees. From these results we can arrive at a key conclusion: *sustainability is a key component of good corporate governance.*

A good example is Westpac Banking, which established a complete governance structure to fully integrate corporate responsibility into the way the Australian bank does business. In 2001, the board established a Board Social Responsibility Committee to reinforce their commitment to sustainable and socially responsible practices.

Westpac's corporate social responsibility governance structure is a hierarchical structure segmented into four layers which, from top to bottom are: the Board and the Board Social Responsibility Committee, which overlaps with Executive Office CSR business review (comprising the Chief Executive Officer and CSR management), which overlaps with the Customer Committee, the Environmental Advisory Group and Stakeholder Engagement. This then leads into a two-way relationship with the final layer, business units (see Figure 2.1).

FIGURE 2.1: CSR governance structure at Westpac Banking



The Board has the responsibility, among others, to ensure that business is conducted ethically and transparently, to set standards for social and ethical practices, and to monitor compliance with Westpac's social responsibilities and practices.

The main purpose of the Board Social Responsibility Committee is to foster Westpac's commitment to operate its business in a manner consistent with the rapidly changing demands of society. The Social Responsibility Committee reviews the social and ethical impacts of Westpac's policies and practices and oversees initiatives to enhance Westpac's reputation as a socially responsible corporate citizen. It also participates with management in setting the strategic direction for Westpac's image, including social and environmental policy, community involvement, and ethical policy relating to lending and investment activities. The Social Responsibility Committee is made up of three non-executive board members plus one executive board member, who is the CEO.

According to Westpac's Senior Advisor of Corporate Responsibility & Sustainability, typical agenda items of the Board of Social Responsibility may include: sustainable supply chain management; feedback from external assessments and ratings; performance against social and environmental indicators; external sustainability reporting; new customer satisfaction measures; and review of initiatives for Indigenous Australians.

2.4. Process of the board

Board operations—such as selection of agenda items for board meetings, board materials distributed in advance, board access to independent advisors, establishment of directors' responsibilities and so on—are working procedures that determine how the processes of information generation and sharing, decision-making and accountability, and distribution of resources and wealth are carried out. Because most aspects of sustainable development are quite new for most companies, it seems advisable for their top corporate governance bodies to regularly consider and prioritize these issues and good practices in their board rooms. Thus, discussion of sustainable development and its implications for the firm should become routine among the board of directors of companies that have adopted sustainability as a core value and business driver.

We observed the communication and working processes most commonly used for dealing with sustainability in the firm's governance structure. We focused our analysis on the frequency of board meetings where sustainable development topics were discussed, the communication mechanisms between the board and CSR committees, and the invitation of external experts on CSR or sustainable development to board meetings.

Our results show that the frequency of meetings where sustainability policies are formally discussed varies *from one to four times a year* (see Table 2.4). We should also mention that most companies state that sustainability is informally discussed often or at every board meeting, because sustainable development is integrated into the way they do business and lies at the core of the firm's strategy.

TABLE 2.4: **Sustainable development in board meetings (18 DJSI Sector Leaders)**

Number of board meetings where sustainability strategy and policies are formally discussed	DJSI Leading Companies
Once a year	4
Twice a year	4
Three times a year	3
Four times a year	5
Not known	2

The agenda for each meeting is normally formalized one month before the meeting and information, whether or not related to sustainability, is distributed one or two weeks in advance of the meeting, with one week being the most common standard. Nevertheless, some sensitive subject matters or urgent issues may be discussed at the meeting without written materials being distributed in advance or at the meeting.

Regarding board CSR committees, we observed that the frequency of meetings varies from two to four times a year. After each meeting the committee reports to the board on its activities and decisions. Furthermore, as some or all of CSR Committee's members are also board members, communication is secured through membership of both bodies.

Other common communication mechanisms to inform the board of sustainability issues are: periodic updates to directors on all matters, including sustainability, and regular reports to directors on CSR from internal executive committees.

For instance, Marks & Spencer's CSR Committee meets at least three times annually. In addition, there are bi-monthly updates to all board members on CSR and the environment (i.e. one update a month). The CSR Committee receives relevant papers at least a week prior to the meeting, which is the norm for all its board level meetings. The main Board has special responsibility for environment and external stakeholder policies. One board member has specific responsibilities for environmental matters and internal sustainable development experts (assisted by external expertise as required) feed into the CSR Committee at every meeting.

Finally, in none of the companies analyzed is the invitation of external experts on sustainable development to board meetings considered a formal policy. However, based on the responses from the companies we contacted, we found that most of them invite external experts when they consider it appropriate. That means, for instance, that external guests are invited from time to time to talk to the board about topics affecting the corporation (e.g., global warming, biotechnology, etc.) or to advise the board on sustainable management policies and tools.

2.5. Role of the board

Traditionally, the primary board roles considered by mainstream theoretical perspectives have been strategy, service, and control (Zahra and Pearce, 1989). Sustainable corporate governance implies that the firm's directors and executives perform, among others, new functions that will help to infuse the firm's sense of identity and sustainability values among all of its members. Equally important is that these top governance bodies become aware of stakeholder aspirations through an honest and transparent dialogue with them. Next, we will review the main functions of sustainable corporate governance.

The strategy role has been emphasized by authors following agency theory, and gives special consideration to the board's strategic contribution in formulating strategy and monitoring its effective implementation (Baysinger and Butler, 1985; Kosnik, 1987). For this reason, one vital task of top corporate governance bodies is to make sure that sustainable development is a key variable embedded in the strategy formulation process.

Acording to the CGSB, another important top corporate governance function is to take the necessary steps to ensure that all company members internalize the values inherent in sustainable corporate governance, so that they are taken into consideration in all of their decisions and activities. Top corporate governance bodies will also have to aim at having these values accepted by all the other firms and organizations involved in the value chain of which the company is a part.

Stakeholder theory posits that the capacity of a firm to generate sustainable wealth over time, and hence its long-term value, is determined by its relationships with critical stakeholders (e.g., Carroll, 1989; Donaldson and Preston, 1995; Freeman, 1984; Jones, 1995; Jones and Wicks, 1999; Mitchell, Agle and Wood, 1997; Post, Preston and Sachs, 2002). In stakeholder theory, the corporation is defined as a socio-economic organization built *to create wealth for its multiple constituencies.*

The stakeholders [14] of any firm are usually quite diverse, but relationships between the firm and each of its stakeholders have many common features. In addition, the stakeholders have common interests (as well as potential conflicts) among themselves (Mitchell *et al.*, 1997). According to this view, the critical challenge for contemporary management is the recognition of the mutual interests among the firm and its stakeholders. The dialogue and the relationships between the firm and its stakeholders, that is to say, those

[14] See footnote 4.

individuals or organizations who have some type of interest or influence in its activities, have gone from being a merely peripheral and often cosmetic activity of limited importance for the competitive success of the business organization to being a basic and core requirement for the persistence of its competitive advantage and survival. Consequently, one of the central functions of sustainable corporate governance is the maintenance, at the highest levels and whenever required, of an honest, fluid and rich dialogue with stakeholders, and the establishment of the necessary stakeholder relationships.

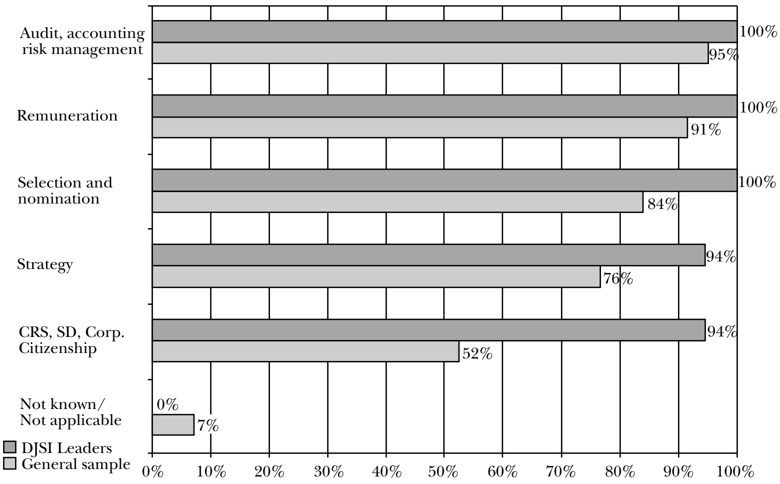
In this section we will first compare the traditional board responsibilities, including CSR, of DJSI leading and ordinary companies. Second, we will analyze different information and communication processes that permit the board of directors to assure the consistent integration of sustainable development into the corporate strategy. Third, we will observe the different tasks promoted by the board to ensure that values are internalized throughout the company and respected by other key stakeholders such as suppliers or vendors. Next, we will see how dialogue with stakeholders is promoted and established at the highest levels of organizations. Finally, we will examine the role of top corporate governance bodies in guaranteeing that sustainable development principles are integrated into R&D and innovation processes.

2.5.1. Responsibilities of the board of directors

Strategy formulation, selection and nomination of top executives are, among other things, common responsibilities of the board of directors. Likewise, a company which aims to become a sustainable enterprise should consider sustainable development policies as a formal responsibility of the board. Graph 2.2 depicts the different roles which are formally taken on by the board of directors. Once again we can see how the biggest difference between DJSI leading companies and ordinary companies resides in the field of CSR.

Only 52% of the ordinary companies consider sustainable development a responsibility of the board of directors, whereas a remarkable 94% (all but one) of DJSI leading companies consider this function a key responsibility of the board. We can obtain an interesting insight by comparing the results from this graph with the table of the structure of the board (see page 51, Table 2.3). In Table 2.3

GRAPH 2.2: Formal responsibilities of board of directors



Source: SAM Research, 2003.

we found that only one company did not have any kind of structure to integrate sustainability into strategy. This is the same result that was found regarding the issue of *formal responsibilities of the board of directors*. Therefore, we can infer that *the structure of the board is a decisive factor for embedding sustainability into the firm's strategy*. In the next section, we look at this topic in greater detail.

2.5.2. Embedding of sustainable development within strategy

As we can see from Graph 2.2, the board of directors is ultimately responsible for the policies and management of the corporation, and approval of strategy. Moreover, some companies—44% in the case of DJSI leading companies—have appointed a board committee to undertake this core function. We should also mention that in multinational corporations strategy is usually formulated through an interactive process between the top executive committee and the board of directors.

The way the board of directors makes sure that sustainable development is integrated as a key variable in strategy formulation processes *is totally dependent on the firm's governance structure*. Thus, we will distinguish among the different structures considered previously (subheading 2.3) in order to analyze this issue:

- *Companies with board CSR committees.* These committees play an active role in providing input and assessing companies' policies, objectives and practices on CSR. They also inform boards about company results related to sustainability. The CSR committee is always supported and informed by top level corporate units. In some cases, an executive team with corporate responsibilities in sustainable development interacts with the CSR committee to formulate and review the strategy and policies. An exemplary case was provided in subheading 2.3 when we explained Westpac's corporate governance structure.
- *Companies with existing committees taking on CSR policies.* This case is quite similar to the previous one. However, because of the broader responsibilities of these kind of committees (e.g., auditing, risk management) we cannot expect the same degree of attention given to sustainability issues as in a committee exclusively dedicated to working in the sustainability area. For instance, Intel's executive committee and governance committee include citizenship and reputation in their management agenda.
- *Companies with one board member responsible for social and environmental policies.* In this case, corporate officers for environmental and social affairs report to this director of the board and keep him/her informed about the company's results in those areas. Although we are not in a position to judge which companies have truly integrated sustainable development into their strategy, we observed that this kind of structure offers less (external) evidence of such integration. In Pearson, David Bell, as director for people, is the board director with overall responsibility for labour standards, human rights and environmental issues.

Finally, we would like to mention some communication systems that permit better interaction between the board of directors and management in relation to sustainable development. These are the following:

- Formal communication—through regular reports and/or shared membership—from the top executive body to the

board of directors on sustainable development policies and performance. Some companies have gone a step further and have created a specific executive committee—made up of members of executive management and top executives from each division—for formulating and supervising the implementation of sustainable strategies into business units. In this case, corporate units and divisions provide input to and advise the top executive committee which, in turn, informs the board on the company's progress towards sustainability. Sustainability policies and strategy are discussed in the interaction process between the board of directors and management.
- Formal communication—through regular reports—from an internal sustainability committee to the board of directors. This internal committee, which is the main group responsible for implementing environmental, social and ethical initiatives, is normally made up of CSR directors and managers from support functions such as Human Resources, Communications, Procurement or Corporate Governance.

Novozymes does not have any board sub-committee to deal with sustainability issues, but the firm's board of directors participates in strategy formulation and provides direction to executive management. Two times a year, in June and September, the board of directors meets to discuss strategic plans, including targets and plans in relation to sustainable development (see Figure 2.2).

2.5.3. Internalization and promotion of values

In this section, we focus our attention on four roles of the board or any other department on behalf of the board. First, we will look at different tools and policies used for internalizing the values assumed by the company. Second, we will analyze different ways of checking the level of awareness of values throughout the organization. Third, we will show how sustainability leaders are extending their commitment to support sustainable development externally and to other players of the value chain. Fourth, we will examine how these organizations make sure that those values are respected by other key stakeholders, such as suppliers or vendors.

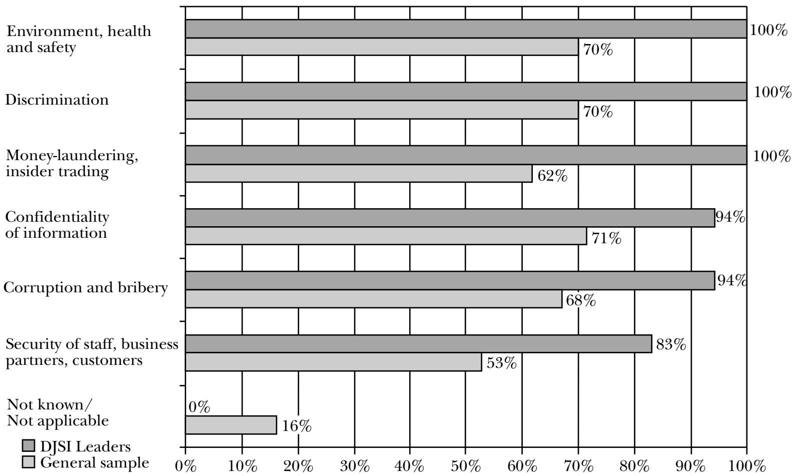
FIGURE 2.2: Cooperation between board and management in Novozymes

The BoD's 3 main tasks	**1) Ensure the right executive management of the company. Ensure the right organization of the company.**	**2) Supervise financial performance of the company. Supervise executive management's performance and integrity.**	**3) Participate in managing the company by providing direction to executive management. Participate in determining the strategy of the company and approve major business plans and decisions.**	
Reporting from Executive Management to BoD:				
January		Monthly Report		
February		Monthly Report Annual Report Consequences, targets and action plans		BoD Meeting
March		Monthly Report		General Assembly
April		Monthly Report		
May		Monthly Report Q1 Results Consequences, targets and action plans		BoD Meeting
June	OA results, Facilitations, org. development and consequences thereof, targets and action plans	Monthly Report	Situation report and strategy plans incl. status, targets and plans re sustainable development	BoD Meeting (3 days off-site)
July		Monthly Report		
August		Monthly Report Q2 Results Consequences, targets and action plans		BoD Meeting
September		Monthly Report		
October		Monthly Report		
November		Monthly Report Q3 Results. Consequences, targets and action plans		BoD Meeting
December	OA results, Facilitations, org. development and consequences thereof, targets and action plans	Monthly Report	Situation report and strategy plans incl. status, targets and plans re sustainable development. Budget for next year	BoD Meeting

2.5.3.1. Internalizing values

Several mechanisms are in place to achieve the acknowledgment of the corporate values inherent in sustainable corporate governance, but the formal declaration of values and principles in the form of a *code of conduct* is the most common mechanism used for this purpose. All companies have written a statement of business practice to guide all employees and managers in their day-to-day work. Generally, this document contains the company's values, vision statement —sometimes a sustainability mission statement—and a code of business principles and conduct. It covers issues from obeying the law to displaying integrity, as well as responsible and sustainable business practices (Graph 2.3 depicts the most common issues covered by codes of conduct). The code of conduct always receives the complete approval of the board before its formal release and is handed out to all employees.

GRAPH 2.3: Focus of codes of conduct



Source: SAM Research, 2003.

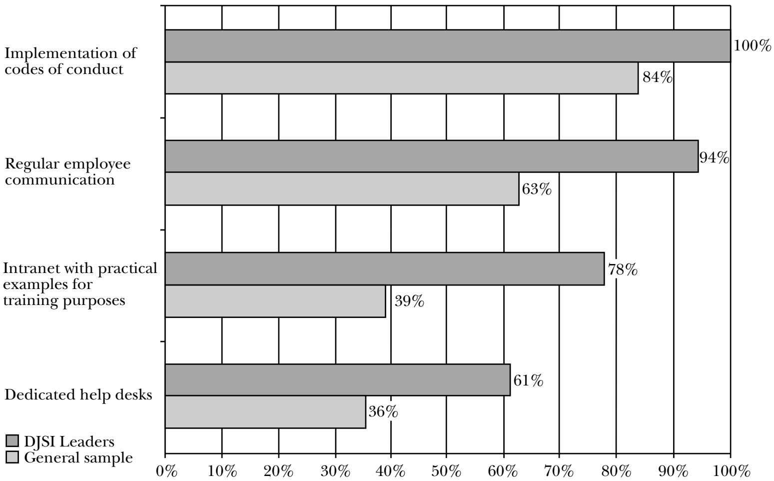
In Graph 2.3 we can observe how DJSI leading companies' codes clearly address ethical, social and environmental values and principles. The percentages are considerably smaller when taking into account the general sample. On the other hand, it is surprising that 16% of companies analyzed by SAM do not have, or do not communicate, the content of their code of conduct. If we assume that these companies do not have a code of conduct, it means that nearly 130 companies lack this document. This is a considerable percentage if we consider that the companies analyzed are multinational corporations trading in Dow Jones Global Indexes.

Some other tools exist to reinforce the understanding of the code of conduct or corporate values related to sustainability. Among them, we can find communication programs, training programs for managers and employees, and dedicated help desks and procedures for solving code of conduct concerns and doubts. The latter usually include open-door policies, telephone hot lines, confidential e-mail systems, *whistle blowing* processes or on-line tools. Less frequent is the invitation to employees to offer their opinions on code of conduct reviews and awards for remarkably ethical or environmental behaviors or practices. A summary of the results follows:

- All companies have a code of conduct for guiding employees' and managers' behavior in their day-to-day work.
- Seventeen companies have communication policies to reinforce the understanding of values and principles stated in the company's code of conduct.
- Fourteen companies have intranet programs to enhance understanding of the code of conduct through practical examples and training sessions.
- Thirteen companies link compliance with the code of conduct to employee remuneration.
- Eleven companies have help desks for solving code of conduct doubts.
- Four companies invite employees to give their opinion on the code of conduct reviews or ethical policies.
- Three companies offer awards for those teams or individuals demonstrating excellent business practice in social, ethical or environmental behavior.

Graph 2.4 gathers these data and compares the implementation of some practices among DJSI leading companies and the universe of firms analyzed by SAM.

GRAPH 2.4: Procedures for internalizing values and codes of conduct



Source: SAM Research, 2003.

As we can see in Graph 2.4, the differences between DJSI leading companies and ordinary companies are considerable. The code of conduct is the most important tool for internalizing values. However, the use of systems to internalize the code of conduct across the organization is much more developed in DJSI leading companies than in ordinary companies. The difference in the degree of implementation of these systems is over 30% on average. These are important results because unless there are clear systems to implement the code of conduct, this document has no impact on management and employees' behavior.

2.5.3.2. Monitoring the level of awareness of values

Now that we have understood the mechanisms companies use to internalize values, we will explore *how* these companies are monitoring the level of awareness of corporate values. Below we provide examples of some of the more common practices and systems used among sustainability leaders.

Whereas the code of conduct is a reserved power of, and is endorsed by, the board of directors, implementation programs are the responsibility of the business units or divisions. A senior manager of each business unit is usually nominated to act as owner of the implementation program. In addition, all executives and managers must confirm their knowledge of the code of conduct and their commitment to promote it among employees. We also observed that some companies have created a corporate compliance committee or have nominated a compliance officer to oversee the necessary policies and systems in place to ensure compliance with the code of conduct in all divisions and business units. Senior managers or compliance committees report regularly to the board of directors or board audit committee and keep them informed of adherence to business principles across the organization. Moreover, most companies have put in practice disciplinary actions to deal with breaches of the code of conduct.

It is also worth mentioning that 72% of companies link employee and manager remuneration to compliance with the code of conduct as a way to ensure a complete awareness of business principles and values across the organization. Also, 67% of companies have integrated compliance with the code of conduct in their employee performance appraisal system. The annual or bi-annual employee surveys given to all employees are commonly used for measuring the level of awareness of business principles and values among this group. In addition, some of these companies have a performance indicator for measuring the progress of the awareness of business principles among employees.

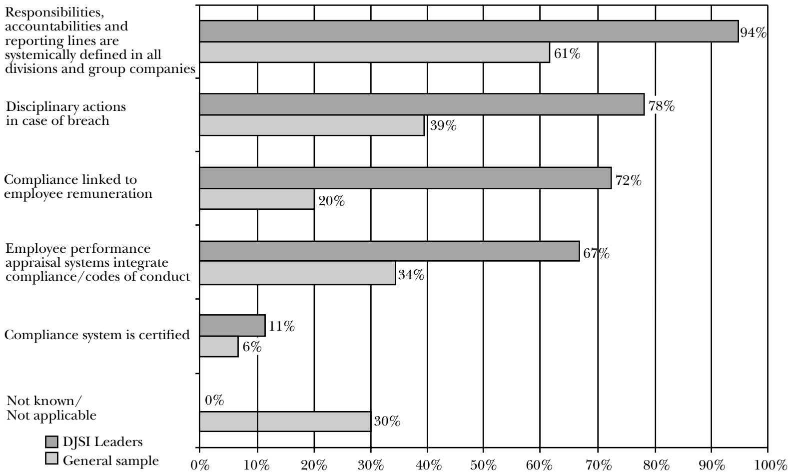
A more reduced number of companies have gone a step further and are conducting a Business Conduct and Ethics audit in all business units and subsidiaries. The results are reported to the board audit committee, which in turn informs the board of directors. A summary of the above results follows:

- Seventeen companies have internal management systems and reporting structures to ensure adherence to the principles and values endorsed in the code of conduct.
- Fourteen companies put in practice disciplinary actions in the case of a breach of the code of conduct's norms.
- Thirteen companies link the code of conduct to employee and manager remuneration.
- Twelve companies conduct employee performance appraisal systems that integrate issues related to code of conduct compliance.

- Seven companies conduct internal Business Conduct and Ethics audits.
- Three companies track the progress of the level of awareness of business principles and values among employees.

Graph 2.5 makes a comparison between DJSI leading companies and the universe of companies analyzed by SAM of some of the code of conduct implementation procedures that we have explained.

GRAPH 2.5: Implementation procedures of codes of conduct



Source: SAM Research, 2003.

As we can see, definition of responsibilities and reporting lines is the most common system for implementing the code of conduct, with 94% for DJSI leading companies and 61% for ordinary companies. Comparing the results between these two groups of companies we can observe that DJSI leading companies are far more advanced than ordinary companies. In some particular cases, such as compliance linked to employee remuneration, the difference extends to more than 50%. The field of certification of compliance systems is the only one where results and differences are not too significant.

It is important to note that 30% of the analyzed companies responded *not known*. If we consider the previous graph (Graph 2.3), we see that 16% did not communicate or did not have a code of conduct. Thus, we can infer that 14% of companies which have a code of conduct do not possess any system or procedure to implement it. This creates further potential for improvement for the majority of the companies.

In sum, these results reaffirm the main idea expressed at the beginning of this chapter: the sustainable enterprise not only has declarations or statements of the importance of embracing new values in accordance with sustainability, but also has systems and procedures that ensure that all members from the company live up to these values.

The remarkable endeavors of British Telecom (BT) in promoting its code of conduct and checking its level of awareness across the company require a detailed explanation. BT has a written a Statement of Business Practice (The Way we Work). The Statement reflects the firm's international operations and increasing expectations in the areas of corporate governance and business practice standards. A copy of the Statement—which is available in eight languages: English, German, French, Italian, Japanese, Korean, Spanish and Chinese (Mandarin)—has been sent to every employee and is also available on the company's intranet site. There is also a question and answer guide for managers to help them brief their teams. These high-level principles are supported by a comprehensive communications program and online training. A confidential helpline and e-mail facility are also available to employees who have questions regarding the application of these principles. Agents and contractors are required to apply these principles when representing BT. The Head of Group Business Practice is responsible for dealing with all these policies. Other elements of the communications plan include: a video and a credit card-size CD-ROM (explaining the Statement) which went to all senior managers for use as a briefing tool, a desk calendar sent to all managers illustrating the firm's 12 business principles, a training web site, a *Maintaining Integrity* booklet sent to all managers, 2,000 training videos distributed to targeted managers, and letters from senior managers to their teams reinforcing the compliance message. In addition, BT's Statement of Business Practice is reinforced by a number of company-wide policies: Equal Opportunities, Ethical Trading, Health and Safety, Environmental Policy, and Social Policy.

In 2001 a BT Internal Audit Department Report found that awareness of the Statement of Business Practice stood at 73% of all employees across the entire BT Group and 71% of all BT employees in the UK:

TABLE 2.5: **Awareness of the Statement of Business Practice**

	BT Group	BT in the UK
Awareness March 2001	73%	71%
Target March 2001	70%	70%
Awareness Sept. 2000	—	68%
Target September 2000	—	65%

These improvements in awareness are the consequence of a comprehensive employee communications plan. In collaboration with the Institute of Business Ethics, BT also established an in-house business practice excellence award. Individuals are nominated by colleagues for demonstrating excellent business practice behavior.

In 2001 a BT Internal Audit Department Report found that the proportion of managers aware of the specific ethical risks they face stood at 87% across the entire BT Group and 89% of all BT employees in the UK.

TABLE 2.6: **Proportion of managers aware of specific ethical risks**

	BT Group	BT in the UK
Specifically aware March 2001	87%	89%

BT believes that this level of application arises from its strategy of embedding the Business Principles into its day-to-day activities. BT has, for example, linked the Statement of Business Practice to Turnbull compliance (a requirement of company financial reporting), not only at the BT Group level but also at the operational unit level. This means that risks are regularly reviewed throughout the business, rather than just at the corporate center. All senior managers are required to manage and minimize that risk (rather than leaving it to a specialist in compliance) and have recently briefed their teams on the importance of the Statement.

The Statement of Business Practice is a reserved power of the BT Group Board and all BT's Lines of Business (Ignite, Retail, Whole-sale, Exact & Openworld) are mandated to comply with it. Implementation programmes are the responsibility of each Line of Business, all of which have nominated their own senior manager to act as owner.

2.5.3.3. Promoting values externally

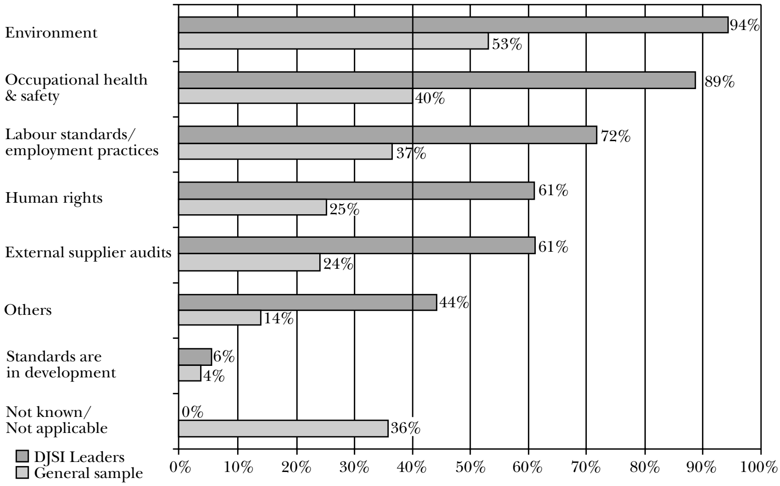
After reviewing the roles of the board in internalizing and checking the level of awareness of values across the organization, we analyze the role of the board in *externally* promoting the corporate values and the way in which compliance is verified. Next, we will show the main mechanisms used for accomplishing this task.

The most extended and proactive way to foster corporate values externally is the assessment of suppliers' accordance with social and environmental aspects. The development of a *sustainable chain policy* or *sustainable supplier guidelines* is discussed and endorsed by the board of directors or board CSR committees.

Graph 2.6 depicts the results of social and environmental areas considered in the evaluation and selection of key suppliers. Environmental aspects and occupational health & safety risks are the areas that receive the most attention. These are followed by labor standards and human rights. Restricting the analysis to DJSI leading companies, we can observe robust percentages: 94% consider environmental aspects when selecting and evaluating key suppliers and 89% occupational and health & safety issues. These high percentages are consistent with the adoption of standardized environmental management systems (EMS), because many organizations that have adopted these systems manifest a preference for suppliers that are also certified. The fulfillment of labor standards is also considered by 72% of the companies. A more reduced percentage, 61%, are integrating into this process the evaluation of human rights [15]. These results are especially important for those companies operating in developing countries, where institutional weakness, lack of regulations and poverty leave employees in an extremely vulnerable position. To some extent, the sustainable enterprise can face up to these deficien-

[15] Sustainable supply chain management is also explained in Chapter 5.

GRAPH 2.6: Areas considered in the evaluation and selection of key suppliers



Source: SAM Research, 2003.

cies and promote good environmental, social and ethical practices among its suppliers.

We see impressive differences with regard to DJSI leading companies when comparing their results to those of ordinary companies. For example, environmental aspects are only considered by just over 50% of ordinary companies. The percentages for social matters are even lower: just 40% of companies take into consideration health & safety and labor standards when selecting and evaluating suppliers, and only 25% care about human rights. Finally, 36% of the universe of firms analyzed by SAM do not have or do not disclose any requirement related to sustainability to select and evaluate suppliers.

As was stated by several DJSI leading companies, the development of a sustainable chain policy is a crucial element to enhance sustainability practices across the value chain. At the same time, it allows the firm's procurement department to assess and select suppliers in a systematic way and in accordance with sustainable development principles.

We observe that this policy can be complemented by other activities or policies to achieve a higher commitment from suppliers, for example: the extension of some parts of the code of conduct—especially those referring to labor and human rights—to suppliers [16], the establishment of dialogue channels and training programs to improve suppliers' sustainable performance, and rewarding suppliers that excel in social, ethical and environmental business practices.

Finally, the endorsement and support of international standards, such as the United Nations Universal Declaration of Human Rights [17], is also used to exhibit to the community the firm's commitment to social, environmental and ethical values. This decision is formally approved by the board of directors. In this case, 67% of companies have endorsed an international standard.

2.5.3.4. Checking the degree of suppliers' compliance with values

In this section, we analyze how the board of directors ensures and measures the degree to which the firm's suppliers are living up to the sustainable values and principles promoted by the company. From Graph 2.6 we can see that 61% of DJSI leading companies are monitoring suppliers' fulfillment of environmental, social and ethical practices. Although this score can be substantially improved, it is much better than the poor 24% for ordinary companies.

Linked with the *sustainable chain policy,* some organizations are *conducting supplier ethical and environmental audits,* which cover quality, health, safety, environmental and labor law issues. This assessment may include, for example, on-site inspection of the supplier's facility, review of the guidelines with the supplier, local reference checks, review of past practices of the supplier, and consideration of the local environment in which the supplier will perform its services. Suppliers may also be requested to certify compliance with the guidelines. Usually these audits are done gradually until they cover the full range of suppliers. Those suppliers with a higher percentage

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[16] Principles on labor and working conditions—such as child and forced labor—are provided both in the supplier guidelines and in the codes of conduct. Organizations state that if a pattern of violation of these principles becomes known and is not corrected, firms shall discontinue their business relationship with the identified suppliers.

[17] The most common standards supported by DJSI leaders are: United Nations Universal Declaration of Human Rights, United Nations Global Compact, ILO Declaration of Fundamental Principles and Rights at Work, the ILO Tripartite Declaration concerning Multinational Corporations and Social Policy, and some other more specific standards depending on the firm's main business activity and location.

of the firm's purchases are the first to be audited. In this case, a performance indicator is implemented to track the percentage of raw material costs covered by these audits.

Sometimes the sourcing principles, or a summary of them, developed by the organization in its sustainable chain policy form part of the contract between the company and its suppliers and suppliers are required to implement them. In this case, the organization designates an internal department to check suppliers' implementation of and compliance with the sourcing principles and values.

In Chapter 5 (5.4.1 and 5.4.2), we explain in detail the supply chain management of Marks & Spencer (M&S), which buys products from more than 1,000 suppliers in over 70 countries and has implemented a supply chain policy concerning environmental and social issues.

Table 2.7 gathers the results of section 2.5.2, comparing the 18 DJSI leading companies and the universe of companies analyzed by SAM.

TABLE 2.7: **Organizations internalizing and promoting sustainable values**

	DJSI Leading Companies (%)	**Ordinary Companies (%)**
Internalizing Values	100	84
Checking Awareness of Values	94	61
Promoting Values Externally	94	53
Checking Suppliers' Compliance with Values	61	24

2.5.4. Encouraging stakeholder dialogue

Our aim was to find out if firms' top corporate governance bodies were ensuring that the interests of their stakeholders were effectively considered in all of their decisions and tasks. Therefore, we focused our attention on board relationships with external experts to discuss sustainable development challenges, and board initiatives for fostering stakeholder dialogue. We could identify five different but complementary processes to accomplish this function:

- The establishment of an *external advisory council* made up of renowned people who are able to assess the company's policies on CSR from different viewpoints. Thirty-nine percent of DJSI sector leaders have an external advisory council of this nature.

- The invitation of external experts on sustainable development to board meetings. Although we found no cases of a formal routine, seven companies responded "when appropriate" to this question and gave us examples of personalities attending a recent board meeting of the company. Only 3 companies have never invited an expert on sustainable development to a board meeting and are not considering doing so. From the remaining 7 companies we could not obtain an answer.
- The adoption of a policy regarding the company's relationships with its stakeholders. In this case, the board's interaction with stakeholders is formally established as a responsibility of the board CSR committee and Chairman and/or CEO in the corporate governance guidelines. Logically, such responsibility does not preclude any other director, independent or not, from meeting with stakeholders. In this case, 44% of the companies include this function in their corporate governance guidelines.
- The board's interaction with stakeholders through informal processes. Examples of this interaction include: comments on sustainability strategy in the annual shareholders' meeting and annual report, discussion on topics related to sustainability with institutional shareholders, meetings with government committees and NGOs on specific projects, participation of board members in internet debates on sustainable development, or visits to the firm's sites to meet local management. This kind of interaction is quite common. Eighty-three percent of the firms' boards of directors are undertaking some such initiative.
- The publication of an annual CSR report [18]. These reports cover different areas that respond to a diversity of stakeholders'

[18] Other common terms used for these reports are *"sustainability report", "corporate citizenship report ", "social and environmental report", "environment, health and safety report"* and so on. Likewise, some companies are beginning to publish a combined annual report integrating economical, social, and environmental information.

interests and include feedback mechanisms which allow the company to know the stakeholders' opinion. Only three companies from our sample do not publish a CSR report. Table 2.8 summarizes the results mentioned above.

TABLE 2.8: **Board interaction processes with stakeholders (18 DJSI Sector Leaders)**

	Yes (%)	No (%)	Not Known (%)
External Advisory Councils on Sustainable Development	39	61	0
External Experts Invited to Board Meetings	39	17	44
Formal Responsibility of CSR Comm./Chairman and/or CEO	44	56	0
Informal Processes	83	6	11
Publication of an Annual CSR Report	83	17	0

Chapter 4 is specifically devoted to stakeholder dialogue, and looks at a wide array of practices, including advisory councils, stakeholder panels, partnerships and formal meetings.

2.6. Summary

Sustainable corporate governance implies that the members of firms' top corporate governance bodies have to internalize certain values related to sustainability and live up to them in their decision making processes. Our objective in this chapter has been to analyze how DJSI leading companies are changing their governance practices to embrace sustainable development. To do so, we used the framework proposed by the Code of Governance for Sustainable Business.

From our analysis we can conclude that, overall, DJSI leading companies have adopted values coherent with sustainable development and that their boards are promoting those values both internally and externally through different means, such as codes of conduct, human resource management systems, procurement systems, and so on. They differ particularly from *ordinary* companies in the importance they give to the external promotion of values, as well as in their efforts to track the extent to which the behavior of their people and their suppliers is consistent with those values.

Almost all DJSI leading companies consider sustainability or CSR issues a responsibility of their boards, while only half of ordinary companies do so. As a result, the companies focusing on sustainability or CSR issues have introduced changes in the structure and composition of their boards by creating *ad hoc* committees and nominating directors conversant with sustainability. In addition, their boards regularly include these issues on their agendas.

Finally, the leading companies' boards are aware of the importance of maintaining an open, honest and fluid dialogue with the firm's stakeholders as a way to maintain their *license to operate* and improve upon their innovation capabilities.

3. Integration of sustainable development into corporate strategy

THE firm's strategy defines its goals and objectives and includes the pattern of actions needed for achieving those objectives. The environment highly influences the firm's objectives and usually these objectives are reviewed to align the firm within its context. In this sense, during the last few decades we have observed that some multinational corporations (MNCs) have responded to social pressures and concerns by including new objectives, which can be summarized in the statement *achieving sustainable growth.*

One of the strategic concerns explored in the context of sustainable development has been the link between sustainable organizations and competitiveness (Shrisvastava, 1995; Hart, 1995; 1997). Managing for continuity and efficiency through traditional strategies such as cost or differentiation in existing industries and businesses is no longer enough (Porter, 1980). In the coming years, competitive advantage will increasingly shift to capabilities for exploration (March, 1991), disruptive innovation (Christensen, 1997), creative destruction (Foster and Kaplan, 2001; Hart and Milstein, 1999), corporate imagination (Hamel and Prahalad, 1991; Hamel, 2000) and competitive imagination (Hart and Sharma, 2002). To be able to develop those capabilities, corporations must embrace sustainability in their strategies.

The objective of this chapter is to analyze how leading companies embody sustainability in their strategies. To do so, we first examine how these firms are integrating the concept of sustainable development in their strategy formulation process. Specifically, we study the structure that supports the integration of sustainability in the strategy formulation process. This means knowing which persons or groups are involved in the process, examining what role they play, and knowing how sustainable development is taken into account. Second, we also consider the identification of the mechanisms, policies, and tools used to implement these sustainable strategies to be equally important. To explore this issue, although we also consider other systems of making the sustainability strategy a reality, we focus on how these leading companies are modifying their *balanced scorecards* to embrace sustainability.

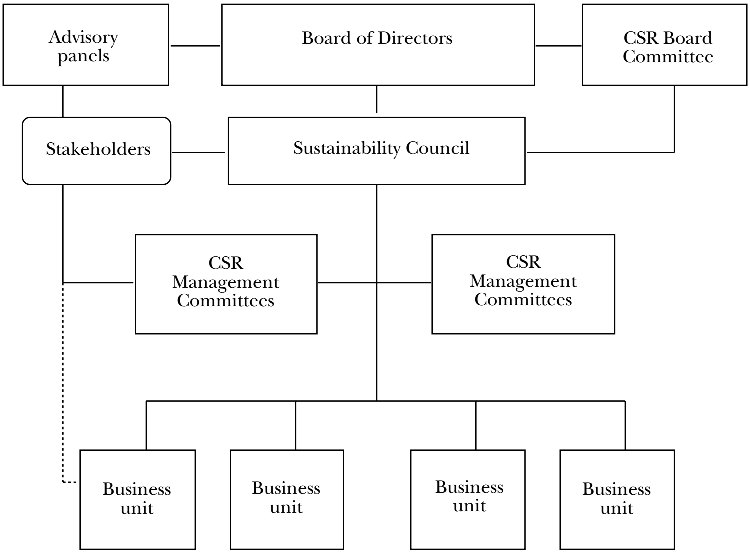
We should mention that all of the companies from our sample are MNCs. This implies that the bodies or groups which are present in the strategy-making processes work at the corporate level, while the groups responsible for implementing sustainability policies operate both at the corporate and the business level.

3.1. Strategy formulation

As stated above, we will analyze the structures of leading companies that support the integration of sustainability in the strategy formulation process. The definition of a firm's strategy is the responsibility of the highest levels of the organization. Usually, top executive management formulates the strategy and the board of directors has the responsibility of reviewing and approving it. Therefore, the firm's governance structure will be decisive in analyzing the process of strategy formulation. However, we must not forget that strategy formulation is also done with the cooperation of other internal and external groups, which provide insight and guidance to executive management and the board. Our analysis has enabled us to observe a wide variety of groups that in one way or another intervene in the strategy formulation process in relation to sustainability.

Figure 3.1 shows the different bodies that, directly or indirectly, participate in the strategy formulation process and contribute to the consideration of sustainable development within it. Although this whole organizational structure should be considered the *ideal* sustainable governance structure, we conclude from our research that, with a few exceptions and variations, it is a fairly standard structure among DSJI leading companies. For instance, all companies ex-

FIGURE 3.1: Sustainability governance structure



cept one have appointed a sustainability council or CSR management committees. This means that new positions called *Director of Corporate Responsibility* or *Director of Sustainable Development* have been created in these companies, in order to facilitate sustainability management and help top executives to consider sustainable development when formulating the firm's strategy.

Next, we list all of the different bodies that we have seen play an important role in the integration of sustainable development into the strategy [19].

- *Board of Directors.* As the board of directors is ultimately responsible for approving corporate strategies and providing strategic direction, it plays a key role in this process. In order to include sustainable development as a key strategy variable, the board of directors has adopted new responsibilities, such as ensuring that the business is conducted ethically and trans-

[19] Rather than presenting the aggregate results (as in Chapter 2), we show the *ideal* structure—from the details of all the different structures that we have analyzed in DJSI leading companies—that should allow a company to integrate sustainable development considerations into the firm's strategy in a more extensive way.

parently, setting standards for social, environmental and ethical practices and monitoring compliance with these practices. Also, some companies have nominated experts with a sustainability background.

- *CSR Board Committee*[20]. The appointment of a board committee with specific responsibilities in social, environmental and ethical policies is used to advise the board of directors on issues related to sustainability. This committee also works jointly with management in setting up sustainable strategies and reviews the firm's sustainability practices.
- *Sustainability Council*[21]. This is a management group made up of senior executives from business units and support functions. It can be chaired by the CEO or by a top executive director. This group acts as the highest executive body with overall responsibilities for sustainability strategy and policies. It has two main functions: evaluating policies and developing proposals to drive the integration of sustainable growth within the corporations and overseeing the implementation of the firm's commitment to sustainability in management processes, business decisions and communications.
- *CSR Management Committees.* These internal committees are appointed to support the work of the Sustainability Council in specific areas, such as *Environment, Health & Safety* or *Social & Ethical Policies.* They also support the implementation of sustainability policies through business units.
- *External or Internal Advisory Panels.* These panels are normally made up of renowned personalities in the field of CSR or sustainable development. Their main function is to advise the board of directors on sustainability activities and relevant issues affecting the company (e.g., biotechnology, bioethics, etc.).
- *Stakeholders.* The outputs from stakeholder dialogue activities can also be integrated into the firm's strategy through the es-

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[20] Section 2.3 of this report details the goals and composition of these board committees.

[21] These management groups can have other names, such as Sustainability Steering Group, Sustainable Development Council, or Corporate Social Responsibility Steering Group (CSRSG).

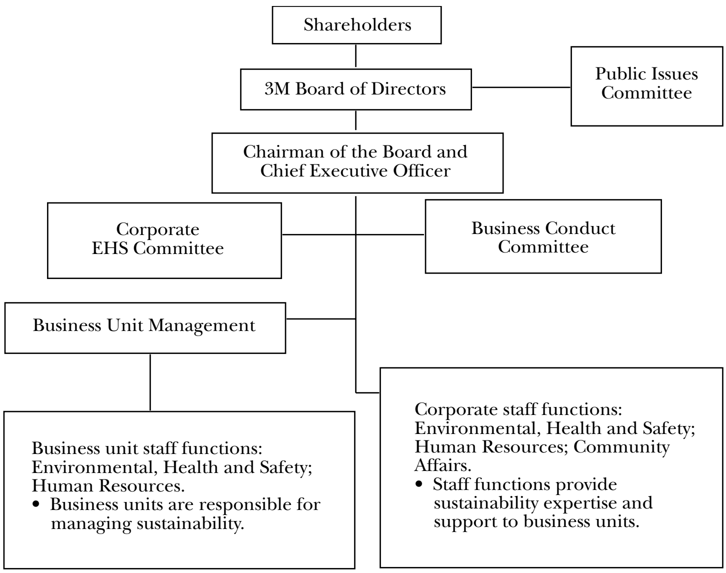
tablishment of formal processes (e.g., stakeholders' councils or internal mechanisms to transfer dialogue outputs). In this way, the firm's sustainable strategy evolves over time and maintains its strength.

- *Business Units*. The major responsibility of business units lies in the implementation process. They are responsible for managing sustainability on a daily basis. However, they can also play an important role in the formulation process when the business units' heads are members of the Sustainability Council.

3M and Swiss Re offer two interesting examples of how these bodies interact and make possible the integration of sustainability in the strategy formulation process.

- The governance structure set up by 3M allows this firm to integrate sustainable development into its strategy and monitor its performance (see Figure 3.2 below). First, the 3M Board of Directors addresses sustainability issues through its Public Issues

FIGURE 3.2: 3M **Corporate Governance**



Committee (PIC). The Public Issues Committee of the Board of Directors of 3M reviews public policy issues and trends affecting the company, reviews and advises with respect to the company's environmental, health and safety (EH&S) programs and compliance, human resources, the corporate contribution program and the 3M Foundation, and reviews and approves the company's response to shareholder proposals relating to public policy issues. Two management committees, the Corporate Environmental, Health and Safety Committee and the Business Conduct Committee, support the Public Policy Committee. These committees consist of 3M executives and also set policies and direction to move the company toward sustainability. Business units are responsible for managing sustainability. 3M's corporate staff functions (environmental, medical, safety, human resources, community affairs and other staff groups) provide the technical expertise to help business units carry out 3M's sustainability policies and direction.

- The most important elements of Swiss Re's sustainability management are the divisional executive teams, the Sustainability Management Officers and the Sustainability Steering Committee. The divisional executive teams constitute the top tier of management in each of the divisions and have strategic responsibility. Each executive team nominates a Sustainability Management Officer, who represents the division on the Sustainability Steering Committee, the main supervisory body at the group level. This committee is chaired by the Group's Chief Reinsurance & Risk Officer. Under the guidance of their respective Sustainability Management Officers, the project teams of the business groups and the Corporate Centre are responsible for implementation. The unit known as Group Sustainability Management in the Corporate Centre is responsible for process management at the group level and the coaching of the divisional initiatives. Together these elements form an integrated organization, which is responsible for defining sustainability-relevant business processes, shaping strategy, the reviewing and reporting process and exchanging know-how.

3.2. Implementation: using BSC and other systems to make strategy a reality

We have analyzed in depth how leading companies are adapting balanced scorecard systems for integrating sustainability dimensions into this management tool. We have focused our attention on the balanced scorecard (BSC) because it is a tool widely used among companies for deploying, assessing, and reviewing their strategic objectives (Kaplan and Norton, 1992). We should keep in mind that normally all of the programs, policies, standards, and guidelines that contribute to the implementation of sustainability strategy are developed at the group level and implemented at the business level. In this sense, there is a need for management systems and reporting and monitoring procedures to ensure that these policies are effectively implemented across businesses. After explaining how companies are incorporating sustainability into their BSC, we will provide some examples of alternative management systems that are being used for this same purpose.

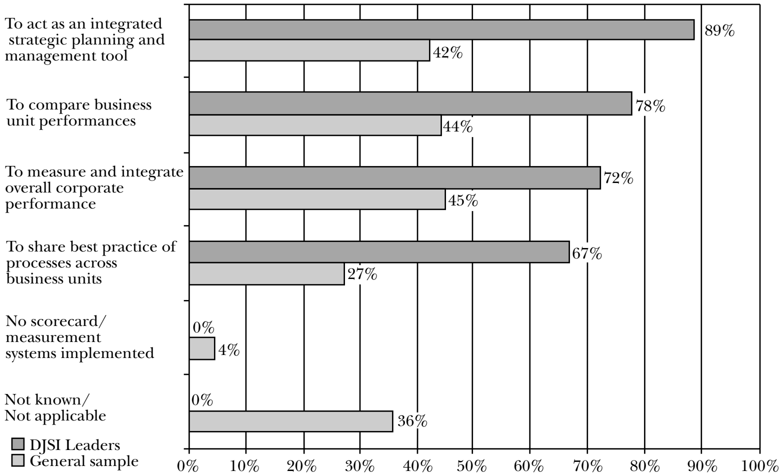
3.2.1. The sustainable balanced scorecard as a system of deployment, assessment and revision of objectives

In order to become a truly sustainable enterprise, alignment with sustainable development has to be embedded in all decision-making processes at all levels. In many cases, big companies have management systems that help all business and operating units set their objectives, evaluate their performance, and review both objectives and performance. In the end, these systems allow those at the highest levels of the organization to check the degree to which the firm's objectives are being attained. One of these systems, although not the only one, is the BSC. The BSC is a framework that helps companies to achieve strategic alignment by linking strategic objectives with measures and actions. The BSC emphasizes the need for equilibrium in various respects. First of all, short- and long-term related goals should be considered equally. In addition, it should cover *internal aspects* (such as processes and organizational development, employees, etc.) as well as *external* ones (such as customers, shareholders, etc.). Third, the BSC tries to provide *enablers* that relate to future performance *(leading indicators),* as well as results *(lagging indi-*

cators) to depict the effect of aims and measures in the past. Finally, it includes such *intangible aspects* as customer satisfaction, process quality, and organizational development, alongside more *traditional financial indicators*. In order to integrate all of these issues, the BSC usually has four perspectives: customer, finance, people and organization [22], and business processes [23].

As we can see in Graph 3.1, the BSC is used as a strategic planning and management tool in 89% of the cases for DJSI sector leaders. This result confirms that BSC is *mainly* a strategic management tool. However, Graph 3.1 shows that the BSC has other common functions, for example, allowing the comparison of business unit performance, measuring overall corporate performance, and contributing to share best practices across business units. Graph 3.1 also clearly demonstrates that DJSI sector leaders outperform ordinary companies in the implementation of BSC.

GRAPH 3.1: Balanced scorecard purposes



Source: SAM Research, 2003.

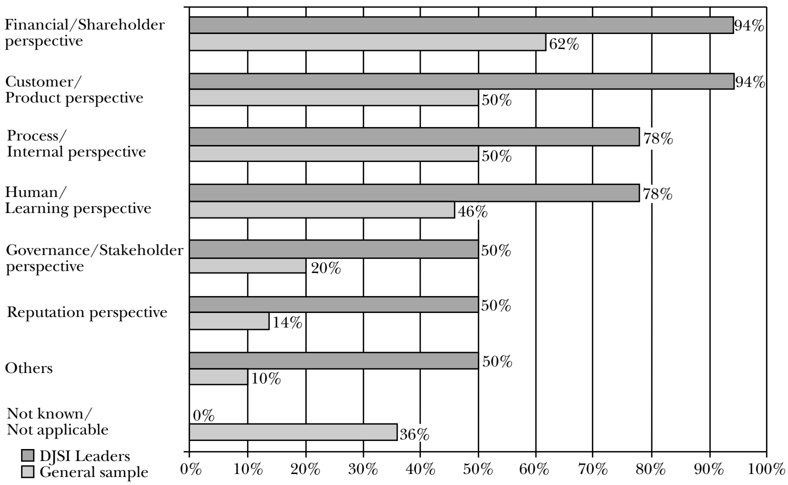
[22] The *people & organization* perspective is also called *learning* perspective. Both names will be used in this report to represent the same perspective.

[23] The *business processes* perspective is also called *internal management* perspective. Both names will be used in this report to represent the same perspective.

Based on the traditional BSC, the *Sustainable Balanced Scorecard* (SBSC) provides a broader scope by integrating all three dimensions of sustainability, and therefore is particularly suitable for value-based sustainability management (Figge *et al.*, 2002). We analyzed to what extent companies are adapting their corporate BSC to sustainability objectives. This, it should be noted, is a new but emergent issue, wich therefore offers the possibility for further research over the next few years.

Graph 3.2 sets out the results regarding the different perspectives of the BSC considered by companies. As expected, the *traditional* perspectives (customer, financial, process and learning) have the biggest percentages both in DJSI sector leaders and ordinary companies.

GRAPH 3.2: Perspectives of balanced scorecards



Source: SAM Research, 2003.

Graph 3.2 also shows that the inclusion of new perspectives is not yet a common practice. Only 50% of DJSI sector leaders have included new perspectives, such as governance/stakeholder and reputation. Nonetheless, as we will see below, some companies, instead of or in addition to adding a new perspective, are considering sustainability as part of traditional BSC perspectives. These percentages are much lower in the general sample, where only 20% and 14% respectively have added the perspectives of governance/stakeholder and reputation.

As we have said, and as can be seen in Graph 3.2, the adaptation of the BSC to sustainable development dimensions is still in an embryonic stage. We found just nine DJSI sector leaders which have an SBSC. Most of these companies are only now taking the first steps to transform their BSC into SBSC.

Besides these statistics, it is also interesting to gain some insight into *how* these companies are developing, or want to develop, an SBSC. We observed three different ways for integrating sustainability dimensions:

1. Integrating *new social and environmental strategic objectives* into the current BSC perspectives. Accordingly, new performance indicators are set and monitored in these perspectives. For instance, Dofasco has included environmental strategic objectives in the *internal management* perspective, whereas stakeholder satisfaction (e.g., customers and workers) is included in *customer* and *people* perspectives and monitored through satisfaction surveys (see below).

TABLE 3.1: **Dofasco's Balanced Scorecard 2003 (summarized)**

Customer	**Investor**
On Time Delivery Accountable Backlog Customer Service Ratings	Growth in Shareholder Value Earning Performance ROCE Total Shareholder Return
Workforce	**Internal Management**
Employee Perspective & Loyalty Employee Perspective (survey ratings) Includes: Overall Corporate Direction Health & Safety Respect and Concern for People Leadership Employee Development Performance	Health & Safety Environmental & Energy Quality Commercial & Financial (Others)

Similarly, Novo Nordisk [24] has included new strategic objectives and adapted some of its BSC perspectives to reflect its commitment to addressing sustainability issues. For instance, the *customer* perspective has been transformed into the *customer & society* perspective to include social, environmental and bioethical objectives (see below).

TABLE 3.2: Novo Nordisk Balanced Scorecard 2002

Customers & Society	**Business Processes**
Realize the full potential of strategic products. Improve market share globally Ensure successful implementation of US and Japanese Business Plan. Achieve superior costumer satisfaction. Improve social, environmental and bioethical performance.	Discovery speed, quality and productivity. Competitive development portfolio Ensure launch capabilities within GP segment. Improve quality management focus in all business processes. Timely and efficient execution of investment portfolio. Ensure effective use of IT supporting the business strategies.
People & Organization	**Finance**
Customer relations Winning culture Attract and retain the best Development of people Social responsibility	Growth in Operation Profit ROIC Operating Margin Cash-to-Earnings Ratio

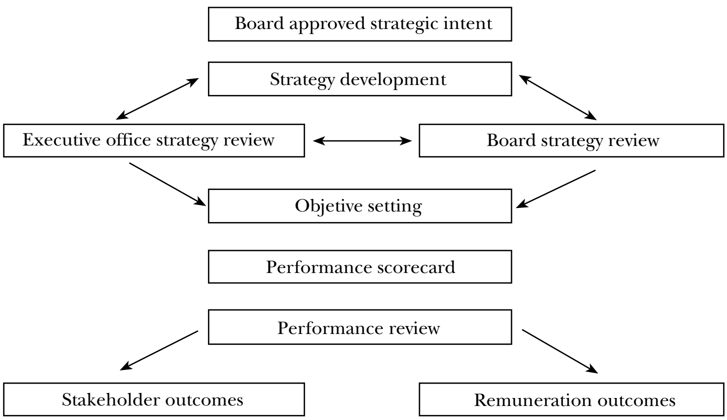
2. Adding *new perspectives* to the BSC to include sustainability objectives. For example, as we will explain in some detail below, Westpac Banking has included a fifth perspective, named the *corporate responsibility* perspective, which considers financial, customer, employee, community, social and other general (reputation, sustainability and governance ratings)

[24] Novo Nordisk is a company of the Novo Group, which owns Novozymes. Novo Nordisk tops the pharmaceutical industry group of the DJSI.

sustainability measures. Some companies (e.g., DuPont or Marks & Spencer) have added other perspectives related to sustainability dimensions, such as *good governance, reputation* or *community consent.*

The example of Westpac Banking Corp. allows us to illustrate how strategy is formulated and afterwards implemented through the use of a BSC. This company has adopted a *value management framework* so strategic decisions and management actions are focused on improving shareholder value while meeting corporate responsibilities. The value management framework (see Figure 3.3) links the strategic intent, strategy development and strategy review to the objective setting, accountability and performance review.

FIGURE 3.3: **Westpac's value management framework**



First, the Board approves the strategic intent of the company and develops the strategy through the annual planning template for the next three years based upon market expectations. From this process a set of Core Goals are established. The next step consists of translating strategy into performance outcomes. To attain this, three steps are considered:

— *Objective Setting.* Each level of the organization establishes its objectives taking as a reference the Core Goals defined by the Board. These objectives should be outcome based and cover each quadrant of the *Balanced Scorecard*—Shareholder, Customer, People and Corporate Responsibility—where applicable [25]. Objectives are classified as strategic, tactical and operational depending on the level of the organization that has established them.

— *Performance Scorecard.* The next step is to select the Key Performance Indicators (KPI) that identify how the objectives will be measured with the associated performance target. It must have two KPIs per objective. Also, it will be necessary to define the Interdependency Profile that will highlight any interdependencies across the business, establish who to rely upon to achieve these objectives, and identify the input required, actions negotiated with key stakeholders, and associated risks.

— *Performance Review.* The last step is to study the degree to which the established objectives have been accomplished. For this purpose, each KPI has an assigned weight and the results of the current year plan are compared with the results achieved in the previous year.

This whole process is not lineal, but rather iterative. Continuous revisions and feedback take place before the process ends. Finally, Westpac links the achievement of the established objectives with executive remuneration.

3. The last alternative of SBSC is quite different from the previous ones. In this case, the company creates *a specific scorecard* for the social or environmental dimension. This can be considered as a *second level* scorecard that improves the implementation of the sustainability objectives and helps a specific corporate division to monitor its performance. However, it should be mentioned that this *second level* scorecard should be complementary to, and not a substitute for, the two previous approaches explained, in order to consistently integrate sustainability dimensions into the way of doing business. For instance, 3M has set up an EHS Scorecard that details the critical eco-efficiency performance of 3M operations (3M's EHS Scorecard is showed below). The EHS

[25] As we can see, Westpac's scorecard includes four perspectives because Westpac has grouped the business process and customer perspectives into just one perspective.

Scorecard reflects 3M's *Environmental Targets 2005* program that sets new five-year corporate environmental goals (e.g., improve energy efficiency, reduce waste, etc.). These goals address environmental issues through eco-efficiency and pollution prevention metrics. They are complemented by individual business unit goals that incorporate product life cycle management within the unit's strategic plan.

FIGURE 3.4: 3M's EHS scorecard

	2000 Baseline	2001	2005 Target
Energy (BTU/$ million sales)	1,606	1,477	1,204
Waste (Ibs/$ million sales)	23,676	23,443	17,757
VOC (Ibs/$ million sales)	1,628	1,475	1,221
TRI Releases (Ibs/$ million sales) (US only based on year reported)	1,298	990	649
3P Projects	194*	67	400**
3P Savings ($US)	22,401,894	7,287,553	NA
3P Pollution Prevented (tons)	4,859	9,234	NA

Note: Energy, waste, VOC and TRI releases data are normalized to one million US dollars net sales.
* Five-year total for 1996-2000.
** Five-year total for 2001-2005.

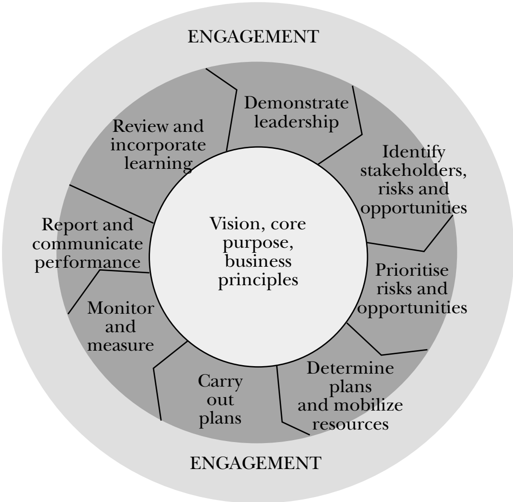
3.2.2. Other systems of deployment, assessment and revision of objectives

In addition to the SBSC, we also analyzed other management systems that could be used for deploying, assessing, and reviewing objectives in accordance with sustainability policy. The following examples from Shell and Lend Lease illustrate different methods that can be utilized for this purpose.

3.2.2.1. Royal Dutch/Shell Group (Shell)

In 1999, Shell developed the Sustainable Development Management Framework (SDMF) to help raise awareness of sustainable development across Shell companies and to embed its requirements into decision-making (see Figure 3.5 below).

FIGURE 3.5: Shell's Sustainable Development Management Framework



Within this framework, Shell has developed a *self-assessment tool* to be used at the group, business or operating level. Its main purpose is to align business processes and sustainable development through: integrating economic, social and environmental considerations into decision making; balancing short-term priorities and long-term needs; and engaging stakeholders. At the same time, it seeks to raise awareness and understanding, stimulate dialogue and lead to an action plan for systematic improvement of sustainable development alignment. The self-assessment tool comprises six steps and a series of short statements describing the degree of alignment at four levels—from minimal to full alignment—for a number of business processes based on SDMF. The steps are listed in order below:

- — Agree upon entity (e.g., business unit, operating unit, or activity) to be assessed.
- — Identify business processes to be assessed.
- — Brief management on purpose and process of self-assessment
- — Prepare for the self-assessment.
- — Meet as team to assess the level of alignment and identify areas for improvement.
- — Identify actions, prioritize, and agree responsibilities to improve the level of alignment.

The following table is provided to all management teams in order to assess the level of business processes using the three core requirements of sustainable development mentioned earlier.

TABLE 3.3: Levels of alignment of business processes and sustainable development

Core Requirements	**Level 1 Minimal Alignment**	**Level 2 Some Alignment**	**Level 3 Considerable Alignment**	**Level 4 Full Alignment**
Integrating economic, social and environmental considerations.	Decision-making based on financial considerations, and to some extent on enviromental (legal/HSE) considerations.	Decision-making takes into account economic and enviromental considerations and to some extent social considerations, but does not take account of their inter-relationships.	Decision-making incorporates economic, enviromental and social considerations, and takes account of selected inter-relationships (e.g. socio-economic).	Decision-making is based on a comprehensive and systematic process that takes into account economic, enviromental and social considerations, and their inter-relationships.
Balancing short-term priorities and long-term needs.	Focused on short-term priorities only.	Short-term priorities managed with some recognition of long-term (strategic) aspirations.	Short-term priorities managed within the context of long-term (strategic) aspirations.	Short-term priorities managed with full recognition of long-term (strategic) aspirations.
Engaging stakeholders.	*Ad hoc,* internal engagement focused on informing stakeholders.	Internal and limited external engagement, usually reactive in nature, to inform and educate stakeholders.	Regular internal and considerable external engagement, pro-active in nature, to manage stakeholder expectations.	Systematic internal and external engagement with stakeholders, fully integrated with business processes.

At the group level, Shell has established a set of Key Performance Indicators (KPI) focused on business processes in order to measure overall business performance in economic, environmental, and social dimensions.

3.2.2.2. Lend Lease

In order to ensure that sustainable development considerations and stakeholder opinions are included in all of the projects, Lend Lease has developed the Environmental Sustainable Development (ESD) Process, which is predicated on total stakeholder involvement. There are five basic steps to deliver the ESD:

- — Establish ESD performance targets for the project in consultation with stakeholders—owners, community, authorities, and experts—relative to local and national concerns.
- — Formulate management strategy and performance criteria to ensure delivery of targets.
- — Implement technical modeling and life-cycle assessment to confirm performance.
- — Document design solutions and support the building process through technical assistance.
- — Hand over or maintain involvement over the long-term to assist owners and stakeholders in maintaining performance.

3.3. Summary

There is no doubt that environmental and social issues are becoming more and more important. However, most companies are considering these issues as something separate from their business strategies. We have found that in order to avoid this schizophrenia, DJSI leading companies have set up structures that allow them to develop sustainability strategies at the top governance and management level intertwined with their business strategies.

Most DJSI leading companies use balanced scorecards as a strategic planning tool that allows them to cascade down objectives and evaluate their degree of achievement. However, overall they are still figuring out the best way to embrace sustainability in their BSC. In fact, only 9 out of the 18 companies analyzed have a sustainable balanced scorecard (SBSC). Some of these companies are adding new perspectives to their BSC while others are adding sustainability indicators to some or all of theirs. In any case, DJSI leading companies continue to be well ahead of traditional companies in this respect.

4. Dialogue as a core capability for the sustainable enterprise

TODAY'S business landscape is characterized by two interdependent facts: 1) the acceleration of the globalization process, and 2) the increasing number of social demands with regard to the role companies play in the globalized world. Market deregulation and the development of information and communication technologies have sped up the globalization process, resulting in an increase in the power and influence of multinational corporations (MNCs) in the world economy. In fact, of the top 100 economies of the world in the year 2000, 29 were MNCs, and two of the MNCs even figured among the top 50 economies (UNCTAD, 2002).

The consequence of this new reality is that society is demanding that corporations assume a greater and more responsible role with regard to the natural and social system in which they operate. In fact, the sustainable enterprise differs from the *traditional* enterprise in its conception of the environment: while the former has a systemic vision of the context and understands its relationships with the natural and social system, the latter only takes into account its competitive context when making strategic decisions. Because of this new paradigm, we are shifting from a shareholder economy to a stakeholder economy. Indeed, some time ago, shareholders were considered the only important group affecting the company's interests. Now, however, nobody doubts that other groups, such as employees, administrations, strategic partners, suppliers, local communities, financial institutions, media, and non-governmental organizations can be key players in ensuring the firm's long-term success. Managing the multiple and often contradicting interests of a range of stakeholders in an integrative fashion is a particularly important capability in the context of sustainable development.

In this new context, those companies embracing sustainability principles have to consider and integrate into their business models the diverse views of stakeholders. For this reason, stakeholder dialogue has stopped being merely a peripheral activity and has become a strategic priority. Below we highlight the characteristics that define stakeholder dialogue and differentiate it from traditional communication.

TABLE 4.1: **Stakeholder dialogue versus communication**

Communication	Dialogue
• Just information	• Information and dialogue
• Operating activity	• Strategic activity
• Externally managed	• Internally managed
• Responsibility limited to a specific department	• Overall organization involved, directly or indirectly
• Superficial involvement of executive team	• Deep involvement of top executive team
• Non-habitual activity	• Ongoing activity
• Peripheral activity	• Core activity

As we can deduce from Table 4.1, stakeholder dialogue is an activity carefully managed by those companies that aim to advance towards sustainability. It requires not only the direct participation of the top executive team; in fact all of the organization's members should participate in stakeholder dialogue activities. In this way, dialogue is embedded in the organization as a core element of its culture.

As we said previously, the main objective of the traditional enterprise was achieving the satisfaction of shareholders because they were the *only* stakeholder. For this reason, the management team was focused on maximizing the return from tangible assets, because the value of the company depended primarily on this aspect. However, today we know that companies mainly have to manage intangible assets in order to create value, because most of the value of the company is attributed to intangible assets. Robert Kaplan, professor at the Harvard Business School, has recently published a study where he shows that the relative value of tangible and intangible assets has dramatically changed over this century. According to this study, in 1929 85% of a firm's value resided in its tangible assets, while just 15% depended on its intangible assets. Today these numbers have been reversed and intangible assets represent approximately 80% of the firm's value. Therefore, the principal source of a firm's competitive advantage lies in its intangible assets. In this new scenario, stakeholders also play an important role for developing and acquiring intangible assets. To a great extent, learning processes, knowledge creation, reputation or even innovation capability depend on the kind of relationships established with stakeholders. Therefore, *the ability to develop positive relationships with stakeholder groups is in itself an intangible asset that can provide and improve upon some of the firm's essential capabilities.*

First, stakeholder dialogue can help to strengthen the firm's innovation capability. Establishing new relationships with different stakeholders enables companies to: 1) possess the broadest range of present and future outlooks on the world, 2) obtain information and knowledge relating to relevant opportunities, 3) establish the collaborations that are essential to fulfill these opportunities, and 4) gain the credibility required to secure social approval for their innovations. Second, stakeholder engagement through dialogue activities enhances and strengthens the credibility and reputation of the firm. Thus, one of the earliest benefits of stakeholder engagement is reputation. Needless to say, to build a solid reputation, dialogue outcomes should be fed into the firm's strategy in order to translate stakeholder interests and concerns into concrete actions. As we can see, this is not a mechanical activity (communication), but rather a strategic activity (dialogue). These intangible assets and capabilities have a strategic nature, because they allow the firm to be different from its competitors and build a sustainable competitive advantage. In the end, these strategic assets and capabilities are positively related to the value creation process and the long-term success of the firm.

To summarize, the enterprise has to consider stakeholder dialogue a key management issue in order to advance towards sustainability and achieve sustainable competitive advantage. This chapter aims to analyze how DJSI sector leaders effectively manage this emergent issue and what benefits they can obtain from the process. First, we will identify and discuss the groups with the biggest influence on the firm's decisions. Second, we will explore the different stakeholder engagement processes and mechanisms most commonly used by DJSI sector leaders. Finally, we will observe how these activities benefit the development of a valuable and essential capability—the innovation capability.

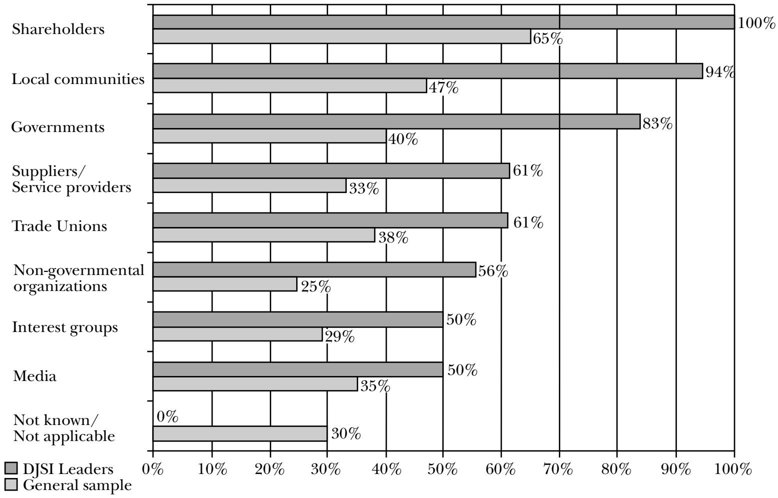
4.1. Stakeholders: who are they?

Following Freeman's landmark book (1984), stakeholders are generally described as individuals, communities or organizations that affect or are affected by the operations of a company. Although there are several categorizations and classifications of stakeholders, we will follow, as in other chapters, the proposal of the Code of Governance for Sustainable Business. As we saw in Figure 1.1 (p. 24), the stakeholders that tend to be most common in a business are shareholders and investors, the public administration, customers, local communities, countries and societies, opinion makers, employees, financial institutions, suppliers and sub-contractors, and strategic partners. Depending on the nature of these relationships, and without the following being interpreted as an assessment of the importance of each stakeholder, we can classify them into three main groups or levels: consubstantial, contractual and contextual. Consubstantial stakeholders are essential for the business itself to exist. Contractual stakeholders have some kind of formal contract with the business, and, finally, contextual stakeholders play a fundamental role in the credibility necessary for the business and ultimately in the acceptance of the business activity

Other authors have proposed different classifications. For instance, Waddock, Bodwell and Graves (2002) developed a Total Responsibility Management framework for integrating and managing all stakeholder interests and demands. In this framework, pressure coming from stakeholders was classified into three groups: primary stakeholders (owners, employees, customers and suppliers), secondary stakeholders (NGOs, communities and governments), and social and institutional pressure (global standards, best practices, etc.)

An important question to ask is, "To what extent are these stakeholders actually influencing the firm's decisions?" In Graph 4.1 we can see which groups DJSI sector leaders and ordinary companies consider most important.

GRAPH 4.1: Stakeholder groups [26]



Source: SAM Research, 2003.

The first interpretation that we can make from this graph is that DJSI sector leaders are clearly more "stakeholder-oriented" than ordinary companies. In all cases, at least 50% of DJSI sector leaders consider stakeholder groups important for their businesses. For ordinary companies, on the other hand, only shareholders get beyond this percentage. These results confirm that the traditional company stills sees shareholders as the main stakeholder and other groups as less relevant.

Shareholders are considered to be the most important stakeholder for both groups, with 100% for DJSI sector leaders and 65%

[26] The *customer* group is missing from these results. However, our analysis of DJSI sector leaders shows that 100% of these companies recognize customers as a relevant group. We can assume that this percentage would also be close to 100% for ordinary companies.

for ordinary companies. However, DJSI sector leaders also consider other stakeholders as being almost equally important, such as local communities, with 94%, and governments, with 83%. In the case of ordinary companies these percentages are reduced by half. Suppliers and trade unions also score high in the case of DJSI sector leaders, with 61% of companies recognizing them as a relevant group. Finally, NGOs, interest groups, and media are the groups least involved in any form of stakeholder dialogue. Nevertheless, half of the DJSI sector leaders are already regularly involving these groups in stakeholder dialogue activities.

In sum, we have observed that shareholders are no longer the *only* stakeholder of the sustainable enterprise. Quite the opposite; local communities, governments, employees, suppliers, NGOs and customers are also key stakeholders, which regularly participate in different types of dialogue with the company. On the other hand, we have seen that DJSI sector leaders are much more stakeholder-oriented than ordinary companies, which remain shareholder-oriented.

4.2. Stakeholder dialogue mechanisms

Dialogue mechanisms are those activities that allow the firm to interact with its stakeholders. Our research found that stakeholder dialogue is a common practice among DJSI sector leaders. Mechanisms such as stakeholder panels, meetings with local communities, forums with employees or suppliers, internet and intranet communication tools are just a small sample of the different systems used to establish relationships with stakeholders. After having reviewed all of the different types of stakeholder dialogue activities, we have grouped them into the following categories [27]:

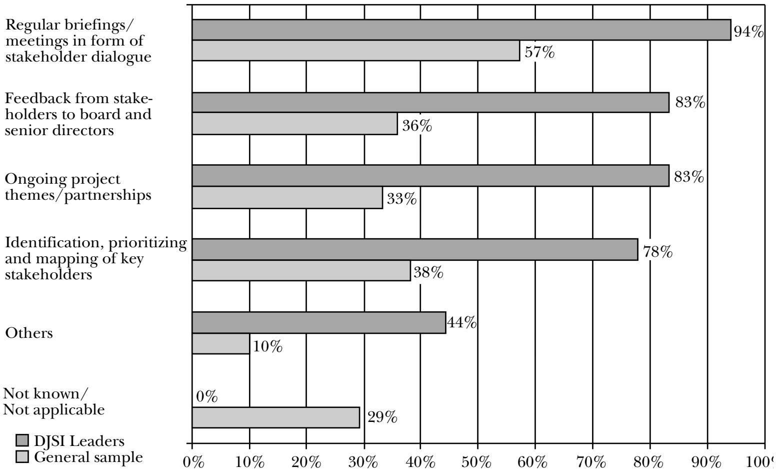
— Identifying, prioritizing and mapping of key stakeholders for input into strategy.
— Establishment of feedback mechanisms from stakeholders to board and senior directors.

[27] Internal dialogue mechanisms with employees are not included here because they will be reviewed in the next chapter when explaining human resource management systems.

— Regular briefings and meetings in the form of stakeholder dialogue.
— Ongoing project teams and partnerships.

Graph 4.2 shows that all four of these mechanisms are quite widespread among DJSI sector leaders. The establishment of regular meetings (e.g., stakeholder panels) is almost a universal practice, with 94% of companies indicating it as a regular procedure for engaging with stakeholders. Likewise, approximately 80% of DJSI sector leaders use the other three mechanisms mentioned above to interact with stakeholders.

GRAPH 4.2: Engagement processes with stakeholders



Source: SAM Research, 2003.

On the other hand, Graph 4.2 shows that most ordinary companies have not yet internalized stakeholder management. Only *regular briefings and meetings* is more or less common, with 57% of companies establishing it as a regular practice. Only about one-third of companies consider using the other three mechanisms, which in fact require a larger commitment from top executive management, as formal practices for engaging with stakeholders. These results evidence that there is further potential for improvement in this area for a majority of companies.

In the following sections we will review these four mechanisms and utilize examples of companies' best practices to illustrate the pioneering use of these tools. As far as possible, the examples offered attempt to highlight those dialogue activities concerned with sustainability issues. In this way, we can see how DJSI sector leaders are creating internal and external networks related to sustainability topics.

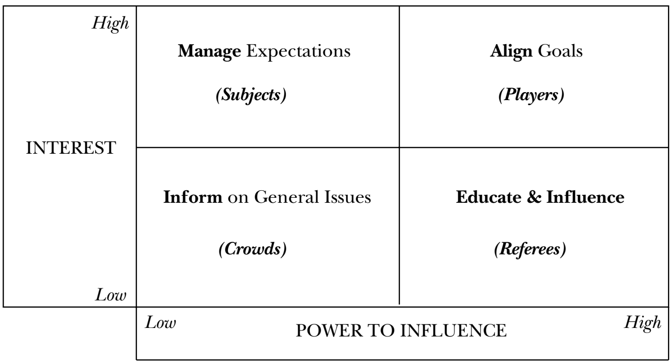
4.2.1. Identifying and prioritizing key stakeholders

Organizations that consider a sustainability strategy have to address the question: *To whom are we responsible? To stakeholders* is the common answer to this question, which means that to manage a sustainability strategy, the identification of stakeholders is a crucial element. This is confirmed by results from Graph 4.2, which show that 78% of DJSI sector leaders have developed processes to identify and prioritize stakeholders. We analyzed how these processes were developed and observed that stakeholder identification and prioritization consist of one main process—stakeholder mapping.

4.2.1.1. Stakeholder mapping

Stakeholder mapping helps to define who is really important to corporations, businesses and projects by assessing the nature of stakeholder relationships and prioritizing them. At the same time, stakeholder mapping can be used to gather in a structured manner all of the existing information and outcomes of stakeholder relationships. One possibility to map stakeholders is through an interest/influence matrix [28]

FIGURE 4.1: Shell interest and influence matrix for mapping stakeholders



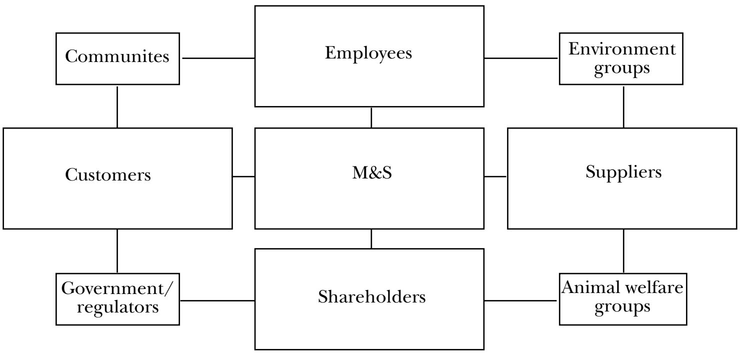
[28] This example is simply used to illustrate a mechanism for classifying and prioritizing stakeholders. We are not attempting to assess the appropriateness of this classification criterion and subsequent management decisions.

(see Figure 4.1). Shell uses this matrix to identify different types of stakeholders on the basis of their interest in and power to influence the firm's activities. According to the stakeholder position on these two axes, Shell decides the type of relationship required.

Stakeholder aspirations and concerns can differ, and sometimes potential conflicts can appear. For this reason, stakeholder mapping can be a useful tool to decide whether different actions are needed for different stakeholders.

Marks & Spencer (M&S) has also carried out stakeholder mapping to identify all stakeholders and understand their expectations. As a result of this process M&S identified the following stakeholders: employees, customers, suppliers, shareholders, communities, environmental groups, government/regulators and animal welfare groups (see Figure 4.2).

FIGURE 4.2: Stakeholder map of Marks & Spencer



Finally, it is worth mentioning that some companies have explicitly recognized in their codes of conduct or corporate principles who their stakeholders are, as well as the firms' specific responsibilities to each of them.

4.2.2. Feedback from stakeholders to the board and senior executives

> Involving stakeholders in decision-making helps us learn from others and address their needs and concerns, resulting in better decisions [29].

[29] Shell statement.

As we said previously, stakeholder dialogue is a strategic activity that requires the direct involvement of the highest level of the organization. For this reason, top executive bodies should be directly involved in stakeholder dialogue activities, and promote mechanisms to generate feedback from other dialogue activities developed across the organization. A remarkable 83% of DJSI sector leaders have set in motion different mechanisms that allow them to integrate into their strategies the different viewpoints expressed by stakeholders.

Stakeholder engagement through dialogue activities is a natural response to enhance and strengthen the credibility and reputation of the firm. Thus, one of the earliest benefits of stakeholder engagement is reputation. However, if dialogue outcomes are consistently considered by executive management, they can also provide useful insight that enables the company to identify emerging issues and trends. Finally, if this knowledge is translated into actions and strategies, the company's ability to develop unique and valuable strategies will be superior. For instance, Hart and Sharma (2002) have shown how establishing stakeholder relationships—and especially with those *unfamiliar* stakeholders situated on the fringe—enables the company to develop competitive imagination capabilities. This opinion is also widely shared by DJSI leading companies, as reflected in the Shell statement quoted above. Below we review through different examples *how strategy can be influenced and strengthened by the different viewpoints expressed by stakeholders.*

One of the more common mechanisms used to provide stakeholder feedback to the board of directors is the establishment of strategic stakeholder panels or advisory councils. As we saw in Chapter 2 (2.5.4), almost 40% of DJSI leading companies have set up an external advisory council made up of renowned people who are able to assess the company's policies on CSR from different viewpoints. This is probably the most evident example of how strategy is shaped by stakeholder observations. However, outcomes from other dialogue and interaction activities with stakeholders can be equally effective in strengthening the firm's strategy, if coordination mechanisms are in place to ensure that the information and knowledge obtained flows correctly to the firm's decision levels.

The experience of BT is a good example here. BT has established different stakeholder panels and committees. For instance, the European Stakeholder Panel helps to maintain and evolve BT's social policy strategy across Europe. Other panels and committees are more focused on specific issues, such as the consumer liaison panel or telecommunications advisory committee. Whatever panel or committee is used, all of the outputs from such stakeholder groups are reviewed by the Corporate Social Responsibility Steering Group (CSRSG), a body responsible for the strategy formulation of all social and environmental programs across the BT group and that has direct communication with the board of directors. The CSRSG is made up of CSR champions nominated by the BT lines of business and four support functions (Human Resources, Corporate Governance, Communications and Procurement). Moreover, the chairman of the CSRSG is a member of the Management Council, the highest top executive body at BT.

Shell also takes a similar approach. At a group level, Shell adopts an issues-based approach and is strategically using the expertise of specialized stakeholders (e.g., Transparency International) to develop policies and/or standards. Furthermore, Shell has designed an issue management network that can help the company to identify critical areas and key related stakeholders. On a local basis, 82 countries have a procedure in place to engage with stakeholders (e.g., via stakeholder panels). In addition, Shell follows the World Bank guidelines in relation to new projects. The World Bank standard requires stakeholder participation. Several local offices or subsidiaries, such as Shell Canada and Shell Philippines, have established stakeholder panels, while in other offices, subsidiaries or locations, regular engagement sessions are held. Shell Canada, for instance, set up a panel of independent environmental and community experts to help the company develop and apply plans to manage its greenhouse emissions. The panel has helped establish the new Athabasca Oil Sands Project goal of 6% fewer greenhouse emissions than the imported crude this source will displace by 2010. Members oversee progress towards this goal and also examine the social and environmental effects of the project to ensure well-integrated sustainable development. During 2001, the panel assisted in the drafting of a Shell Canada Climate Change Strategy, which has now been approved by the Shell Canada Board. Shell Canada is taking the lead in meeting group commitments for greenhouse gas reductions, and is actively addressing the topic of climate change.

The insight and information gained from stakeholder dialogue not only affect business strategies at the business level, but also at the corporate level. This is the case of DuPont, which is changing to new businesses after a long process of stakeholder engagement. In this respect DuPont states:

> As we organize and grow our efforts to work with external stakeholders with diverse viewpoints, areas of expertise and regional perspectives, we find at least three areas for growth: climate/energy, food and nutrition, and safety and security. All three address important global issues and all three require unprecedented partnerships between the private and public sectors.

Because one of DuPont's areas of growth—food and nutrition—requires the development of biotechnology-based products, DuPont has created an independent Biotechnology Advisory Panel to guide the company's actions in the development, testing and commercialization of new products based on biotechnology.

Some companies have recently begun to formalize stakeholder dialogue as a way of strengthening the firm's sustainability strategy. For instance, although Dofasco has been maintaining dialogue with stakeholders for several years, the most significant input in terms of strategy formulation to date has come from customers. Dofasco has a very customer-oriented strategy called *Solutions in Steel.* More recently, Dofasco has launched a Sustainable Development Strategy Team to examine long-term global drivers. This strategy development process will receive contributions or input from a wider spectrum of external stakeholders

Finally, it is important to point out the key role that shareholders and institutional investors can play in order to enhance sustainability strategies. For instance, Swiss Re, in order to satisfy the demands of the market and of shareholders, has established two clear targets: 1) to see a steady increase in the representation of Swiss Re stock in specialized socially responsible investment (SRI) funds, and 2) to see a steady increase in its representation in pension funds adopting positive policies on SRI. Swiss Re's research indicates that in December 2001, approximately 2% of all Swiss Re stock was held in *sustainability* funds of ecologically- and/or socially-oriented institutional investors.

We have seen through these examples that stakeholder dialogue is increasingly being used to reinforce business strategies. Therefore, engaging stakeholders gives companies not only the opportunity to earn a strong reputation, but also to achieve other important benefits such as better knowledge of customers' and society's needs, identification of business opportunities, improvement of operational processes, and the development of new products.

4.2.3. Regular meetings and briefings in form of stakeholder dialogue

Our results indicate that for most companies, precisely 94% of DJSI sector leaders, regular meetings and briefings are a part of their stakeholder engagement strategy. The form that these activities can take is quite diverse, but all have a common aim—to foster dialogue and enhance transparency.

One of the more widespread mechanisms for engaging stakeholders is the establishment of stakeholder panels. Some panels may be designed to attend to the specific needs of one stakeholder (e.g., local communities), while others may bring together different groups of stakeholders to discuss a specific topic from diverse points of view. Because of the relative importance of stakeholder panels, we will now review them in more detail. After that, we will examine other activities and systems used to promote dialogue with stakeholders.

4.2.3.1. Stakeholder panels

The setting up of panels to consult the opinions and interests of stakeholders is an interesting tool that is quite widespread among DJSI leading companies. Some panels can be *stakeholder specific* (e.g., customer panels, community panels), while others are *multi-stakeholder panels* in which different groups are represented. Another characteristic of panels refers to their intention. Panels can be informative tools for discussing company projects and policies with different stakeholders, but they can also be, as we saw in our last section, mechanisms to feed the firm's strategy. In such cases, the former is usually locally-oriented, while the latter is globally-oriented.

TABLE 4.2: **Stakeholder panels**

Stakeholder panel characteristics	
Stakeholder specific	Multi-stakeholder
Informative nature	Strategic nature
Locally-oriented	Globally-oriented

— Stakeholder specific versus Multi-stakeholder

Customer and users panels are extensively used to find out opinions regarding product requirements and specifications. For example, British Telecom (BT) runs a number of consumer liaison panels across the UK. These consist of groups of 12-15 consumers with a broad range of experience and usage of communications technology, as well as different needs, interests, ages and cultural backgrounds. Feedback from panel members provides valuable insight into consumer thinking and informs the policy-making process within BT.

Community panels are also quite common and have proven to be a very effective way to increase transparency and enhance the firm's reputation. Intel routinely meets local groups near their manufacturing sites to discuss community or environmental programs. This practice was formalized in the mid 90s with the introduction of Community Advisory Panels. In 1997, Intel conducted the first Community Perception Survey to gauge stakeholder perceptions of Intel's social responsibility, work environment and economic environment. Results from the survey are shared with senior management at each site. This survey is now a formal planning tool for managing and maintaining strong stakeholder relationships. In the case of DuPont, with the advent of Responsible Care, a chemical industry code of conduct developed by the Canadian Chemical Manufacturers' Association, the focus on interaction between DuPont sites and its local communities has increased dramatically to the point where this company has a community advisory panel or interaction process in place for almost every plant site around the world.

Similar panels with specific goals are also established with other stakeholders, such as employees, suppliers or companies in the industry. However, there are also multi-stakeholder panels that can offer a diverse and valuable perspective around issues of CSR. BT appointed the European Stakeholder Panel to bring together a diverse mix of academic, business and CSR professionals from all over Europe to help maintain and evolve its social policy strategy across Europe. The panel, made up of 14 members, three from within BT and 11 external members, meets twice a year to share insights into and understandings of societal trends that will help BT better reflect these expectations in its policies. Another exemplary case is Unilever, which in the context of the already mentioned sustainability initiatives, has formed a Sustainable Agriculture Advisory Board of 11 independent experts to monitor Unilever's progress on this front. Its members are from NGOs, research institutes, and community organizations, and also include experts on agriculture.

— Informative nature versus strategic nature

As we could see from previous examples, some panels have an informative nature while others have a stronger influence on the company's strategy. Continuing with the case of DuPont, we can see how Community Advisory Panels ensure that there is effective communication of hazard and risk information from the firm's sites to community members. Thus, the main purpose of these panels is to talk with communities and inform them of the firm's operations and risks. In 2001 the company created, in conjunction with the setting of its 2010 Sustainable Growth goals, the DuPont Canada Advisory CounSel—spelled with an "S" to highlight the advisory and consultative purpose of the process. Composed of external stakeholders, it includes civil society organizations, special interest groups, academia, government, and value chain partners. The CounSel objectives are to build an understanding of complex sustainability issues, inspire innovation, and help to improve results and progress with DuPont's 2010 Sustainable Growth Goals. As we can see, this external CounSel directly advises DuPont's executive management in Canada about the best way to improve its sustainability strategy.

— Locally- versus Globally-oriented

The majority of stakeholder panels are local because they address specific issues. Community advisory panels are the most obvious example, but consumer, employee, and supplier panels also tend to be very locally-oriented. We also observed that community panels can be supported by volunteer activities. Most companies encourage their employees to participate and become actively involved with their local community. An interesting result of volunteer activities is the improvement of communication skills, teamwork and decision-making. As Severn Trent states, “These initiatives give our employees the opportunity to acquire many new and varied skills to bring back into their businesses”. Employee-volunteers’ self-assessment has shown that communication skills have improved by 75%, team building by 87%, time management by 25%, decision making by 50% and confidence by 12%.

On the other hand, other panels are more globally-oriented. For instance, the already cited advisory panels have a global orientation because they advise the board of directors directly about technological trends, societal concerns, environmental aspects or other issues affecting the whole corporation.

As an example, Westpac Banking has recently appointed an external stakeholder council, chaired by the CEO, which operates as an external advisory body. This council will be used to formalize the existing relationships developed with key stakeholder representatives. It is designed to underscore Westpac’s commitment to sustainable relationships and the value it places upon them. Therefore, this council provides stakeholders’ feedback on Westpac policies and strategic direction, and early issues identification and remediation. For stakeholders, the council provides access to Westpac’s key decision makers and business decisions.

Similarly, companies involved in biotechnology businesses (e.g., Novozymes and DuPont) have responded to societal worries about the potential hazards and benefits of this technology by creating advisory panels or committees to specifically address these issues. Chad Holliday, Chairman and Chief Executive Officer for DuPont, announcing the creation of the Biotechnology Advisory Panel, stated that “this independent and prestigious panel will guide our actions, help us create positions on important issues, and guide and challenge us in the development, testing and commercialization of new products based on biotechnology."

As we can see, these panels, in addition to their global orientation, also have a strong influence on firms' strategy and imply a deep commitment from top executives to foster stakeholder dialogue and enhance transparency.

4.2.3.2. Other activities to promote regular stakeholder dialogue

Among these other activities we can find *meeting or open days* addressed at communities, suppliers or interested groups. For instance, Intel holds annual *suppliers days* during which more than 700 suppliers gather to discuss Intel's expectations. Similarly, BT organizes ethical trading forums with key suppliers and companies from its industry.

Another common practice includes the holding of regular meetings with and presentations to institutional investors, media, suppliers, NGOs, or scientists to discuss key issues and reach a common understanding. Discussion of sustainability topics is a frequent item on managers' agendas and some companies even make the presentation given by their experts available on their websites.

Companies are also taking action to promote awareness of and share best practices about sustainable development issues through seminars, workshops, or forums. For instance, Severn Trent runs Environmental Leadership Seminars to encourage dialogue between leading businesses and others with an interest in shaping public policy for sustainable development. Each seminar is for invited guests and is held under Chatham House Rules. Invitations are extended to those who occupy senior corporate posts in government affairs, environmental affairs or some similar position, plus representatives from non-governmental organizations and others that influence or make policy. A Severn Trent Director hosts and chairs each event. Following each seminar, Severn Trent prepares a short summary of the key points and suggestions. This summary, endorsed by the participants, is then made publicly available and is sent to parties likely to be interested in the topic.

Swiss Re has undertaken a remarkable project. In November 2000, Swiss Re created the Centre for Global Dialogue, which provides a forum to deal with global risk issues and to facilitate new insight into future risk markets. The centre provides unique facilities for fostering dialogue. Swiss Re addresses social, political, economic and environmental topics through a range of events and programs. Its international or regional conferences attract experts in fields as diverse as risk and capital management, ecology and genetics, statistics and economy, politics and sociology. They gather together for conferences that examine global issues. The goal of these events is to gain better understanding, build stakeholder communities around topics and consider potential business solutions. Actuarial, reinsurance and broader financial services themes are also addressed through business meetings hosted by Swiss Re, or staged by third parties, for the company's clients and partners. In summary, as the Swiss Re website of the Centre for Global Dialogue announces "It's a place to create knowledge. It's a place to debate, to learn, to connect people and ideas, create new thoughts and challenge the orthodox. It's a place to create new dialogue."

Volkswagen has taken similar steps to promote stakeholder dialogue. Volkswagen is a founding member of Ecosense, a Forum for Sustainable Development. This is an initiative of leading German companies and organizations that share a common vision of the concept of sustainability and its integration into their business strategies. Above all, the forum is designed to offer a platform for stakeholder dialogue. It addresses a wide range of companies and business networks, politicians as well as NGOs, the scientific community and the general public.

Although it cannot be classified exactly as a regular meeting, Shell has created an interesting tool for enabling dialogue that is worth mentioning. This tool is called Tell Shell and consists of a web-based and replied-paid mail service created to encourage people to dialogue with Shell. It is widely used for comments, queries and debate. Senior executives read and discuss the comments sent in, providing them with an important indicator of people's feelings.

Finally, before concluding this section we would like to mention other activities that companies have undertaken to inform people of company performance and activities. All of the companies informed stakeholders of their efforts and progress through a number of online and printed materials. The more common ones are:

annual reports, sustainability reports, press communications, periodic publications on special topics, and other formats available on the website. However, although these reports and briefings are important, they must be supported by other dialogue activities that enable two-way communication in order to truly obtain a valuable outcome from stakeholder dialogue.

4.2.4. Partnerships and alliances

The establishment of partnerships with different stakeholders is a practice followed by 83% of DJSI leading companies. The objectives pursued are multiple, so we confine ourselves to the more common ones:

— To improve the environmental and social performance of products and processes.
— To develop new and sustainable products.
— To participate in social and environmental regulations.
— To share and spread knowledge on special topics like environmental issues, biotechnology, or social rights protection.
— To improve corporate responsibility practices and obtain international recognition.
— To enhance industry competitiveness and efficiency.

Research bodies, investors, suppliers, NGOs, trade unions, governments, communities, competitors and other companies are all key players that have an important role in achieving these goals. As a result, partnerships or alliances with different stakeholders help the business to grow not only when it comes to developing new products, sales and marketing, but also in achieving wide approval from society and advancing towards sustainable development. Below we review some partnerships that have been established to favor the achievement of this challenging objective.

In order to design and produce sustainable products, Unilever is increasing the involvement of suppliers, research institutes, NGOs and consumers, particularly through the firm's sustainability initiatives on agriculture, fish and water. These initiatives depend heavily on partnerships for their success. For example, in relation with the fish initiative the company is working in partnership with the Marine Stewardship Council (MSC) and the conservation organization World Wildlife Fund (WWF), to encourage suppliers to source their fish from sustainable fisheries, such as those certified by the MSC. Similarly, within the context of the water initiative, Unilever prepared the Sustainable Water Integrated Catchment Management Initiative (SWIM). This document contains a set of SWIM principles to help Unilever companies develop partnerships to protect water resources. The principles are based upon an integrated approach to water management that balances demand for water with environmental protection, and were developed in partnership with the UK sustainability organization Forum for the Future and others.

Volkswagen has established a partnership with the German Society for Nature Conservation, one of the best known and most highly respected environmental and conservation organizations in Germany, to run joint projects geared to supporting sustainable development. Both parties are committed to engaging in an open exchange of what may at times be conflicting views and standpoints, and to supporting the development of innovative solutions that are specially designed to help the environment.

Dofasco has been involved in the UltraLight Steel Auto Body Project with 35 of the world's leading steel companies from 18 countries. The shared objective is to provide the auto industry with a safe, reliable, and light upgrade to current auto bodies. Dofasco also has an Early Vendor Involvement program, which creates opportunities for customers to work closely with Dofasco employees during the product development phase. This early involvement helps support sustainable success among its customers. These types of relationships are a significant competitive advantage for Dofasco, and enabled it to remain profitable while virtually every other North American steelmaker lost money during the recent down cycle. Customers have been coming to Dofasco because of its reputation and credibility, asking the company to help them achieve their goals. In 2002, Dofasco's shipments grew 11%. Value-added products accounted for 85% of that growth, underscoring the success of the investments the company has made to add value for its customers.

To translate more of its ideas into value, DuPont is marketing its knowledge base by establishing a five-year, $35 million research and development alliance with the Massachusetts Institute of Technology. The partnership will help the company lay out a path to long-term materials and biotechnology goals. The alliance encourages the formation of multidisciplinary teams from the science, technology and engineering community, and the business, management and policy areas. Projects will focus on bio-based materials and technologies, including fine chemicals, monomers, biopolymers and biomodified polymers.

Voluntary agreements are specific mechanisms to establish partnerships with the administration. These agreements are endorsed by the administration and the company or representatives from an industry, and are normally based on the principle of shared responsibility. For instance, Dofasco was the first company in Canada to sign a voluntary Environmental Management Agreement (EMA) with Environment Canada and Ontario's Ministry of the Environment. The Environmental Management Agreement contains detailed commitments to air, water quality, energy use and waste management, as well as continued involvement and commitment to the community. It goes beyond existing requirements and includes the firm's commitment to publish reports on progress towards specific objectives.

The majority of companies have established partnerships with international organizations or institutions in order to help themselves ensure the best corporate responsibility practices. Our research found that the most common organisms that multinationals are partnering include the World Business Council for Sustainable Development (WBCSD), United Nations Global Compact, United Nations Environmental Program, World Resources Institute, International Chamber of Commerce and CSR Europe. A clear example is provided by Volkswagen, which has engaged with the WBCSD in the *Sustainable Mobility* project. In this three-year project, nine leading enterprises in the car and energy industries have set themselves the objective of developing a global vision of environmental sustainability in the mobility sector.

As we have seen through these examples, partnerships can be a very effective way of developing new products, services or technologies, as well as increasing industry efficiency. In other words, we see that stakeholder dialogue—partnerships and other forms of dialogue—can act as a driver for the firm's innovation capability. Because of the relevance of this topic for the long-term success of companies, we conclude this section with a fuller discussion on related issues.

4.3. Stakeholder dialogue as a driver for innovation

Throughout this chapter we have remarked that managing the multiple interests of stakeholders in an integrative fashion, and developing positive relationships with them, is a particularly important capability in the context of sustainable development. In turn, this *relational capability* contributes to building and improving an equally important capability for the firm's success and sustainable development—the innovation capability.

We have observed that one of the benefits that can be obtained through stakeholder dialogue is the acquisition of information and knowledge relating to market opportunities, which can be translated into innovative products, technologies or manufacturing processes. In fact, in a study by Hart and Sharma (2003), the authors show that gaining access to stakeholders previously considered on the fringe can contribute by generating disruptive business models and innovations. Moreover, stakeholder relations may increase the probability that the innovations directly or indirectly flowing from them are those needed by the market and society, and will therefore be positively valued.

In this respect, partnerships with knowledge makers (e.g., universities, research institutions) and the transfer of the resulting knowledge to the firm's R&D and innovation processes have a critical role to play. We have observed that the most effective mechanisms in building innovation capability are partnerships and alliances, stakeholder panels, and direct relationships with some stakeholders.

As we saw in our last section, the establishment of partnerships with universities and research institutions to develop new products or R&D projects are relatively common. For instance, Intel has a network of university laboratories with which it carries out joint efforts to develop new products and technologies. Severn Trent has also established alliances and agreements with different universities, the National Society of Clean Air, Bayer AG and others to develop R&D projects. Similarly, the global steel industry is examining the possibility of making significant reductions in CO_2 emissions through radical solutions across the steel life cycle. Inputs such as energy and raw materials, the steel processing technology and carbon sequestration are being considered in the scope of the project. Dofasco is leading the Canadian effort to identify appropriate research institutions or networks of researchers to participate in this effort.

At the same time, partnerships with other companies from the industry are also useful to develop joint projects which require huge R&D investments, or the sharing of knowledge. The already mentioned Ultra Light Steel Auto Body (ULSAB) project is an exemplary case. Automotive customers communicated the importance of new product development to produce lighter weight steel products that meet the needs of strength, formability and safety. The global steel industry responded to this challenge through the ULSAB project. Over 30 steel companies globally participated in this research project led by Porsche Engineering. The outcome of the ULSAB project and subsequent projects has been the development of new steels, hydroformed tubes and laser welded blanks to lighten vehicle weight and meet all other end use requirements. Dofasco has been one of the global leaders in introducing many of the new steel products to the automotive market segment.

In a similar way, Volkswagen has joined forces with other car manufacturers, suppliers, electronics and IT companies, as well as a number of universities and research organizations, to take part in the INVENT research project. In 2001, an industry consortium and the German Ministry of Education and Research launched INVENT (the German acronym stands for *intelligent traffic and user-friendly technology*), a research initiative that seeks to use the *intelligence* of individual vehicles to help tomorrow's traffic flow more safely and smoothly. The aim is to make *intelligent vehicles* part of an intelligent traffic network based on systems which provide continuous information—both before and during the journey—about all relevant modes of transportation, and which also support self-organizing traffic management and control strategies.

Alliances with customers also provide a useful way to know the customer's needs and to develop new products that are more valuable to them. For instance, Novozymes gives special importance to the protection and growth of intellectual capital, defined as the ability to safeguard future earnings and create long-term value, and represented by patents and insight into customer needs. In this respect, Novozymes together with many large customers, and ideally in strategic alliances, analyzes how its technology can lead to new products and processes. Novozymes states that "to be able to deliver a steady stream of new ideas and products, we have to know our customers' needs." For this reason, the company works systematically to gather knowledge about customers' needs and make this knowledge broadly available throughout Novozymes. The hub for this work is Novozymes' customer relationship management system, which includes contact information, customer plans and visit reports. The system was improved in 2002. Virtually all employees in Sales and Marketing use the system regularly, and its introduction into R&D has significantly boosted the number of registered users.

Direct relationships with suppliers can also help to develop new sustainable products. For instance, direct relationships with important raw material suppliers and joint participation in the Ethical Trading Initiative are helping Marks & Spencer to find new and more sustainable raw materials for clothing and food, in accordance with its Global Sourcing Principles.

Stakeholder panels can influence R&D efforts as exemplified by BT, which says that is undertaking relevant research on the climate change implications of the rollout of broadband networks in the UK after a request was made by a stakeholder panel.

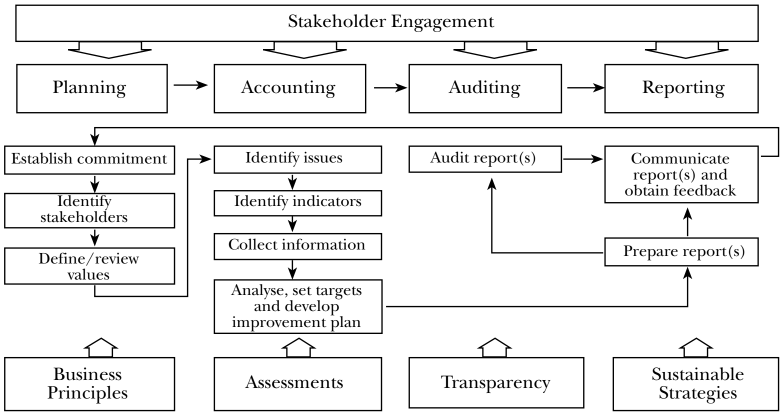
Up to this point, we have provided several examples that show how different stakeholder dialogue mechanisms can benefit the firm's innovation capability. However, the establishment of relationships with stakeholders has to be supported by effective management systems and coordination activities to effectively spread dialogue outcomes, knowledge and best practices across the organization. In the annex of this chapter we explain how Westpac Banking is creating new departments and functions to formally manage stakeholder dialogue.

4.4. Managing stakeholder relationships: the case of Westpac Banking

Westpac maintains an active stakeholder dialogue with a broad range of representative groups ranging across non-governmental organizations (NGOs), trade unions, financial and consumer advocacy groups, government and industry bodies, shareholders and investors, and international CSR organizations such as UNEPFI and the Global Reporting Initiative.

Stakeholder engagement is fully devolved, to the extent that both the choice of stakeholders consulted and the nature of the engagement can be driven by specific issues and projects and the business units directly involved. This means stakeholder engagement occurs where and when it is required, and hence knowledge and learning are delivered where and when they are most effective.

FIGURE 4.3: **Total Responsibility Management in Westpac**

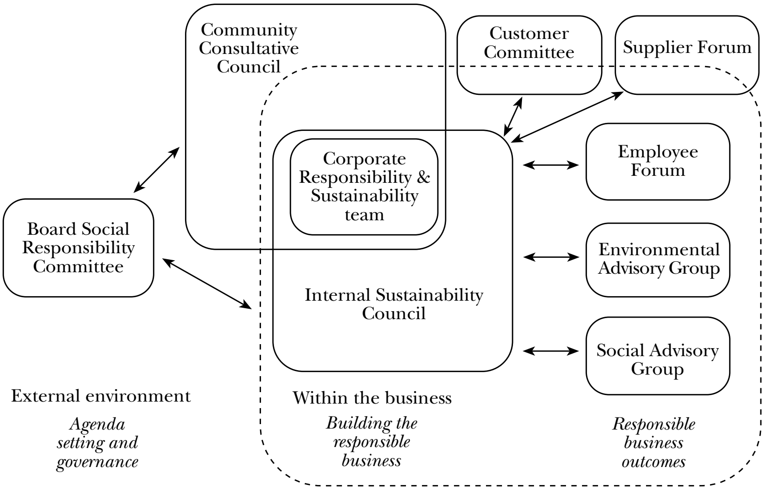


Source: Westpac.

Westpac has adapted the Total Responsibility Management (TRM) framework proposed by Waddock, Bodwell, and Graves (2002) to manage and balance the different needs of its stakeholders. As we can observe in Figure 4.3, TRM in Westpac is based on an ongoing stakeholder engagement in different steps of business projects. This is an iterative process with feedback mechanisms that allows Westpac to develop sustainable strategies, and shows the company's willingness to monitor and report verifiable information on the triple bottom line to external stakeholders.

Beyond this, Westpac has developed fluid and dynamic cross-functional structures to encourage continued dialogue both across the organization and with external stakeholders. Figure 4.4 depicts these groups and the high degree of interaction between them.

FIGURE 4.4: Stakeholder engagement framework at Westpac



Source: Westpac.

As we can see, stakeholder dialogue is an ongoing and fluid activity across Westpac. In the words of Tim Williams, Senior Advisor for Corporate Responsibility & Sustainability: "The common characteristic is that stakeholder dialogue is all boundary-spanning activity. Myself and colleagues are a case in point. We consider ourselves as having one foot inside the organization and the other outside. We represent external interests internally and viceversa." In order to properly understand the role of these groups, a brief description of them follows:

Board Social Responsibility Committee

The Board Social Responsibility Committee has the same status and procedures as Westpac's other Board committees (Audit & Compliance, Credit & Market Risk, Nominations and Remuneration). This Committee provides the focus for board-level stewardship of responsibility and sustainability within Westpac, and sets the responsibility program agenda.

The Committee is chaired by a non-executive director and comprises three further non-executive directors plus Westpac's CEO. However all board directors are fully informed about committee matters and are able to attend all meetings. In addition, the full board is formally informed about all committee business.

Typical agenda items include: sustainable supply chain management, feedback from external assessments and ratings, performance progress against comprehensive social and environmental indicators, external sustainability reporting and reviews, and discussion of specific projects and initiatives.

External stakeholders and sustainable development experts are invited to committee meetings depending on the agenda. The Chairman and CEO in particular are firm advocates of transparency and engagement with stakeholders. They have made numerous presentations internally and externally to all stakeholders on Westpac's sustainability agenda, which is a core business strategy.

The Chairman and CEO also meet frequently with NGO stakeholders on specific projects or issues. Other Board members meet with sustainability experts and intermediaries. Board members frequently participate in Government committees or other multi-stakeholder initiatives. In addition, all board members attend customer and staff functions and otherwise represent Westpac within the community.

Community Consultative Council

The Community Consultative Council supplements ad-hoc and project-based dialogue with external stakeholders. The council brings together leaders of these organizations with the CEO and key executives. It provides access to key decision makers and in turn provides feedback to Westpac on its policies and strategic direction.

Beyond this, the council has the specific objective of exploring how Westpac, as a major financial institution, and stakeholders from multiple sectors can collaborate to take action on key sustainability issues. The committee is chaired by the CEO. The current external members are:

- Commonwealth Department of the Environment and Heritage
- The Environment Protection Authority (EPA) Victoria
- Reconciliation Australia
- Mission Australia
- National Seniors Association
- University of Technology Sydney School of Management
- Our Community
- The Smith Family
- The Wilderness Society
- Australian Council of Social Service
- ACTU (union)
- Human Rights and Opportunity Commission
- City of Melbourne
- FSU National Executive (union)
- The Salvation Army
- Commonwealth Department of Family and Community Services
- NSW Department of Infrastructure Planning & Natural Resources
- Australian Conservation Foundation
- St James Ethics Centre
- Landcare Australia

The key issues currently under consideration by the committee include:

- The emerging underclass and *postcode poverty*—both outcomes of intergenerational unemployment and welfare dependency.
- The ageing population: the need to alter attitudes towards the employment of older workers, and wealth transfer and related intergenerational tensions.
- Disability: particularly access to employment and the increasing incidence of disability and chronic illness as the population ages.
- Indigenous disadvantage—most starkly illustrated by a 20-year lower life expectancy.
- Climate change and ecological sustainability.

Corporate Responsibility and Sustainability team

The central Corporate Responsibility & Sustainability team, headed by the Group General Manager for Stakeholder Communications, acts as an internal consultant to the organization on sustainable development. This team sits alongside and works closely with Government and regulatory affairs, investor relations, internal communications, and media relations.

The team is a central point of contact for NGO and other specialist stakeholders. Other roles of the members include: participation in meetings of the Board Social Responsibility Committee, the Community Consultative Council, and the Customer Committee; chairing the Internal Sustainability Council; participation in the Supplier Forum, the Employee Forum, the Environmental Advisory Group, and the Social Advisory Group.

Internal Sustainability Council

This is an internal cross-functional/division group that provides leadership across the organization in the integration of corporate responsibility into normal business practices. It brings senior managers together in diverse roles, which enables them to actively influence and drive the business agenda—for example, sustainability-linked product development or the further development of the Balanced Scorecard regime. The Council is chaired by the Group General Manager for Stakeholder Communications. The current members are:

- General Manager, Strategic Sourcing (Procurement)
- Head of Consulting and General Manager, People and Performance, (both Human Resources)
- Group General Manager, Product and Process
- Counsel and Head of Legal
- General Manager, Customer Experience (Marketing)
- General Manager, Strategy Development and Implementation
- Head of Group Internal Communications
- Head at Governance Advisory Service
- Director Corporate Affairs, New Zealand
- General Manager, Specialized Capital
- Acting General Manager, Group Risk

- Head of Employment Policy and Communication
- Global Head Westpac Energy
- National Manager Regional Banking
- Group Strategy
- Chief Compliance Officer
- Chief Technology Officer
- A further series of predominantly internal groups brings together people within the organization to focus on specific areas of sustainable business practice.

The *Customer Committee* examines monthly complaints management data, addresses customer concerns, resolves specific customer complaints, and has a broader remit across Westpac's products and services. The committee has two external independent customer and ethics advocates, one of whom also chairs the committee.

The *Supplier Forum* is an informal advisory panel of Westpac's key suppliers, representing all goods and services, together with Westpac's procurement professionals. Westpac has recently begun to assess all new supplier relationships and its top 100 current suppliers against comprehensive social, ethical, and environmental criteria —part of building a sustainable supply chain. Westpac's approach is to positively influence supplier behavior, and the forum will allow supplier education and other capacity building, such as the sharing of best practices and problem solving.

The *Environment Advisory Group* is an internal group that coordinates and drives environment-focused activity. This activity includes: environmental targets, lending and investment policy including lending and investment with a high environmental benefit, the assessment of environmental risk in lending and investment, and environment-linked product development.

The *Social Advisory Group* is planned to parallel the existing environmental group. It is a further internal group that coordinates and drives social issue-focused activity. This activity includes: lending and investment policy, product pricing, responsible lending and banking, lending and investment with a high social benefit, reputation risk in lending and investment, and community involvement activity.

The *Employee Forum* is the final internal group set up to coordinate and drive employee-focused program activity. This activity includes: the Enterprise Development Agreement, the Disability Discrimination Act, consultation with unions, and work-life balance, diversity, and occupational health and safety.

4.5. Summary

Dialogue with stakeholders is the most prominent consequence of the change in values and the extension of the business horizon that sustainability conveys. In the same way that companies have traditionally needed to develop relationships with customers and suppliers to understand their business environment and make the best operating decisions, they now need to enlarge their list of stakeholders to progress in the newly extended environment.

Leading companies are establishing numerous mechanisms to maintain a fluid dialogue with their stakeholders. They recognize that stakeholder engagement is probably the most important new core capability that must be developed, since it is a key component of the foundations of two strategic assets—reputation and innovation. As a result, the board and senior management are responsible for and personally involved in this activity. Nevertheless, leading companies still have an opportunity to enhance the management of this capability in two ways: 1) improving stakeholder mapping, and 2) enhancing their influence in firms' R&D and innovation processes.

5. Systems and procedures of the sustainable enterprise

In previous chapters we have seen how a sustainability vision should be adopted through various changes in governance systems, planning and decision-making processes, information flows, and feedback mechanisms. We have also observed that the participation of stakeholders in those processes can enrich the new vision and strengthen the firm's capabilities to move towards sustainability. All of these changes allow appropriate sustainability-based thinking and behavior to emerge. In fact, Doppelt (2003), after having reviewed 26 public and private organizations leading change toward sustainability, observed that one of the key steering mechanisms is a change in governance systems.

However, this new approach must become embedded within the organization in order to advance it towards sustainability. In this sense, Bob Doppelt remarks that systems and procedures that shape organizational performance must be aligned with the new sustainability approach because "senior executives cannot order employees or stakeholders to adopt sustainability thinking and behavior". Thus, alignment systems are essential because they permit people to feel engaged in a mission, and build a unity of purpose.

Sustainability issues can be legitimized within the company if they are an integral part of the corporate identity. In this way, Lawrence and Lorsch (1967) pointed out that culture may facilitate the adoption of a specific strategy if there is strong coherence between the two. Similarly, Russo and Fouts (1997) explained that sustainability performance can be improved if it is reflected in the business culture, human resources, and the organizational capabilities used to manage actions in this area.

In the end, the business culture and alignment systems that support it act as signals to employees and stakeholders regarding what is truly important. As Jennings (2000) found, in those companies without a culture and systems to embed it, money frequently becomes the culture by default. In these cases, workers are less efficient and productive than if they were able to feel that they were making a difference and that their work contributed to the accomplishment of the firm's mission. Moreover, the vision of becoming a sustainable enterprise provides people with a source of passion about their work and excitement about their membership of the organization. For instance, one of the aims of 3M's sustainability policies is "being a company that employees are proud to be part of". Similar statements are made by the majority of DJSI sector leaders.

In Chapter 3 we observed how *internal measurement systems* can be aligned with the firm's vision, if sustainability dimensions are integrated into the balanced scorecard or similar management tools. Although this tool is not in itself a measurement system—we should remember that its main purpose is to define, assess and review strategic objectives—it allows the firm to track and monitor the performance of critical parameters. To some extent, this chapter complements Chapter 3 by reviewing different systems and procedures that embrace sustainability vision and contribute to aligning it among the various individual units and departments of the organization.

We will discuss the different systems on which to focus alignment efforts. First, and probably most important, we will review human resources systems. Needless to say, without the strong commitment of employees, all efforts at change are worthless. Following this discussion, we will analyze environmental, health and safety management systems, because they are one of the cornerstones for reducing the firm's environmental footprint and increasing its competitiveness. Next, we will examine the extension of the sustainability vision to the supply chain. Finally, we will see how research and development systems can contribute positively to sustainability.

5.1. Human resources systems

Research on organizations that have consistently excelled over the long-term strongly suggests that a firm's ability to create a sense of identity by engaging employees and stakeholders is one of the keys to long-term success. For example, Arie de Geus, a former Royal Dutch/Shell executive, led a research team that found that the ability of an organization to learn and be sensitive to its environment, its cohesiveness and sense of identity, its ability to tolerate the messiness and uncertainty that accompanies innovation and change, and its conservative use of financial resources are the real keys to long-term success (De Geus, 1997). Consequently, organizational culture and decisions about human resources are critical elements upon which all of the capabilities necessary to achieve sustainable competitive advantage are based.

In the context of the sustainable enterprise, the main purpose of human resource systems is the achievement of a strong commitment and participation from all of the company members to advance towards sustainability. As Chris Argyris (1998) has accurately said, "Commitment is about generating human energy and activating the human mind. Without it, the implementation of any new initiative or idea would be seriously compromised." Once again, we must insist on the key role of top management in this process. Without respected and powerful managers acting as the catalyst for change, the new initiative will probably fail.

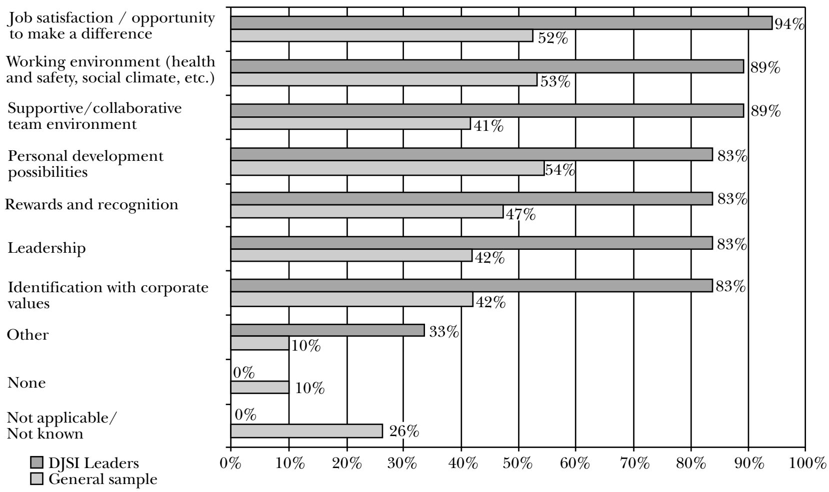
It seems evident that the so-called sustainable enterprise has to treat its employees fairly, promote the adoption of strong ethical values, respect diversity, give employees the opportunity to enhance their capabilities and skills at work, offer them a safe and healthy workplace and so on. When analyzing these human resource policies among DJSI leading companies, we found a high percentage of acceptance of such policies. A summary of results follows:

- 100% commit to the adoption of ethical policies to ensure the accomplishment of human rights.
- 100% have management systems to guarantee a healthy and safe workplace.
- 87.5% explicitly mention the adoption of policies and programs to foster equal opportunities and diversity.
- 87.5% promote career development programs, and instruction of their employees to increase their motivation, retention and the firm's competitiveness.

- 62.5% have work-life balance initiatives in place that cover flexible work schedules and leave for special conditions.

In Graph 5.1 below we can see how these issues are tracked and benchmarked by leading companies compared with their industry peers through the use of employee satisfaction surveys.

GRAPH 5.1: **Tracking and benchmarking employee satisfaction**



Source: SAM Research, 2003.

As we can see in this graph, DJSI sector leaders make substantially more effort to know the opinion of their employees in different areas than do ordinary companies. Job satisfaction is the most common issue in employee surveys, with 94%. It is followed by working environment and collaborative team environment with 89%. Rewards and recognition, leadership, personal development and identification with corporate values are taken into account in 83% of the employee surveys of DJSI sector leaders. As we explained previously, identification with corporate values and strategy is especially important for achieving the commitment of staff to undertake new initiatives. We can observe how just 42% of ordinary companies consider this issue in employee surveys. This percentage is similar for other issues, except for job satisfaction, working environment and personal development possibilities, which are just over 50%.

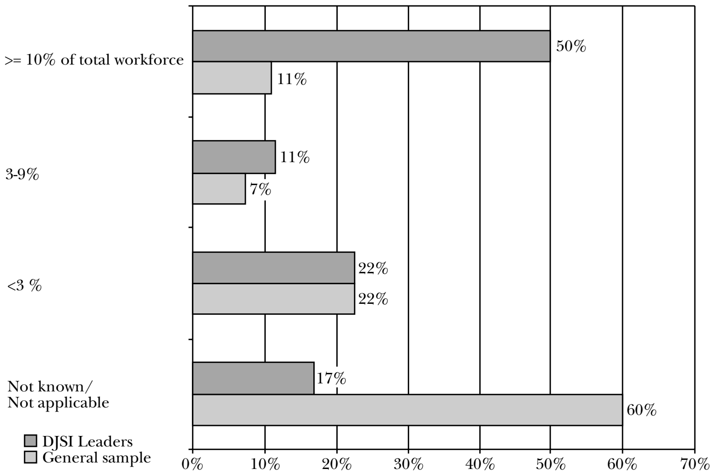
As we can see, having a healthy, respectful, and enjoyable working environment that offers personal development possibilities is one condition aligned with the sustainable enterprise. However, this condition, although completely necessary, is not sufficient to enable a firm to become a truly sustainable enterprise. We argue that for this purpose a clear perception and instruction are needed among all company members on sustainability issues and their implications for the firm. To send consistent messages in support of sustainability, human resources must focus on reward systems, training programs, recruitment processes and communication mechanisms. All of these systems must be aligned with sustainability vision, goals and strategies in order to build a business culture that embodies the value of sustainability. For this reason, we extended our analysis to find out how sustainable development considerations are included in these four human resource policies. In the following sections, we will highlight some results and best practices to illustrate pioneering human resource policies related to the firm's sustainability strategy. We will mention innovative practices in the following areas: rewarding systems, training programs, recruitment processes and communication mechanisms.

5.1.1. Rewarding systems

One of the key levers of change held by human resource systems is the organization's system of rewards. Performance-based incentives linked to business and individual performance should be aligned with the organization's sustainability vision, goals, and strategies, in order to increase the motivation of employees to achieve these objectives.

In Graph 5.2 we can observe the percentage of employee variable compensation (including bonus and all incentive schemes) linked to environmental, corporate citizenship, and corporate responsibility performance at the individual, business unit or corporate level. According to this graph, 83% of DJSI leading companies link employee variable compensation, to a greater or lesser extent, to sustainability performance, with 50% applying this policy to more than 10% of the workforce. For ordinary companies, only 40% have established a similar policy and of this percentage, 22% are applying it to less than 3% of the workforce (suggesting perhaps that this policy is applied exclusively to staff from environment, health and safety departments). Although DSJI sector leaders have better marks than ordinary companies, the results indicate that this is still, in most cases, an emergent and novel practice, which requires further development and implementation.

GRAPH 5.2: Employees whose variable compensation is linked to environmental, corporate citizenship and corporate responsibility performance



Source: SAM Research, 2003.

Shell's compensation package reflects, in part, the contributions people make towards sustainability. Shell's corporate scorecard for all businesses has four key components, one of which is *Sustainable Development*, which includes health, safety, environment, reputation and social responsibility. Bonuses make up 50% of the variable compensation and are linked to the business's scorecard performance. All employees, including senior executives, receive these incentives based on business and individual performance.

Similarly, DuPont offers a variable compensation policy based on financial commitments for the year and qualitative assessment of performance in such areas as workplace environment, treatment and development of people, strategic staffing, safety and environmental stewardship.

Westpac Banking's employment performance processes and practices are based on merit, and employee appraisal systems are developed around a balanced scorecard, which seeks to evaluate employee performance on their contribution to developing long-term shareholder value by meeting the needs of by customers and other stakeholders. This includes the senior managers having specific objectives relating to corporate responsibility and employee commitment.

In the same way, the executive compensation of Procter & Gamble (P&G) is based on performance against a combination of financial and non-financial measures including business results and developing organizational capability. In addition, executives are expected to uphold the fundamental principles embodied in the Company's Statement of Purpose, Values and Principles plus the Sustainability Report and the Environmental Quality Policy.

Employee reward systems should also consider incentive plans and awards for those persons and groups who excel in achieving sustainability. These types of awards and incentives given to individuals or teams attempt to foster employee creativity in order to find new products, solutions or processes that substantially improve on existing ones. They also serve to demonstrate the importance of relevant policies (e.g., sustainability policy) for the company. For instance, in 2001 Volkswagen introduced its first internal environmental award to underline the firm's commitment to the principle of sustainability, and to reward those employees who have displayed a commitment to protecting the environment that goes well beyond the call of duty.

The same philosophy is applied to 3M's annual awards, which reward employee contributions to moving the company towards sustainability. A brief description of 3M's awards follows. First, the 3M Pollution Prevention Pays (3P) Award salutes employees and teams that apply innovative thinking to projects that significantly reduce waste, prevent pollution and contribute a positive economic benefit. The 3P program depends directly on the voluntary participation of 3M employees. More than 4,820 3P projects are initiated annually by 3M employees worldwide. A second prize is the 3M Chairman's Leadership Award for Environment, Health and Safety. It is a global award open to every 3M employee or employee team in all 3M worldwide locations who are environmental, health and safety pioneers at work and in the community. The 3M CEO Safety and Health Award recognizes facilities, groups and business units for achieving sustained periods of zero lost time due to injury and/or illness cases. Finally, the 3M Applied Ergonomics Innovation Award recognizes efforts that improve the ability of employees to work safely and productively.

5.1.2. Training programs

Training is an essential aspect in systems that need high performance. Several studies have shown the existence of a positive relationship between a company's level of environmental, social or ethical training and the level of development of the company in that area, because company-sponsored training often increases the firm specificity of employee skills (e.g., Groenewegen and Vergragt, 1991; Cook and Seith, 1992; Koch and Macgrath, 1996).

We observed different companies in which sustainable development is being integrated into development and training programs. In this way, all staff can understand the concept and its relevance to their jobs as well as have the skills and enthusiasm they need to put sustainable development thinking into practice. This is the case of Severn Trent, a company that selects managers to go through the Sustainability Learning Networks on sustainable development, run by the University of Cambridge Programme for Industry in partnership with Forum for the Future.

Likewise, Shell has decided to integrate sustainable development more systematically into its leadership development, training and internal communications. As a matter of fact, in 2002 sustainable development considerations were added to Shell's executive and senior executive leadership programs. Similarly, Volkswagen has a Human Resource Development and Environmental Communication Program, which is made up of different programs such as management seminars, training of supervisors, environmental specialists, recycle-friendly design seminars and the Environmental Service Center (ESC), which provides a location for theoretical instruction and a base for environmental service activities.

The experience of Swiss Re in training on sustainability-related issues is also remarkable. In its new Center for Global Dialogue in

Rüschlikon (Switzerland), Swiss Re holds a series of seminars on sustainable development in the financial services sector that it calls Sustainability @ Rüschlikon. The aim of these events is to identify the main drivers and develop practical concepts based on the sustainability principle. During 2001, four seminars were held for senior management with an average of 25 participants. Following presentations by experts from international companies showing examples of sustainability as business models, participants discussed conclusions and implementation opportunities for Swiss Re. At another level, Swiss Re offers its employees different training categories specialized in sustainability aspects. The *sustainability workshops* examine the significance of sustainability management, its corporate benefits, and its possible impact on the company's risk landscape. The environmental courses—Basic Environmental Risk & Underwriting and Advanced Environmental Risk & Underwriting—allow employees to learn about Swiss Re's strategy in covering environmental risk, risk identification and quantification; types of insurance cover offered; and legal principles. Finally, environmental experts' workshops are held to share best practices in sustainability management. All in all, more than 500 employees, or 6% of the total headcount, took part in training on sustainability-related issues during 2002. An additional 200 employees took part in a series of seminars and presentations on emerging environmental and social risks and opportunities.

5.1.3. Recruitment processes

Firms that take more care in their recruiting practices are more likely to be able to access high-quality new employees. All companies want to recruit and retain talented and motivated people with the skills and capabilities required for efficiently developing their job. For this reason, all of the companies analyzed try to offer a competitive salary, benefits packages (e.g. pension plans, health and medical insurance, etc.), a pleasant workplace environment, etc. At the same time, more and more employees are seeking greater levels of fulfillment in their own lives. Thus, companies must offer a workplace where people can put their values into practice and feel satisfied with the company's activities. Some of the companies analyzed are including recruitment selection criteria or introductory courses to demonstrate how the firm lives up to its corporate values, as well as to emphasize the importance of new employees respecting these values, especially those regarding sustainability.

The Group Sustainability Management and Internal Environmental Management units of Swiss Re provide information on the firm's sustainability activities at the monthly introductory courses for new employees. Along the same lines, Shell has increased the focus on sustainable development thinking in its training programs for new recruits.

BT is committed to promoting diversity and equal opportunities within the company. The company has a Global Equality and Diversity Forum, which sustains and delivers the equality and diversity strategy for the BT group. One decision that has been made is to develop positive measures to encourage the recruitment and employment of any under-represented minority group, and to pursue an effective policy of promoting equal opportunity throughout the business.

5.1.4. Communication mechanisms

All companies recognize that human capital is one of the most valuable assets of the company. Therefore, it is logical that firms try to share their objectives and values with employees in order to achieve their commitment and involvement. After having reviewed internal dialogue mechanisms and communication tools of DJSI leading companies, we have identified a wide range of systems to interact with employees. Employees' forums, formal policies of internal communication, *open door* policies, interaction with management, regular business updates through newsletters and intranet portals or surveys are several examples of systems used to foster dialogue and communication with employees. As we will see through the following examples, sustainability topics are integrated into and discussed within these communication channels.

Several companies seek to promote higher levels of employee involvement in business decisions through the creation of an *employee forum.* M&S has employee representation groups, which it calls Business Involvement Groups. These groups are formed at a local, regional and national level. The employees joining these groups are elected democratically and must attend a training program created for the company in conjunction with the Institute of Management. Employees who take part in Business Involvement Groups are given two hours a week for this role. Store Business Involvement Groups feed into a bigger national group. The company has Business Involvement Groups in every store and office area, with head office and regional forums to review shared issues. After running these forums for over a year, M&S also launched a national forum, which the M&S Chief Executive chairs. These forums aim to encourage employees to share knowledge and promote debate about the business.

In certain leading companies, a formal internal communication policy is utilized to focus on sustainability issues. This is the case of Volkswagen, which has a Human Resource Development and Environmental Communication Program. It consists of different programs such as management seminars, training of supervisors, training of environmental protection specialists, and recycling-friendly design programs. There are also a wide array of initiatives and projects designed to increase communication, such as company newspapers *Autoprogram* and reports, *green factory tour, green factory rally* for apprentices, poster campaigns, etc.

New technologies have opened up a new space for communications. Besides using traditional communication systems, Shell has launched the *Sustainable Development Portal*, an internal website that enables Shell people worldwide to share best practices and access the latest sustainable development tools, communication materials and news.

Employee interaction with senior management is a common practice used to inform employees about business results and product plans, and to elicit their questions and concerns. M&S organizes *Listening Groups* conducted by senior management during regular store visits. Volkswagen does the same through its *Factory Meetings*, and Intel shares business information and strategic plans with employees through quarterly business update meetings.

All DJSI leading companies conduct formal employee surveys to track employees' satisfaction and to analyze the impact of policies and practices on people. As we observed, the existence of feedback mechanisms is important to ensure that managers can work with their teams to analyze results and to formulate and carry out action plans. Most companies track the survey results and fix strategic targets. This is the case of BT, which every year gives all of its employees the opportunity to complete the Communications and Attitude Research for Employees (CARE) survey. A key measure within CARE is the *People Satisfaction Index*, one of BT's non-financial key performance indicators. BT periodically sets a strategic target to increase the score of the People Satisfaction Index.

As we have seen in this section, human resource systems are a key element of the implementation process of a firm's sustainability strategy. When these policies are aligned with the firm's strategic objectives, they can positively contribute to moving the company in the direction desired. Therefore, companies aspiring to achieve sustainability should consider integrating sustainable development thinking into the design of their performance and evaluation methods, recruiting processes, training and development courses and programs, and internal communication policies.

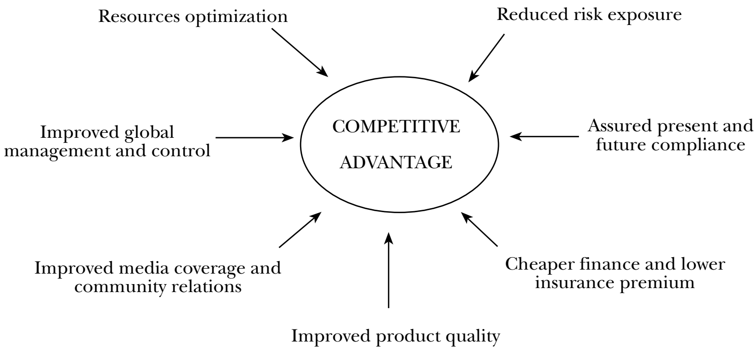
5.2. Environmental, health and safety management policies

One of the key elements of the sustainable enterprise refers to its environmental impact. A company with the aim of being truly sustainable should completely eliminate its *corporate environmental footprint*. To illustrate with two excellent examples, both DuPont and Teijin had set themselves the *goal of zero waste, emissions, injuries, illnesses and accidents*. This objective is shared by most DJSI leading companies, which express the need to reduce the environmental footprint of their products, processes, and operations. In this context, one of the key elements to support the sustainability strategy and guide the organization in continuous improvement in the area of environmental protection is the definition of an environmental, health and safety (EH&S) policy and its effective implementation.

Because environmental matters were, in most cases, the first issues considered by companies due to external pressures and concerns, it is not surprising that all DJSI leading companies have established an EH&S policy as well as specific management systems to implement it. In fact, some companies have a long tradition in pollution prevention. This is the case of 3M, which established a formal environmental policy in 1975.

The implementation of EH&S management systems can lead to positive effects on the firm's productivity, efficiency, or capacity to deal with legal requirements. Welford and Gouldson (1993) identify certain elements associated with environmental management as constituent factors of competitive advantage (see Figure 5.1).

FIGURE 5.1: **Constituent elements of competitive advantage**



Source: Welford and Gouldson, 1993.

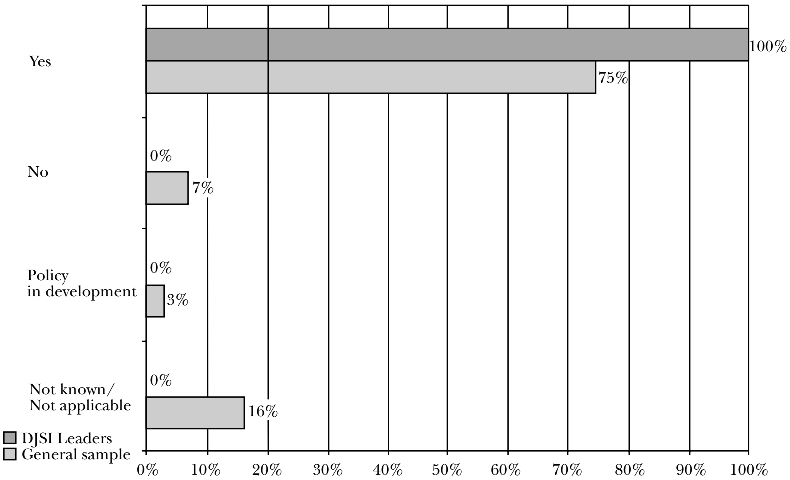
As we can see, competitive advantage can be gained through different mechanisms that are related to increased resource efficiency, improved quality of products and reputation, and better positioning to deal with the financial sector and regulators. Therefore, EH&S management systems can lead to restructuring and innovation processes with associated economic incentives (Cohan and Gess, 1995; Shrivastava and Hart, 1995).

In the following section we will first examine the degree of implementation of corporate environmental policies among DJSI sector leaders. Second, we will analyze in detail environmental management systems and certification systems used for ensuring a proper implementation of these systems. Finally, we will discuss the case of Unilever, which offers a good approach to environmental management.

5.2.1. Corporate environmental policy

Corporate environmental policies provide companies with the framework upon which to base their environmental programs. As expected, all DJSI sector leaders have defined a corporate environmental policy (see Graph 5.3). To a large extent, ordinary companies also have an environmental policy. However, if we assume that those companies that have not responded to this question do not have a corporate environmental policy—which is highly probable—then this means 23% of the companies analyzed by SAM are operating without such a policy.

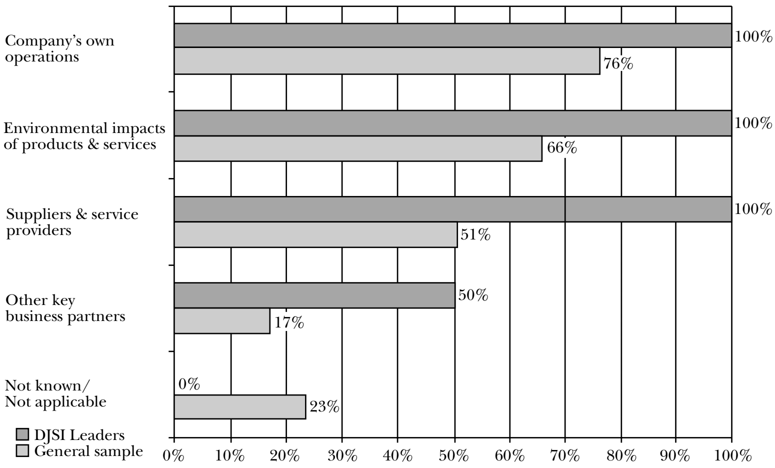
GRAPH 5.3: **Corporate environmental policy**



Source: SAM Research, 2003.

Our analysis of the different areas covered by environmental policies led to the following results (see Graph 5.4). The environmental policies of DJSI leading companies cover the companies' own operations, the environmental impact of product and services, and suppliers and service providers in 100% of cases. Moreover, 50% of DJSI leading companies have extended the environmental policy to other key business partners. Looking at ordinary companies that *have* a corporate environmental policy (i.e., excluding the 23% without a policy), we can see that companies' own operations are covered in 100% of cases. The environmental impact of products or services is covered by 86% of ordinary companies, while suppliers and service providers are taken into account in 66% of cases. Although these are remarkable results, they are still far from the sustainability leaders.

GRAPH 5.4: Areas covered by those companies with a corporate environmental policy

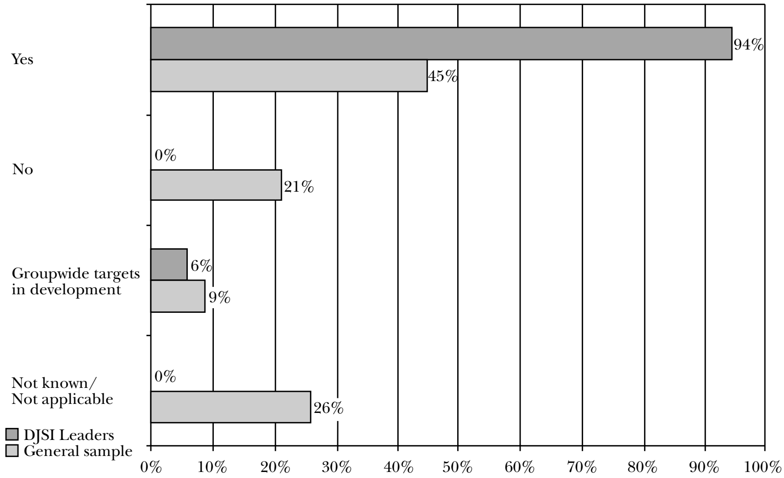


Source: SAM Research, 2003.

On the other hand, environmental policies enable a firm to set targets and measure its progress as well as strive for continuous environmental improvement. In this way, all DJSI sector leaders except one—which claims that it is working on it—have set measurable environmental group-wide targets (see Graph 5.5.). These results contrast with ordinary companies; just 54% of them have defined targets or are in the process of developing them.

To summarize, although the formulation of an environmental policy is quite a common practice among the total sample of companies, we observed that DJSI leading companies have established environmental policies with a broader scope, including products and services, suppliers and improvement targets.

GRAPH 5.5: Corporate environmental targets



Source: SAM Research, 2003.

5.2.2. Environmental management systems

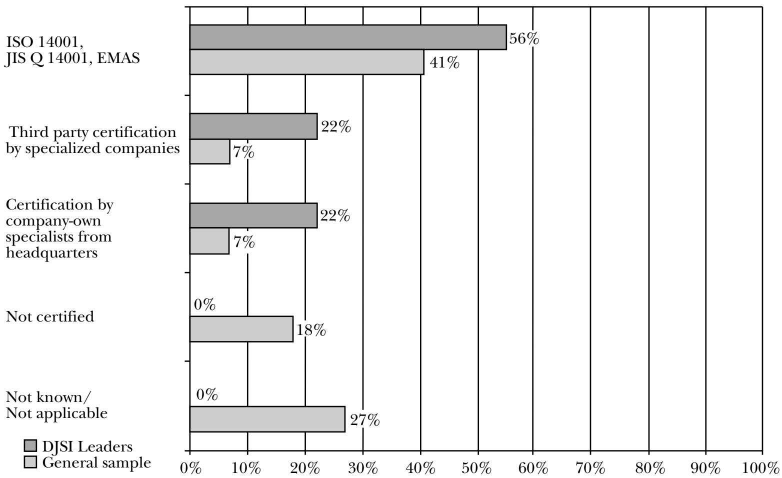
Environmental management systems (EMS) are one of the tools an organization can use to implement an environmental policy. They consist of a number of interrelated elements that function together to help a company manage, measure, and improve the environmental aspects of its operations. An EMS responds to the need for greater control of operations and better management, and supplies the framework to do so by creating a structure to:

- Adopt a written environmental policy.
- Identify the environmental aspects and impacts of operations.
- Set priorities, goals, and targets for continuous improvement in environmental performance.
- Assign clear responsibilities for implementation, training, monitoring and corrective actions.
- Evaluate and refine implementation over time so as to achieve continuous improvement both in the implementation of environmental goals and targets and in the EMS itself.

Prior to 1996, there was no major trend towards the widespread adoption or standardization of EMS, perhaps due to a lack of acceptance and understanding of the economic rationale. However, the publication of the international EMS standard ISO 14000 series and the European Environmental Management and Audit Scheme (EMAS) sparked this trend by generating keen interest within the business community. The main rationale for the creation of these standards was that their worldwide acceptance would expedite international trade by harmonizing otherwise diffuse environmental management standards and by providing an internationally accepted blueprint for sustainable development, pollution prevention and compliance assurance. The ISO 14000 series Environmental Management System standards were introduced on the coat-tails of the success of ISO 9000, which is a series of quality management system standards.

In Graph 5.6 we provide some results with regard to certification systems. Seventy-eight percent—including ISO 14000, EMAS and other certifications—of DJSI sector leaders have obtained a third party certification for their EMS. The remaining 22% have chosen to develop their own certification. In the case of ordinary companies, just 55% of them hold an EMS certification.

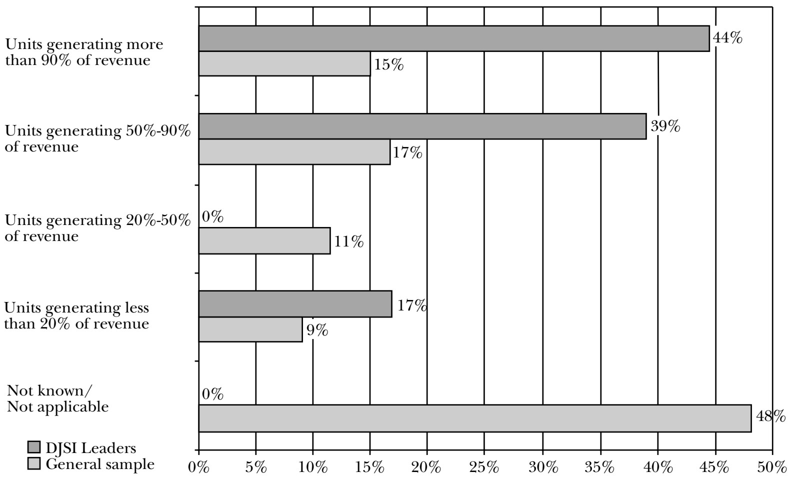
GRAPH 5.6: EMS certification



Source: SAM Research, 2003.

When analyzing the coverage of certification systems, we observed that 83% of DJSI sector leaders have certified businesses and operations that represent more than 50% of their total sales. In fact, 44% of the sector leaders have certified businesses that generate more than 90% of their income (see Graph 5.7). On the other hand, just 17% of leading companies are limiting their certification to businesses and operations that represent less than 20% of sales. Therefore, we can say that DJSI leading companies are making big efforts to obtain certification systems in almost all their operations. The results are less impressive when we consider ordinary companies. For these companies, certified systems cover more than 50% of sales in just 32% of the cases.

GRAPH 5.7: EMS coverage of certification

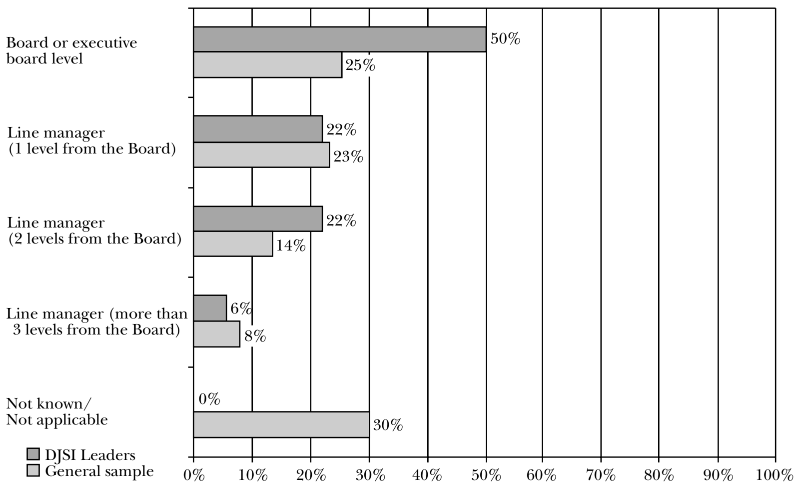


Source: SAM Research, 2003.

Finally, success in environmental management depends on: 1) the development of an appropriate structure in accordance with the general structure of the organization, and 2) the appropriate support from senior management. In Graph 5.8 we can see the positions within the companies of those who possess top responsibility for environmental issues.

As we can see, the board of directors is the highest level responsible for environmental issues in 50% of DJSI leading companies. If we refer to ordinary companies, we can observe that this percentage is reduced by half. The differences between leading and ordinary

GRAPH 5.8: Responsibility for environmental issues



Source: SAM Research, 2003.

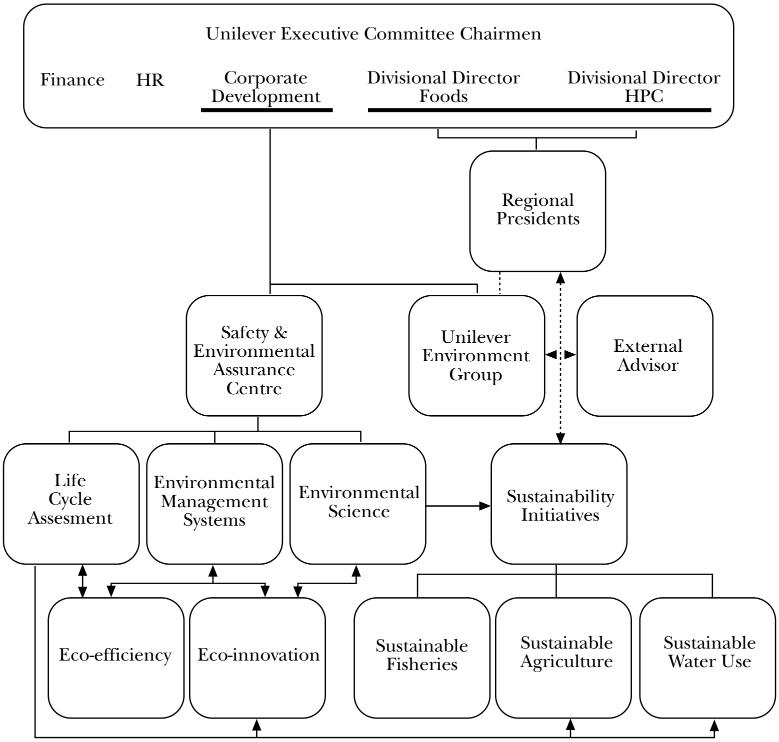
companies are not significant when the highest level of responsibility of environmental issues is given to line managers at different levels of the organization. Once again, these results show that top managers from sustainability leading companies are more involved with and committed to areas relating to sustainable development.

5.2.3. Unilever's approach to environmental management

Despite the importance of EH&S management systems, they alone cannot ensure that the environment is an integral part of all business decisions and processes, such as sourcing, products, logistics, distribution, and so on. For this reason we will highlight the case of Unilever, which illustrates a holistic approach to environmental matters. Although this company recognizes that it still has a long road ahead in its quest to contribute to sustainable development, we can see how its EH&S management system is just a tiny portion of its environmental strategy, which it calls *Path to Grow.*

The following chart (see Figure 5.2 below) shows relationships and interactions of key individuals, groups, systems and strategic initiatives for the environment in Unilever.

FIGURE 5.2.: Environmental responsibilities of Unilever



Source: Unilever.

We can see that the Unilever Chairmen and Executive Committee hold strategic responsibility for environmental issues, with overall operational responsibility located in the Foods Division and Home & Personal Care Division. Daily responsibility for environmental issues rests with the local management operating companies. These are supported by:

— The Unilever Environment Group (UEG), which is a strategy and policy-making group that carries out environmental responsibility on behalf of the board. The UEG is made up of individuals from divisions, corporate experts on safety, health, environment and communications, and four external advisors who contribute valuable independent views on

Unilever's plans, along with advice on emerging and long-term environmental issues.

— The Safety and Environmental Assurance Centre (SEAC). This is a central technical resource providing expertise and advice on safety and environment matters, such as expert knowledge of hazard analysis and risk assessment for products and processes. This is also the center for life-cycle assessment.

Unilever's environmental strategy consists of three important objectives: 1) improve the environmental efficiency of manufacturing operations, products and services (eco-efficiency), 2) improve the environmental performance of products (eco-innovation), and 3) focus on three sustainability initiatives in areas (agriculture, fisheries and water) that are directly relevant to Unilever's business and where the firm aims to improve its control over the supply chain.

To achieve all of these objectives, Unilever has different management systems and tools, such as environmental management systems, life-cycle assessment techniques and a department called *environmental science*. This department consists of a large group of environmental professionals with expertise in such areas as biology, environmental chemistry, ecology, ecotoxicology, life-cycle assessment, environmental management and auditing, pollution control and risk assessment, and modelling. These scientists establish internal environmental performance standards, develop eco-efficiency measures and indicators, provide guidance in environmental management systems, assess the life-cycles of products and processes, support sustainability initiatives, etc.

These environmental responsibilities and organizational structures, which go well beyond an EH&S management system, are contributing to achieve the *Path to Grow* strategy and reduce Unilever's environmental footprint.

5.3. Research and Development processes

The progress towards sustainable development is closely tied to innovation and change. This observation is implicitly assumed in the well-known definition of sustainable development adopted by the World Commission on Environment and Development (the Brundtland Commission) in 1987. In the Commission's words: "A sustainable condition for this planet is one in which there is stability for both social and physical systems, achieved through meeting the needs of the present without compromising the ability of future generations to meet their own needs."

The current westernized way of life and persistent inequalities on our planet are not sustainable. Fundamental changes regarding how the economic system affects and is related to the social and natural system are needed. According to Senge and Carstedt (2001), the industrial age has been an era of harvesting natural and social capital in order to create financial and productive capital. Only fundamental shifts in how the economic system affects the larger systems within which it resides—namely, society and nature—would constitute the beginnings of a truly post-industrial age. Although this huge challenge requires the participation and involvement of several international and local players, business is the social institution with the greatest capability of innovating in this direction, because it is subject to fewer norms and rigidities than are public institutions.

Moreover, in today's dynamic and changing markets, one condition for remaining competitive and protecting future profits and revenues is the ongoing development of new and successful technologies, products and services [30]. That is the reason why most leading companies invest huge amounts of money in research and development (R&D) programs.

In Chapter 2 we presented the most common values held by DJSI leading companies. We observed that more than 60% of these companies consider innovation a core value. Equally, in Chapter 4 we explained how DJSI leading companies are increasingly involving stakeholders to enhance their innovation capabilities. These results clearly express the significance of innovation for sustainability leaders.

However, innovation is a necessary but not sufficient condition. New products must meet the requirements of environmental and social sustainability to provide a continuing contribution to the

[30] Herein *products* will be used to refer to *products and services.*

company's triple bottom line. In any event, environmental and social challenges can be drivers of innovation. As Porter and van der Linde (1995) have shown through extensive research, properly designed environmental standards can trigger innovations that lower the total cost of a product and improve its value. Thus, there is an underlying economic logic that links sustainability, resource productivity, innovation and competitiveness if the company responds to sustainable development challenges in a proactive and creative way.

In this chapter we analyze how and to what extent sustainable development principles are integrated into new product development processes. We will discuss different design tools and methods used to facilitate the innovation of sustainable products.

Before presenting the results, we would like to point out that in the context of new product development, environmental indicators are much more developed than social indicators. While eco-efficiency indicators have existed for some time now, and are even to some extent standardized, no such guidelines exist for social productivity. It is also important to observe that social indicators are culture-specific. Thus, the process of identifying indicators for the social sustainability of new products is relatively new and not easy to compare.

5.3.1. Tools and methodologies for sustainable design

Our results consistently show that *eco-innovation* is the main mechanism used for designing sustainable products. Eco-innovation is a process of developing new products, processes or services that provides value to customers and businesses but significantly decreases environmental impact. We observed that *life-cycle analysis* [31] is the most common tool used for supporting the process of eco-innovation. In fact, 87% of DJSI sector leaders employ this tool. If we subtract the financial and insurance sector, this percentage rises to 100%. However, we must mention that Westpac Banking (bank sector) and Swiss Re (insurance sector) have developed analytical tools to assess the underlying risk, comprising financial, technical, ethical, social and environmental aspects.

[31] Other common names used for life-cycle analysis are product stewardship or life-cycle assessment.

Eco-innovation processes are also complemented with *programs and guidelines for R&D organizations* that require them to integrate potential environmental and societal impact assessments into the development process. These programs try to encourage designers to consider issues and opportunities early in the innovation process. We identified six DJSI sector leaders with these specific guidelines for R&D departments.

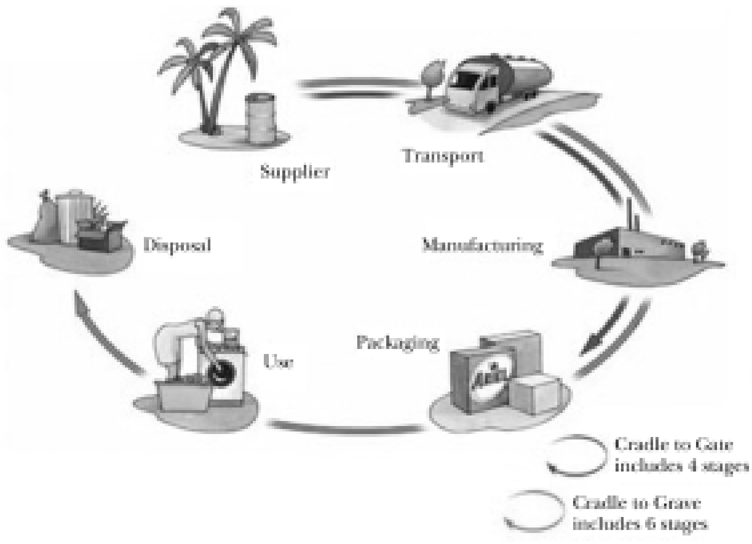
Other common tools used in new product development processes are environmental risk assessment, safety assessment, human health risk assessment, cost-benefit analysis, socio-economic impact analysis, or qualitative screening. All of these tools aim to ensure the final quality, reliability and accordance with the environmental and safety regulations of products.

5.3.1.1. Life-cycle analysis

Life-cycle assessment is an analytical environmental management tool based on the scientific understanding of the inputs and outputs of processes and their effects on the environment. This tool is used to evaluate the potential environmental impact of a product, process, or activity throughout its entire life-cycle by quantifying the use of resources (*inputs* such as energy, raw materials, and water) and environmental emissions (*outputs* to air, water, and soil) associated with the system that is being evaluated (see Figure 5.3). The most important aspect of life-cycle assessment is that it considers all stages of a product's life-cycle. It condenses this information into a visual map that displays the comparative environmental merits of new design options against the original design. In the end, eco-innovation and life-cycle analysis have several benefits for firms, such as more eco-efficient processes and products, less risk exposure, the creation of new *eco-markets* (e.g., eco-labelling), and the securing of competitive advantages (e.g., better positioning ahead of future regulations).

3M, with 500 new products introduced each year, has a continuous flow of opportunities to significantly add to their environmental, health and safety progress. As such, Life Cycle Management (LCM) is becoming a formal part of 3M's new product development process worldwide. Cross-functional, new product development teams use a Life Cycle Management matrix to systematically and holistically ad-

FIGURE 5.3: Life cycle analysis



Source: Procter & Gamble.

dress the environmental, health, and safety opportunities and issues of each stage of their product's life (see Figure 5.4). LCM at 3M is supported by several groups within the organization: 1) 3M's Corporate Product Responsibility staff group that helps business units in the commercialization of safer and more environmentally responsible products, 2) 3M Technology Centers that help improve product technologies to reduce and manage impact, and 3) Technology study reports and success stories promoting the sharing of new ideas and results within the 3M technical community. Finally, governance of the LCM policy falls to the corporate EH&S Committee.

As mentioned earlier, eco-efficient innovations increase the economic value of a product while reducing its environmental impact. Thus, one key element in this analysis is value measurement. 3M not only considers direct value from financial accounting (classical investment calculation), but also other categories of value, such as: hidden value, which refers to the value not directly attributable to a certain product; intangible value (e.g., positive public perception); and long-term value, which considers value that lies beyond short-term contributions.

FIGURE 5.4: 3M's life cycle management matrix

Life Cycle Stage / Impact	Material Acquisition	R&D Operations	Manufacturing Operations	Customer Needs	
				Use	Disposal
Environment					
Energy/ Resources					
Health					
Safety					

5.3.1.2. Sustainability guidelines for R&D departments

The implementation of sustainability guidelines gives new project teams the opportunity to reflect on and take into consideration environmental, social and ethical principles during the development phase of new products. The guidelines for R&D departments offer a consistent framework, which contributes to the development of sustainable products from the very beginning. In this sense, they differ from life-cycle analysis, which can be seen basically as an environmental assessment tool. Usually, the development of these guidelines is a task that falls to a technical and scientific department. Below we explore some examples.

Procter & Gamble (P&G) uses a Product Sustainability Assessment Tool (PSAT), which starts off with a series of questions that challenge each project team to evaluate whether a new initiative is consistent with sustainable development. The PSAT generates a visual sustainability profile of the initiative, which is then used to help find ways to build on its sustainability-related strengths and eliminate any weaknesses. In P&G, initiatives related to sustainability research are led by the Environmental Science Department. This department promotes scientific understanding and operates in partnership with all the company's areas of business and their respective brands.

In 2003, DuPont introduced new guidance to their R&D organizations that requires them to integrate potential environmental and societal impact assessments into the development process. The guidance for R&D includes questions regarding product trial, global inventories and raw material, global regulations, human and environmental impacts, occupational health impacts, customer information, waste and emissions, sustainable growth metrics, reuse and recycling, packaging and shipping.

Volkswagen's Technical Development has established *7 environmental goals* (the Ecological Program), which must be taken into consideration during the development of its models. These goals concern the following areas: materials, manufacturing processes, recycling, consumption, emissions standards, ground and water pollution, and acoustics. Similarly, Intel has a Design for Environment, Health and Safety philosophy, in which ecological aspects (eco-efficiency, recycling, etc.) are included.

Other companies are taking similar steps. For instance, Novozymes is working to ensure that their environmental and bioethical policy is reflected in research and development activities. In another case, Unilever is piloting a new program called *Design for Excellence* across its Home & Personal Care Europe business that encourages designers to consider environmental issues and opportunities early in the innovation process.

5.3.2. Sustainable design implications

We end this section by showing the main implications of sustainable design or eco-innovation on product development processes. As we will see, sustainable design implies more than just incremental improvements to existing products. Rather, it can be a strategic tool that implies changing product conception, managers' involvement and openness to stakeholders.

5.3.2.1. The product (and even companies) can change at a conceptual level

Eco-innovation can lead to new products that provide the consumer with the *function* that they require in the most sustainable way. In the end, this can result in a firm's transformation. In fact, Senge and Carstedt (2001) make clear that the business logic of the sustainable enterprise implies a shift from "the value is in the stuff" to "the value is in the service the stuff provides".

For instance, DuPont began 200 years ago as a company producing black powder. It transitioned to a chemical company in the 1900s and is now transforming again into a company that uses all sciences (chemistry, physics, biology, and information) to create a strong offering to its customers and to society. This last transformation responds to Dupont's mission of *sustainable growth* and attempts to sell products and services derived from renewable resources. An example is the relationship between Ford and Dupont in the United Kingdom (Arnold and Day, 1998). Instead of simply buying paint from Dupont, Ford has subcontracted the management of its bodywork painting operations to Dupont, which uses its better knowledge of the properties of coatings and painting in general to use less product. Instead of paying per gallon of paint, Ford pays Dupont per car painted. The latter's goal is no longer to sell paint but to offer the best service using the least amount of product. In this way, DuPont locks in its important customer in addition to obtaining first-hand information on its competitors' products and the negotiating strategies they use in their sales. In 2002, 14% of Dupont's revenues were derived from renewable resources such as agricultural feed stocks, technology-based sales, and service fees. Its target for 2010 is 25%.

Dofasco is another company that has transformed itself during recent years. In the early '90s—in response to increasing global competition, an oversupply of steel and declining prices—Dofasco created *Solutions in Steel.* This was a new strategy that has transformed Dofasco from a manufacturer of steel to a high-tech producer of innovative, value-added steel solutions, designed to solve the immediate and future needs of its customers and deliver value to all of Dofasco stakeholders.

5.3.2.2. Increased involvement of top management

As can be observed in the previous point, the implications of sustainability strategies are very relevant to new product development processes. Therefore, it should not be surprising that top management is increasingly involved in this process.

A clear case is provided by Unilever's sustainability initiatives (agriculture, fish, and water), which have the objective of developing environmentally better products. These initiatives were approved by top executives who later signed partnerships with suppliers, industries, governments, and NGOs; a critical step that has supported the firm's progress towards the achievement of the goals established in the initiatives. The strategic importance of these initiatives has been reflected in the development of plans to share eco-manufacturing skills across the supply chain, which includes third-party product suppliers, providers of key raw materials and transportation firms.

The main sustainability challenge for the automotive industry is climate change. For this reason, Volkswagen is pursuing a strategy to combine the expansion of its product portfolio across all relevant segments with a rigorous focus on enhancing overall fuel economy. This will result in a balanced portfolio of growth with relatively low carbon intensity. The Research Department coordinates all the activities to develop more ecological models, and updates the board on sustainable development issues.

5.3.2.3. Increased involvement with stakeholders (e.g., suppliers, customers, universities, NGOs, governments and competitors)

Throughout this report we have emphasized the importance of the role that stakeholders play for the sustainable enterprise. This is also true for the development of new products. Engaging stakeholders offers the company a wider knowledge of product uses, implications, alternatives and characteristics. The remaining challenge is to integrate this knowledge (e.g., stakeholder dialogue output) across the business and products in order to systematically launch sustainable and successful products. In Chapter 4 we provided several illustrative cases in which partnerships and alliances with stakeholders have enhanced the development of sustainable products.

5.3.2.4. Incremental changes to the existing product

Finally, eco-innovation and life-cycle analysis contribute to the improvement of the eco-efficiency of products and processes. These incremental improvements allow the firm to reduce its ecological footprint while enhancing its profitability.

One of Intel's goals is to reduce the environmental footprint through the reduction in size (dematerialization) and energy consumption of their products during the usage phase. With this idea in mind, the Intel Reseller Products Group redesigned the packaging for its boxed Intel *Celeron* processor products. The new design allows Intel to avoid disposing of more than 1.3 million pounds of packaging materials each year. The new, more efficient design reduced packaging by 50% while maintaining marketing, security, shipping and product protection requirements. The Reseller Product Group team won the Intel 2001 Product Ecology Design Award for their efforts. Intel also has an ongoing initiative to reduce lead in its products. In 2002 the first lead-free products (flash memory) were shipped to customers, while continuing R&D efforts yielded lead-free solutions for four additional packaging technologies. In addition, Intel product teams developed a lead-free Network Interface Card (NIC); the first board-level product to use lead-free solder.

Volkswagen has been working on reducing the energy requirements of new cars. For example, the vehicle's service life accounts for about 73% of total energy utilization over the life-cycle of a Golf A4, or 67% in the case of the *three-litre* Lupo. A comparison with the figure of 80% determined for the Golf A3 shows the progress that has been made in reducing fuel consumption.

We have concluded this section by looking at the main implications of sustainable design. We have seen that the integration of sustainability into new product development processes not only affects R&D departments, but can also imply a new strategic intent which affects the entire organization. When this is the case, more opportunities exist for *sustainable growth* and for achieving a solid competitive position in the marketplace.

5.4. Supply chain management

Up to this point, we have observed how sustainability strategy is implemented *internally*. We have seen its implications in human resource systems, EH&S management systems and innovation processes. Now we will examine how sustainability decisions influence *external* elements, focusing our attention on supply chain management.

In Chapter 2 (2.5.3.3. and 2.5.3.4.), we provided some results regarding the sustainability chain policy. We saw that 94% of DJSI sector leaders have incorporated social, ethical or environmental areas into their selection and evaluation of suppliers. In addition, 61% of these companies are monitoring and auditing suppliers with regard to these issues. These results show that sustainability leading companies are already aligning the principles and values that guide their activities to external stakeholders who directly influence their business processes and products. In this section we will extend this analysis to explore *how* these processes are undertaken. We will observe how DJSI leading companies are managing their supply chain in order to improve human rights and labor standards, as well as to favor sustainable raw materials when purchasing from suppliers.

The first and fastest way to fulfill these objectives is through the firm's supplier selection and evaluation process. Second, we have observed that alternative ways for promoting sustainable practices are being used by DJSI sector leaders, such as training programs for suppliers, the development of partnerships, or setting up suppliers' awards that recognize excellent practices in social responsibility areas. In the following section, we will review these practices through illustrative examples.

5.4.1. Selection and evaluation of suppliers

One of the critical aspects of supply chain management is the process of selection and evaluation of suppliers. Logically, economic factors (e.g., price competitiveness), quality of products and services (e.g., delivery ontime), and integrity (e.g., compliance with laws and regulations) are components always considered when selecting suppliers. However, *sustainable supply chain management* goes beyond these common requirements because it also establishes methods of selection and evaluation in accordance with sustainable development principles. For example, policies, procedures, guidelines, or principles that include social, ethical and environmental standards are commonly developed as a means of ensuring that suppliers comply with all of the requirements expressed in these documents.

Marks & Spencer (M&S) offers a good case for illustrating how suppliers are selected. M&S, which buys products from more than 1,000 suppliers in over 70 countries, has developed a supply chain policy concerned with environmental and social issues. In this context, M&S has developed Global Sourcing Principles that suppliers must comply with. They include suppliers' responsibility (set jointly with each supplier), workforce rights, regular assessment, environmental responsibility and the commitment to extending the principles through the suppliers' supply chain. A summary of the M&S Global Sourcing Principles forms part of the contract between the company and its suppliers. Quite similar, although more focused on environmental aspects, is the case of Teijin, which has a *green purchasing policy* that requires each business group to plan and implement green purchasing with specific goals. Teijin promotes preferential purchasing through the intranet websites of companies providing environmentally friendly products.

The evaluation of suppliers' social, environmental, health, and safety performance is also an important process carried out through different mechanisms, such as risk and quality assessment tools and audits. Continuing with the M&S illustration, the company uses *ethical audits* to obtain additional assurance about the compliance of standards on child labor, safety, pay, terms of employment, and working hours. M&S evaluates over 70% of its finished product suppliers worldwide.

Similarly, Intel monitors supplier EH&S performance through a supplier assessment process. Intel has helped to develop a Standardized Supplier Quality Assessment tool for industry-wide use in collaboration with members of Semiconductor Equipment and Materials International.

Another case worth mentioning is that of Novozymes, which evaluates key suppliers on environmental performance and, more recently, on human rights and labor standards. Novozymes has developed its own methods for evaluation and aims to cover all key suppliers of raw materials, corresponding to approximately 80% of its raw material costs. From 2004 onward, all new Novozymes suppliers will be evaluated.

5.4.2. Alternative ways of promoting sustainable practices among suppliers

Besides supplier selection and evaluation, we also observed other forms of promoting sustainable practices among suppliers. We found three basic ways that firms are doing so: 1) training programs, 2) the development of partnerships and 3) setting up supplier awards.

The inclusion of environmental and social issues in supplier training programs seeks to raise awareness of the importance of these issues, and helps suppliers to improve their sustainability management. As an example, M&S provides compliance incentives and training to the company's procurement teams, suppliers and subcontractors. They are focused on raising the awareness of internal procurement employees and external suppliers. Some examples are the *social compliance audit training* accreditation, given to those suppliers who attend and pass the examination, and the one-day local language workshops for site managers of suppliers. Moreover, suppliers receive Self-Help Guides and training to set up local best practices.

Partnerships are also an effective way to involve suppliers in sustainability management. Companies such as BT and M&S are engaged in the Ethical Trading Initiative (ETI) [32]. The ETI is an alliance of companies, non-governmental organizations (NGOs), and trade union organizations committed to working together to identify and promote ethical trade. Such trade involves the implementation of a code of conduct for good labor standards, including the monitoring and independent verification of the observance of ethics code provisions, such as standards for ethical sourcing.

Finally, although it is still quite rare, some companies have also created supplier awards to strengthen suppliers' commitment to sustainable development. A good illustration of this is the case of BT, which has several categories of awards to recognize significant contributions by their suppliers, highlighting examples of innovation and forward thinking. Within these awards are categories such as *innovation and responsiveness* and *commitment to social responsibility*. The latter looks for suppliers who have implemented policies, systems or initiatives that demonstrate their commitment to social responsibility where a BT contract is concerned. Suppliers can demonstrate this in areas such as the environment, supply chain human rights, diversity or other areas of social responsibility.

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[32] More information about this initiative can be found at www.ethicaltrade.org/

5.5. Summary

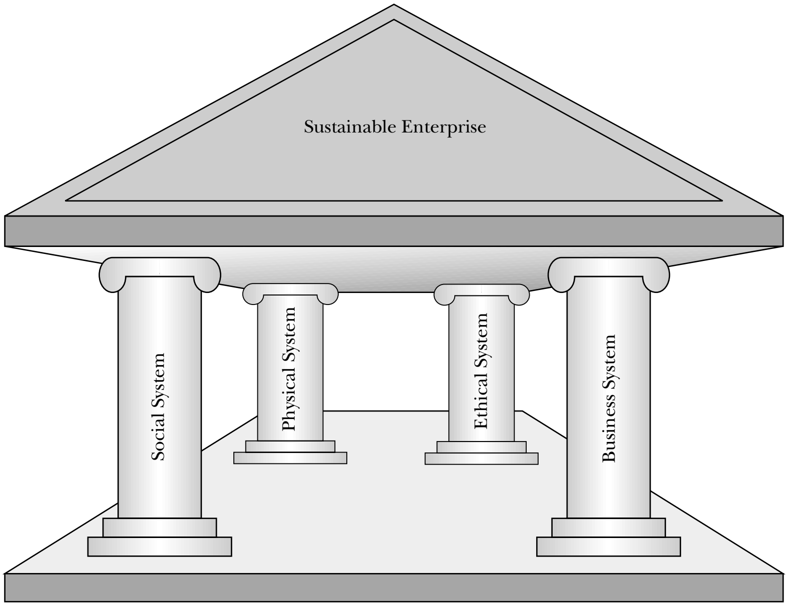
Leading companies in sustainability are adapting their management systems to align their procedures and routines with their new governance and strategy systems. Although they still have room for improvement, they far exceed ordinary companies in these efforts. The leading companies that we have analyzed throughout this chapter seem to have made the greatest inroads in human resource management systems such as recruiting, rewarding, training and communication systems. They also show a clear and true interest in keeping their environment, health and safety management policies and systems alive. In fact, they are enlarging the scope of these systems and including elements that go beyond the requirements of standards such as ISO 14000 or EMAS. Leading companies are also promoting sustainability values outside of their companies' confines; they include these issues in their supply chain management policies and systems related to the selection and evaluation of suppliers. They are also starting to include key suppliers in their sustainability-related training programs, and establishing supplier awards to recognize their commitment to sustainable development. Finally, although leading companies are using tools such as life-cycle assessments or sustainability guidelines, it appears that they must continue their efforts in order to embrace sustainability in their research and development systems.

6. Conclusions

THE need to advance towards a more sustainable business development model and the role that companies can and should play in developing and managing such a model within their organizations cannot be dealt with in a cosmetic way. On the contrary, the quest for sustainability conveys a radical change of paradigm; a new paradigm whose cornerstone implies changing companies' core values; from considering the maximization of shareholder value the ultimate goal of businesses to a new view of the role of business in society based on making survival the essential objective. Under this approach, instead of profit being an end in itself, achieving survival becomes the end, which is achieved by creating wealth for both companies and society at large. As opposed to the traditional company, and in accordance with any other living system, the ultimate goal of the sustainable enterprise is survival. As is also the case with living systems, the core value of the sustainable enterprise is its awareness of the system of which it is a part and the sense of belonging to it. This core value drives its behavior. Instead of being a net predator of the physical-social system, the sustainable enterprise obtains resources from the system with the purpose of contributing to the net creation of wealth. This behavior adds to the resilience and general improvement of both the company and the system. Its governance, strategy, and other management systems are designed to generate this beneficial symbiosis. In Figure 6.1 we represent this conception of the sustainable enterprise.

In this research project, we have studied how the leading companies in sustainability are adopting these new values. As a result, they are engaging in an open and fruitful dialogue with their stake-

FIGURE 6.1: The four pillars of the sustainable enterprise



holders and introducing deep changes in their governance, strategy, and other key management systems. Next, we detail the most important conclusions that we have drawn from this research project, organized by topics:

6.1. Corporate governance

As expected, sustainability has had a profound impact on the governance systems of leading companies. Almost all of the leading companies consider sustainability a board responsibility while only half of the regular companies do so. Some conclusions worth highlighting are:

- *Sustainability*, as well as other related values, has become one of the core values of sustainable enterprises.
- Most sustainable enterprises have appointed one or more directors knowledgeable in sustainable development.
- Sustainability board committees are becoming a popular feature in sustainable enterprises. In these companies, their

level of take-up is the same as that of other board committees, such as those in charge of audit and remuneration issues, and greater than that of those dealing with strategy and nominations.

- Sustainability is becoming a regular item in sustainable enterprise board meetings.
- Overall, leading companies see sustainability as a strategic issue, and the responsibility for its development is assumed at board level. Therefore, new roles are developed at board level to respond to this new reality. Furthermore, the development of such new roles imposes the changes we have just indicated in the composition, structure and processes of boards of directors. All other changes in leading companies are initiated by these fundamental changes in corporate governance.

6.2. Corporate strategy

A second fundamental transformation we saw in leading companies corresponds to the efforts they have made to integrate the values of sustainable development into strategy. We can see these efforts both at the formulation and implementation level:

- Sustainable enterprises use different mechanisms to ensure that sustainability is embraced in the formulation of corporate strategy. The fundamental step we detected is the development of a governance structure to assure this objective.
- Sustainable enterprises use different mechanisms to ensure that sustainability values are alive and deeply internalized in their organizations.
- Sustainability is a key component of sustainable enterprises' codes of conduct.
- At the implementation level, many companies use some kind of balance scorecard mechanism (or a related mechanism) to assure that sustainability is translated from strategy into operations.

6.3. Core capabilities

We have not focused deeply on all the capabilities that leading companies have to develop to advance into being sustainable enterprises. However, one key capability we have studied is dialogue with stakeholders, a fundamental milestone on this journey.

- Leading companies have learned to develop real engagement with stakeholders. To do so, they have assigned the relevant responsibilities at board and senior management level, hold regular meetings with stakeholders and develop partnerships with them.
- Sustainable enterprises' boards promote stakeholder dialogue as a regular activity within their organizations.
- Directors of most leading companies are involved in stakeholder dialogue in several ways.
- Stakeholder engagement is a core capability that promotes the enhancement of two essential strategic assets—reputation and innovation.
- While most leading companies identify and prioritize stakeholders, they still need to make additional efforts in the mapping of key stakeholders.

6.4. Management systems

We have studied in depth four management systems to understand the way sustainability values are being translated into organizational routines and procedures. These key systems are human resource systems, environmental, health and safety systems, research and development systems, and supply chain management systems. Overall, they allow us to get a good idea about such translation. Some generic conclusions in this area are:

- Sustainability is increasingly reflected in recruiting processes, training programs, rewards systems and communication policies.

- Environmental, health and safety policies and management systems are already standardized and widely adopted by leading companies. New elements are being included to extend the systems' scope and therefore their contribution towards real sustainability.
- Including sustainability concepts within R&D systems is both a challenge and a fundamental issue for leading companies. Companies are trying different procedures to do so, but no dominant approach was detected. We strongly believe this is an area where new capabilities need to be developed to create sustainable value.
- Sustainable enterprises are increasingly promoting sustainability values and practices along their value chain. This is an area where effort is already being applied, and with a potential to have great impact on the diffusion of sustainability values to other companies.

In short, leading companies have gone through a profound transformation reflected in their corporate strategy and governance. A cause and effect of this transformation has been the establishment of new relationships with stakeholders at all management levels. The impact on the routines, procedures and capabilities of these companies is already being felt, but the real transformation is still to come. As we have demonstrated throughout our research, leading companies are showing us the way forward as well as developing a new business paradigm.

In Table 6.1 we represent the paradigm of sustainable enterprise that emerges from our research, and compare this new paradigm with the traditional approach to doing business and what we consider a middle of the road attitude towards sustainability. Some of the 18 DJSWI leading companies are close to becoming truly sustainable enterprises while others are still considering sustainability as an add-on. Anyway, although in our opinion none of them have arrived at the end of the journey towards sustainability, they collectively suggest the kind of changes that a company should undergo to progress in this direction.

The key components of this paradigm are the new values and purposes that drive the transformation process in governance, strategy and other management systems. In a few years, we should see

TABLE 6.1: Towards the sustainable enterprise

	Traditional approach	Sustainability as an add-on	Sustainable enterprise
Main focus	Fixed focus on shareholder value	Focus on shareholder value + philanthropic or opportunistic "zoom outs"	Focus on the long-term triple bottom line
Competitive System	Costs	Reputation Risk management	Innovation
Natural System	Legal approach	Ancillary improvement activities in natural resources use efficiency	Natural capital maintenance and improvement
Social System	Legal approach	Ancillary improvement activities in business' social impact	Social resources management and enlargement
Ethical System	"Ordinary decency"	"0.7% syndrome"	New core values
Attitude towards Sustainable development	Ignorance "Sustainable development is not the business of business"	Reactive responsiveness: Philanthropy: "We should return to society some of our profits." Opportunism: "SD has an impact in our reputation."	Proactive commitment and involvement: "We should look after the system we are part of because it is the right thing to do."

how these values affect all corporations, much in the same way that we saw the quality movement drastically transforming all businesses during the 1990s. By then, the concepts *profitability-sustainability* and *business-societal good* will not be seen as mutually exclusive or as needing to be compromised when both are pursued simultaneously. Instead of being severed by the conjunction *or* they will be bridged by the connector *and*. Sooner or later, false dichotomies regarding sustainability will be a by-gone characteristic. Although this new strategic management approach is just starting, the rate of change is increasing. As Victor Hugo said, "Nothing is so powerful as a new idea whose time has come."

ANEXES

A.1. SAM Research's Corporate Sustainability Assessment Questionnaire

SAM Research Inc. Member of the SAM Group
Rotfluhstrasse 91 CH-8072 Zollikon-Zurich
Tel. +41 1 397 10 30 Fax +41 1 397 10 50

Approval Form Company Name: ______________________

Confirmation of Truthful Company Statements and Documentation

The following people confirm that all statements made in the SAM Corporate Sustainability Assessment Questionnaire online or on paper as well as additional information/documentation (listed below) provided to SAM Research is true to the best of their knowledge. They confirm that they have read and accepted SAM's Information Policy and Disclaimer concerning the use of the provided information indicated below.

Name	Function/Position
Signature	Place, date
Name	Function/Position
Signature	Place, date

Documentation provided

Please include only recent documentation which has not previously been sent to SAM Research.

❍ SAM Corporate Sustainability Assessment Questionnaire (paper version)
____
Date submitted

❍ ______________________________
Annual/Financial Reports

❍ ______________________________
Sustainability Reports

❍ ______________________________
Environmental Reports

❍ ______________________________
Social Reports

❍ ______________________________
Others

Use of Information Policy and Disclaimer

SAM Research Inc. (this term shall include its related, affiliated and subsidiary companies) will use the information provided by your company in connection with this survey as a basis for defining and distributing index products. In addition, this information may be used in aggregated form for other commercial activities of SAM Research Inc. such as research, advisory or investment activities. In aggregated —but never in individual— form, this information may also be used for publication. Aggregated information refers to information that is expressed in scores, not to the detailed information contained in the SAM Corporate Sustainability Assessment Questionnaire. By completing and returning to us this questionnaire, you agree to the use of such information as specified herein and that such information may be transferred abroad. To the extent permitted by law, SAM Research Inc. shall not be liable for any direct, indirect or consequential damages arising out of the use of such information. With regard to other important legal issues we refer to the disclaimer as stated on http://www.sam-group.com/assessment2002 (after login). This policy and the disclaimer may be updated occasionally. Our use of such information is subject to the policy and disclaimer in effect at the time of use.

Economic Dimension

Corporate Governance

1. How many members are on your Board of directors? Board of directors?
   ❍ ____________ members

❍ Not applicable. Please provide explanations in the comment box below.
❍ Not known
Comment:

2. How many Employee/Trade Union representatives, that are required by law, do you have on your Board/Supervisory Board?
❍ Employee/Trade Union representatives
❍ Not known
❍ Not applicable
Comment:

3. How many Board members have executive functions in your company?
❍ ______________ members
❍ Not applicable. Please provide explanations in the comment box below.
❍ Not known
Comment:

4. Is the Board headed by a non-executive chairman and/or a lead director?
❍ Yes
❍ No
❍ Not applicable. Please provide explanations in the comment box below.
❍ Not known
Comment:

5. Please indicate in the table below the functions, and associated committee names, for which the Board explicitly assumes formal responsibility.

❍	**Function**	**Responsibilities**	**Name of committee**
	Strategy	❑ Formal Board Responsibility	
	Audit, accounting, risk management	❑ Formal Board Responsibility ❑ All members are non-executives	
	Selection and nomination of board members and top management	❑ Formal Board Responsibility ❑ All members are non-executives	

Remuneration of board members and top management	❑ Formal Board Responsibility ❑ All members are non-executives
Corporate social responsibility, corporate citizenship, sustainable development	❑ Formal Board Responsibility

❍ Not applicable. Please provide explanations in the comment box below.
❍ Not known
Comment:

6. Please indicate if the Board of your company has issued a formal corporate governance policy. If yes, please attach the document or indicate where it can be found (website, annual report etc.).
❍ Yes, documented in ________________________________
❍ No
❍ Not applicable. Please provide explanations in the comment box below.
❍ Not known
Comment:

7. Please indicate the percentage of the main nationality represented on your Board of Directors relative to all other nationalities represented on the Board.
❍ ____________ %
❍ Not applicable. Please provide explanations in the comment box below.
❍ Not known
Comment:

8. How many women are members of your company's Board of Directors?
❍ ____________
❍ Not applicable. Please provide explanations in the comment box below.
❍ Not known
Comment:

9. Please indicate the percentage of fees for management consulting paid to your auditing firm as a percentage of total fees paid to your auditing firm at corporate level in 2002.

❍ ____________ %
❍ Not applicable. Please provide explanations in the comment box below.
❍ Not known
Comment:

10. Do you externally communicate the remuneration/compensation of your senior directors (CEO and Board members)? Please attach documents and/or indicate web address.
❍ Yes, on an individual level.
❍ Yes, on an average level per member (e.g. board/supervisory board).
❍ Yes, on aggregated level, including other senior management.
❍ No
❍ Not applicable. Please provide explanations in the comment box below.
❍ Not known
Comment:

Documents (pages):

http://

Investor Relations

11. Please provide examples of material (e.g. analyst presentations, websites, reports etc.) used to communicate with analysts and investors about sustainability issues.
❍ ____
❍ Not applicable. Please provide explanations in the comment box below.
❍ Not known
Comment:

12. Please indicate the number of face to face investor meetings your company has held in the last fiscal year (1 on 1s and/or seminars) with regard to your sustainability/corporate social responsibility strategy and performance.
❍ ____________ meetings in the last fiscal year.
❍ Not applicable. Please provide explanations in the comment box below.
❍ Not known
Comment:

13. Do you conduct regular investor perception studies?
    ❍ Yes
    ❍ No
    ❍ Not applicable. Please provide explanations in the comment box below.
    ❍ Not known
    Comment:

    If yes, which of the following aspects are part of the perception study process/system? Please provide supporting documents or indicate website.
    ❍ ❑ Number of perception studies per year: ____________________
       ❑ Feedback to board
       ❑ Feedback to chief financial officer
       ❑ Others, please specify: ________________________________
    ❍ None
    ❍ Not known
    ❍ Not applicable. Please provide explanations in the comment box below.
    Comment:

    Documents (pages):

    http://

Strategic Planning

14. Please tick the five (5) most important options where you perceive the most value is added from your sustainability strategy in terms of value generation/competitiveness enhancement.
    ❍ ❑ Access to capital
       ❑ Talent attraction
       ❑ Operational efficiency
       ❑ Innovation Trigger
       ❑ Reputational Enhancement
       ❑ Maintaining licence to operate by stakeholders (such as public, employees, NGOs etc.)
       ❑ Reducing Environmental Footprint
       ❑ Future Business Option Creation
    ❍ Not applicable. Please proved explanations in the comment box below.
    ❍ Not known
    Comment:

15. Which of the following tools do you systematically use for strategic planning at corporate level?
    - ❍ Answer:
        - ❑ Portfolio theory; briefly describe how it is applied: ____________
          ____
        - ❑ Real options methods; briefly describe how they are applied. ____
          ____
        - ❑ Scenario planning; indicate the average time horizon used: _____
          ____
        - ❑ Systems dynamics methods; briefly describe how it is applied: ___
          ____
        - ❑ Others: please describe: ________________________________
          ____
    - ❍ Not applicable. Please provide explanations in the comment box below.
    - ❍ Not known

    Comment:

16. Please attach or indicate a web address of corporate statements or reports that indicate the core values and/or business principles of your company.
    - ❍ ____
    - ❍ Not applicable. Please provide explanations in the comment box below.
    - ❍ Not known

    Comment:

    Documents (pages):

    http://

Scorecards/Measurement Systems

17. Please indicate the main purposes of your scorecard/measurement systems (such as Balanced Scorecards or similar).
    - ❍ Answer:
        - ❑ To measure and integrate overall tangible and intangible corporate performance
        - ❑ To act as an integrated strategic planning and management tool, linking different levels of the company
        - ❑ To share process best practice across business units

- ❑ To compare business unit performances (Key Performance Indicators)
- ❑ No scorecard/measurement systems implemented

❍ Not applicable. Please provide explanations in the comment box below.

❍ Not known

Comment:

18. Which perspectives are integrated in your company's scorecards/measurement systems at a group/corporate level (Balanced Scorecard or similar)?

❍ Answer:

- ❑ Customer/Stakeholder perspective
- ❑ Governance/Stakeholder perspective
- ❑ Financial/Shareholder perspective
- ❑ Process/Operational perspective
- ❑ People (Employee)/Learning perspective
- ❑ Reputation perspective
- ❑ Others, please specify: ________________________________

❍ Not applicable. Please provide explanations in the comment box below.

❍ Not known

Comment:

Documents (pages):

http://

Risk & Crisis Management

19. Please indicate the name and position of your chief risk officer or person responsible for this function.

❍ Name: __________________ Position: ______________________

Number of levels from the Board: ___________________________

❍ Not applicable. Please provide explanations in the comment box below.

❍ Not known

Comment:

20. Please indicate the name, position and reporting line of the person responsible for issue/reputation management(i.e. coordination and communication of issues with high potential risk to your company's

reputation) at a group level. Please also refer to the helptext. issue/reputation management(i.e. coordination and communication of issues with high potential risk to your company's reputation) at a group level. Please also refer to the helptext.

❍ Name: ___________________ Position: ________________________
  Number of levels from the Board: _____________________________
  Reporting line: ____

❍ Not applicable. Please provide explanations in the comment box below.

❍ Not known

Comment:

21. Please indicate the elements included in your company's crisis/emergency plans.

❍ Answer:
  ❑ Business continuity plan
  ❑ Communication with the media and other critical audiences/stakeholders affected
  ❑ Co-ordination between departments involved (e.g. Public Relations, Investor Relations, Manufacturing, Customer Service, Finance and Risk Management departments)
  ❑ Frequent rehearsal/testing of plans
  ❑ Mechanisms for early internal/external notification of an emergency situation

❍ Not applicable. Please provide explanations in the comment box below.

❍ Not known

Comment:

Documents (pages):

http://

Codes of Conduct/Compliance/Corruption&Bribery

22. Please indicate for which areas corporate codes of conduct have been defined at a group level (including subsidiaries). Please attach supporting documents, codes of conduct, etc.

❍ Answer:
  ❑ Corruption and bribery
  ❑ Discrimination

❑ Confidentiality of information
❑ Money-laundering, insider trading
❑ Security of staff, business partners, customers
❑ Environment, health and safety
Documented in: ______________________________

____

❍ Not applicable. Please provide explanations in the comment box below.
❍ Not known
Comment:

23. What mechanisms are in place to ensure effective implementation of your company's codes of conduct?
❍ Answer:
❑ Responsibilities, accountabilities and reporting lines are systemically defined in all divisions and group companies.
❑ Regular employee communication.
❑ Dedicated help desks.
❑ Intranet with practical examples for training purposes.
❑ Codes of conduct linked to employee remuneration.
❑ Employee performance appraisal systems integrates compliance/codes of conduct.
❑ Disciplinary actions in case of breach (i.e. zero tolerance policy)
❑ Compliance system is certified, please specify: ______________

____

❍ Not applicable. Please provide explanations in the comment box below.
❍ Not known
Comment:

24. Please indicate which of the following aspects are covered by your anti-corruption and bribery policy. Please refer also to the helptext.
❍ ❑ Bribes (in any form, including kickbacks, on any portion of contract payments)
❑ Direct or indirect political contributions
❑ Political contributions publicly disclosed. Please attach document and/or website: ______________________________
❑ Charitable contributions and sponsorship.
❑ Charitable contributions and sponsorship publicly disclosed. Please attach document and/or website: ______________

❍ Policy in development and to be implemented within next _______ months/year(s)
❍ Not known
❍ Not applicable. Please provide explanations in the comment box below.
Comment:

25. Who does your corruption and bribery policy apply to? Please indicate the percentage of coverage of your corruption and bribery policy relative to the total number of:
❍ ❑ Employees group-/worldwide: ________ %
❑ Contractors/Suppliers/Service providers: ________ %
❑ Subsidiaries: ________ %
❑ Joint ventures: ________ %
❍ Not applicable. Please provide explanations in the comment box below.
❍ Not known
Comment:

26. Does your company publicly report on breeches of your corruption and bribery policy? Please attach documents and/or web address.
❍ Yes, please refer to the document(s) attached: __________________
❍ No
❍ Not applicable. Please provide explanations in the comment box below.
❍ Not known
Comment:

Documents (pages):

http://

Customer Relationship Management

27. What approach do you use for integrating customer feedback?
❍ ❑ Harmonized CRM database at business unit level
❑ Webbased, harmonized feedback channels
❑ Integration of feedback into product/services development
❑ Dedicated Helpdesks for complaints
❑ Ombudsman for complaints
❍ Not applicable. Please provide explanation in the comment box below.
❍ Not known
Comment:

28. Does your company systematically monitor customer satisfaction? Please provide documents.
   ❍ Answer:
      ❑ Yes, it is monitored by third parties
      ❑ Yes, it is monitored internally
   ❍ No
   ❍ Not applicable. Please provide explanations in the comment box below.
   ❍ Not known

   Comment:

   Documents (pages):

   http://

Environmental Dimension

Environmental Policy/Management

29. Please indicate the name, position and reporting line of the person responsible for environmental issues at the highest level within your organization.
   ❍ Name: ____________________ Position: _________________________
      Number of levels from the Board: ______________________________
      Reporting line: ____
   ❍ Not applicable. Please provide explanations in the comment box below.
   ❍ Not known

   Comment:

30. Has your company adopted a corporate environmental policy? (whether stand alone or integrated into a broader policy statement). Please refer to the policy or indicate where it can be found on the web.
   ❍ Yes, documented in: ____
   ❍ No
   ❍ Policy is in development and to be implemented within the next ____ months
   ❍ Not applicable. Please provide explanations in the comment box below.
   ❍ Not known

   Comment:

If yes, please indicate whether this policy applies to:

❍ Answer:
  - ❑ Company's own operations
  - ❑ Environmental impacts of products & services
  - ❑ Suppliers & service providers (e.g. contractors)
  - ❑ Other key business partners (e.g. non-managed operations, JV partners, etc.), please specify: ________________________________

❍ Not applicable. Please provide explanations in the comment box below.

❍ Not known

Comment:

31. Have quantified environmental targets been defined for the whole company? Please attach relevant documents.

❍ Yes

❍ No

❍ Groupwide targets are in development, to be implemented within the next ________ months

❍ Not applicable. Please provide explanations in the comment box below.

❍ Not known

Comment:

Public availability of environmental targets

❍ Yes, documentation attached

❍ Yes, no documentation

❍ No

❍ Not applicable. Please provide explanations in the comment box below.

❍ Not known

Comment:

32. Please indicate how your environmental management system is certified.

❍ ISO 14001, JIS Q 14001, EMAS
  - ❑ Third party certification by specialized companies
  - ❑ Certification by company-own specialists from headquarter

❍ Not certified

❍ Not applicable. Please provide explanations in the comment box below.

❍ Not known

Comment:

33. Please indicate the percentage of total revenues certified according to these systems:
   ❍ _______ % of revenues
   ❍ Not applicable. Please provide explanations in the comment box below.
   ❍ Not known

   Comment:

   Documents (pages):

   http://

Environmental Performance

34. Please complete the following table and include a short explanation of the trend.

❍	Indicator	Unit (if different from unit indicated)	Estimated coverage (%) of total revenue in 2002	1999	2000	2001	2002	Explanation of trend
	Total energy consumption (GJ)							
	Total direct GHG emissions (tons CO_2 equivalent)							
	Total water use (tons)							
	Total waste generation (tons)							

❍ Not applicable. Please provide explanations in the comment box below.
❍ Not known

Comment:

Documents (pages):

http://

Advanced Environmental Management System

35. Have corporate environmental requirements or guidelines been developed for the following?
    - ❍ Answer:
        - ❑ Production operations
        - ❑ Maintenance operations
        - ❑ Selection/on-going evaluation of suppliers/contractors/service providers
        - ❑ Development of new products and services
        - ❑ New projects
        - ❑ Non-managed operations/licensees/third-party manufacturers/JV partners
        - ❑ Due-diligence/Mergers and acquisitions
        - ❑ Other ______________________________
    - ❍ Not applicable. Please provide explanations in the comment box below.
    - ❍ Not known

    Comment:

36. How frequently is environmental data (e.g. emissions to air, water, land, resource consumption, accidents) reported by operations/business units to corporate?
    - ❍ Monthly
    - ❍ Quarterly
    - ❍ Yearly
    - ❍ Irregularly
    - ❍ Not reported as yet
    - ❍ Not applicable. Please provide explanations in the comment box below.
    - ❍ Not known

    Comment:

37. Does your company have a centralized database for environmental data that is accessible from various parts of your organization?
    - ❍ Answer:

- ❑ Yes, database is accessible at corporate level
- ❑ Yes database is accessible at business unit/divisional level
- ❑ Yes database is accessible by individual operations
- ❑ No centralized database exists

❍ Not applicable. Please provide explanations in the comment box below.
❍ Not known
Comment:

38. Please complete the following table (or attach documents) with your company-wide environmental data and explain trends. (Note: significant environmental incidents are incidents which resulted in extensive or long-term impairment of ecosystem function, contamination or shortage of surface/ground water supply, chronic illness, permanent disabling injury, fatality or extensive property damage to the public, irreparable damage to highly valued structures or sacred locations)

❍ Answer:

Parameter	**Unit**	**1999**	**2000**	**2001**	**2002**	**Comments**
Hazardous waste	tons					
Waste disposed to landfill	% of total waste generated					
Incidents	Number					

❍ Not applicable. Please provide explanations in the comment box below.
❍ Not known
Comment:

Documents (pages):

http://

Product Stewardship

39. Are there programs in place to formally assess and minimise the environmental impacts of product packaging, distribution, use and disposal?

❍ Yes ____
❍ No
❍ Not applicable. Please provide explanations in the comment box below.
❍ Not known
Comment:

40. Which of the following aspects are formally included in the development and design of new products?
   ❍ Answer:
      ❑ Environmental impacts of product use and maintenance. Please specify ________________________________
      ❑ Environmental impacts of product manufacturing. Please specify ________________________________
      ❑ Environmental impacts of raw materials production. Please specify ________________________________
      ❑ Upgradability and modularity of products
      ❑ Disassembly, reuse and recycling of the product and its components
      ❑ Other ________________________________
   ❍ Not applicable. Please provide explanations in the comment box below.
   ❍ Not known
   Comment:

41. To what extent is your company actively and directly involved in product take back programs (e.g. disassembly, reuse or recycling of the product and its components)? Please indicate the proportion of revenue corresponding to products covered by such programs.
   ❍ Answer:
      ❑ Product take back programs ________________________________
      ____
      ❑ ________ % of revenue
   ❍ Not applicable. Please provide explanations in the comment box below.
   ❍ Not known
   Comment:

   Documents (pages):

   http://

Climate Strategy

42. Please indicate the organizational coverage of your GHG inventory.
    - ❍ Answer:
        - ❏ wholly owned entities/facilities representing ________ % of total revenue
        - ❏ entities/facilities that are controlled but not wholly owned
        - ❏ jointly controlled assets/entities
        - ❏ entities not controlled but over which the company has significant influence
    - ❍ Not applicable. Please provide explanations in the comment box below.
    - ❍ Not known

    Comment:

43. Please indicate the scope of your GHG inventory (according to WBCSD/WRI Protocol or other).
    - ❍ Answer:
        - ❏ Direct GHG emissions (i.e. Scope 1 of WBCSD/WRI Protocol)
        - ❏ GHG emissions from imports of electricity, heat or steam (i.e. Scope 2 of WBCSD/WRI Protocol)
        - ❏ Other indirect GHG emissions (i.e. Scope 3 of the WBCSD/WRI Protocol)
    - ❍ Not applicable. Please provide explanations in the comment box below.
    - ❍ Not known

    Comment:

44. Please indicate which independent organization verifies your GHG inventory.
    - ❍ Verified by ______________________________
    - ❍ Not externally verified
    - ❍ Not applicable. Please provide explanations in the comment box below.
    - ❍ Not known

    Comment:

45. On what is your strategy for reducing/managing carbon risk based?
    - ❍ Answer:
        - ❏ intra-company emissions trading
        - ❏ national/international emissions trading
        - ❏ Based on carbon sequestration projects

❑ Clean Development Mechanisms (CDM)
❑ Joint Implementation (JI) projects
❑ switching fuel sources
❑ reducing carbon intensive operations/technologies/products/services
❑ other methods (please specify) ____________________

____

❍ Not applicable. Please provide explanations in the comment box below.
❍ Not known
Comment:

46. What is your target for reducing GHG emissions? (inc. sources of emissions covered, baseline, timescale)
❍ Target ____________________

____

❍ Not applicable. Please provide explanations in the comment box below.
❍ Not known
Comment:

Documents (pages):

http://

Social Dimension

Labor Practice Indicators

47. Does your company use indicators (e.g. number of cases breaching group business principles or national laws) regarding the following issues, and are these externally communicated? Please complete table and provide documents and/or web address.

❍

	Diversity	**Discrimination**	**Freedom of Association**	**Child Labor**	**Forced Labor**	**Layoffs**	**Health & Safety**
Indicators	❑ Yes ❑ No ❑ Not applicable	❑ Yes ❑ No ❑ Not applicable	❑ Yes ❑ No ❑ Not applicable	❑ Yes ❑ No ❑ Not applicable	❑ Yes ❑ No ❑ Not applicable	❑ Yes ❑ No ❑ Not applicable	❑ Yes ❑ No ❑ Not applicable

Externally communicated	❑ Yes ❑ No ❑ Not applicable	❑ Yes ❑ No ❑ Not applicable	❑ Yes ❑ No ❑ Not applicable	❑ Yes ❑ No ❑ Not applicable	❑ Yes ❑ No ❑ Not applicable	❑ Yes ❑ No ❑ Not applicable	❑ Yes ❑ No ❑ Not applicable

❍ Not known

Comment:

48. Is a system in place to collect and handle employee grievances and complaints (e.g. help line or independent Ombudsman ensuring employee anonymity for whistleblowing)?

❍ Yes
❍ No
❍ Not applicable. Please provide explanations in the comment box below.
❍ Not known

Comment:

49. Does your company publicly endorse (having signed or publicly acknowledging adherence to) one or more of the following charters/frameworks?

❍ Answer:
- ❑ UN Universal Declaration of Human Rights
- ❑ ILO Tripartite Declaration of Principles concerning Multinational Enterprises and Social Policy
- ❑ OECD Guidelines for Multinational Enterprises
- ❑ Other charters related to labour practices/HR issues, please specify and attach document: ____________________

❍ Not applicable. Please provide explanations in the comment box below.
❍ Not known

Comment:

Documents (pages):

http://

Human Capital Development

50. Do you measure and control the long-term success of your human resource policies in a formal/standardized way (e.g. based on indicators such as employee satisfaction)?

❍ Yes

❍ No
❍ Not applicable. Please provide explanations in the comment box below.
❍ Not known
Comment:

If yes, please indicate which performance indicators you are using:
❍ Answer:
- ❏ Qualitative operating indicators/ratios (e.g. employee satisfaction, degree of implementation of HR projects etc.)
- ❏ Non-financial operating indicators/ratios (e.g. number of hours spent in training, staff turnover rate, number of staff out sick, etc.)
- ❏ Cost-based financial indicators/ratios (e.g. training cost per employee)
- ❏ Investment-or value-based financial indicators/ratios (e.g. ROI —Return on investment—, EVA —Economic value added—, CVA —Cash value added)
- ❏ Human resource-based financial indicators/ratios (e.g. VAP —value added per person, margin per employee)

❍ Not applicable. Please provide explanations in the comment box below.
❍ Not known
Comment:

51. Does your company have a medium-term workforce and skills plan comparing current employees and their skills with the future number, type and skills of employees required to execute the business plan?
❍ Yes, available for business/performance units generatin more than 75% of total revenue
❍ Yes, available for business/performance units generating 50%-74% of total revenue
❍ Yes, available for business/performance units generating less than 50% of total revenue
❍ Not available
❍ Not applicable. Please provide explanations in the comment box below.
❍ Not known
Comment:

52. Please indicate the percentage of skilled employees and executives receiving a regular (e.g. at least once per year) formal evaluation of their performance (performance appraisal)
    ❍ ________ % of employees
    ❍ Not applicable. Please provide explanations in the comment box below.
    ❍ Not known
    Comment:

53. Please indicate how senior/middle management is appraised.
    ❍ ❑ Regular performance appraisal by line superior
    ❑ Multidimensional performance appraisal (e.g. line superior plus upward feedback plus 360 degree feedback)
    ❑ Systematic use of agreed measurable targets and indicators (e.g. project completion)
    ❑ Formal comparative ranking of managers
    ❍ Not applicable. Please provide explanations in the comment box below.
    ❍ Not known
    Comment:

54. Please indicate the percentage of employees for whom there is a company training program, specific to their job category (e.g. specific to the company's sales managers) which must be taken before or within a defined time period after taking up their position.
    ❍ _________ % of employees
    ❍ Not applicable. Please provide explanations in the comment box below.
    ❍ Not known
    Comment:

    Documents (pages):

    http://

Talent Attraction & Retention

55. Please indicate the percentage of employees hired based on a validated selection test in the last fiscal year.
    ❍ _________ % of employees
    ❍ Not applicable. Please provide explanations in the comment box below.
    ❍ Not known
    Comment:

56. Please indicate the percentage of skilled employees (managerial, professsional and technical employees) leaving the company in the course of the past year relative to the total average number of skilled employees during the last year:
❍ _________ % of employees
❍ Not applicable. Please provide explanations in the comment box below.
❍ Not known
Comment:

57. Please indicate the percentage of your workforce that is systematically outplaced or re-assigned because of weak performance of employee relative to the total average number of total workforce during the last fiscal year.
❍ _________ % of workforce
❍ Not applicable. Please provide explanations in the comment box below.
❍ Not known
Comment:

58. Do you regularly track and benchmark employee satisfaction against industry peers with regard to the following issues?
❍ Answer:
❑ Rewards and recognition
❑ Leadership
❑ Supportive/collaborative team environment
❑ Personal development possibilities
❑ Job satisfaction/opportunity to make a difference
❑ Working environment (Health and safety, social climate, etc.)
❑ Identification with corporate values and strategy
❑ Other, please specify: ______________________________
❍ No
❍ Not applicable. Please provide explanations in the comment box below.
❍ Not known
Comment:

59. Based on your employee satisfaction surveys, please characterize the satisfaction level of your employees relative to the previous survey period. Please provide documents and/or indicate web address.
❍ ❑ Higher level of employee satisfaction

❑ Constant level of employee satisfaction
❑ Decreased level of employee satisfaction
❍ Not applicable. Please provide explanations in the comment box below.
❍ Not known

Comment:

60. What percentage of compensation/annual salary (excluding fringe benefits such as pension plans or company car) of skilled employees and managers is—on average—performance related for:

❍ ❑ Top/Senior management: _________ %
❑ Middle/Lower management: _________ %
❑ Sales Staff: _________ %
❑ Technical specialists: _________ %
❑ Overall company average: _________ %
❍ Not applicable. Please provide explanations in the comment box below.
❍ Not known

Comment:

61. For the overall company, what percentage of performance related compensation is on average constituted by:

❍

Type of performance related pay	**Percentage [%]**
Stocks or other forms of stock related compensation (eg: options)	
Other long-term compensation (not directly stock-related)	
Profit shares (or similar)	
Sales or order commision (or similar)	
Bonus pool based on profit, divided up based on management assessment	
Scorecard target bonus set in relation to salary granted on the basis of management assessment	
Other, Please specify:	

❍ Not applicable
❍ Not known
❍ No Answer
Comment:

62. Please indicate the percentage of employees whose variable remuneration and compensation (including boni and all incentive schemes) is linked to environmental, corporate citizenship and corporate responsibility performance at a personal, business unit or corporate level.
❍ ________ % of total workforce
❍ Not applicable. Please provide explanations in the comment box below.
❍ Not known
Comment:

63. Please indicate the group-wide employee benefits provided by your company in addition to government schemes.
❍ Answer:
  ❑ Pension plans
  ❑ Health insurance
  ❑ Medical care for employee families
  ❑ Accident insurance
  ❑ Disability insurance/programs
  ❑ Mortgages & loans
  ❑ Others, please describe: ______________________________
❍ Not applicable. Please provide explanations in the comment box below.
❍ Not known
Comment:

64. Does your company offer the choice of private pension plans with a sustainability/socially responsible component to its employees?
❍ Yes, please attach documents and/or web address: ____________
____
❍ No
❍ Not applicable. Please provide explanations in the comment box below.
❍ Not known
Comment:

Documents (pages):

http://

Knowledge Management/Organizational learning

65. Please indicate if formal organizational learning/knowledge management systems are in place at your company and the percentage of employees involved in them.
   - ❍ Formal systems in place covering approximately ________ % of total employees.
   - ❍ Formal systems are not in place.
   - ❍ Not applicable. Please provide explanations in the comment box below.
   - ❍ Not known

   Comment:

66. Please select the three (3) most important aims of your knowledge management/organizational learning systems.
   - ❍ Answer:
     - ❑ Increase efficiency
     - ❑ Support innovation
     - ❑ Reduce risk, early warning system
     - ❑ Enhance learning and the intellectual capital of the firm
     - ❑ Improve understanding of strategy and vision
     - ❑ Categorize and structure information
   - ❍ Not applicable. Please provide explanations in the comment box below.
   - ❍ Not known

   Comment:

67. Please indicate the tools/processes widely used by your company in managing organizational learning and knowledge management.
   - ❍ Answer:
     - ❑ Experts directories
     - ❑ Informal knowledge/learning networks
     - ❑ Formal knowledge/learning networks with regular meetings and staff support
     - ❑ Intranet based knowledge repositories/databases
     - ❑ Intranet based interactive knowledge platforms integrated into daily work processes
     - ❑ Peer group Key Performance Indicator comparisons across Business Units
     - ❑ Systematically accessible descriptions of best practice processes
     - ❑ Collaboration/knowledge sharing as formal feedback criterium

❑ Bonus directly related to collaboration/knowledge sharing
❑ Company academy/university
❑ Others, please specify: ______________________________

❍ Not applicable. Please provide explanations in the comment box below.
❍ Not known

Comment:

Documents (pages):

http://

Standards for Suppliers

68. Please indicate in which of the following areas your company has defined corporate requirements/guidelines for the selection and ongoing evaluation of key suppliers and service providers at a groupwide level. Please attach examples of such guidelines.

❍ ❑ Environment
❑ Labour standards/employment practices
❑ Occupational health & safety
❑ Human rights
❑ External supplier audits
❑ Others: Please specify: ______________________________

❍ Standards are in development and to be implemented within the next __________ months
❍ Not applicable. Please provide explanations in the comment box below.
❍ Not known

Comment:

Documents (pages):

http://

Stakeholder Engagement

69. Please indicate how your company engages with external stakeholders. Please provide supporting documents or indicate website.

❍ ❑ Identification, prioritizing and mapping of key stakeholders for input into corporate strategy.
❑ Regular briefings/meetings in form of stakeholder dialogue.

- ❑ Feedback from stakeholders to board/supervisory board and/or senior director.
- ❑ Ongoing project teams/partnerships. Examples: ______________
  ____
- ❑ Others, please describe: ______________________________
  ____

❍ Not applicable. Please provide explanations in the comment box below.
❍ Not known
Comment:

70. Does your company regularly track the satisfaction and/or complaints of the following stakeholders?
    ❍ Answer:
    - ❑ Governments
    - ❑ Interest groups, such as consumer organizations
    - ❑ Local communities
    - ❑ Media
    - ❑ Non-governmental organizations (NGOs)
    - ❑ Shareholders
    - ❑ Suppliers/Service providers
    - ❑ Trade Unions

    ❍ Not applicable. Please provide explanations in the comment box below.
    ❍ Not known
    Comment:

    Documents (pages):

    http://

Corporate Citizenship/Philanthropy

71. Does your company have a philanthropic/corporate citizenship/social responsibility strategy which is aligned with your corporate strategy?
    ❍ Yes
    ❍ No
    ❍ Not applicable. Please provide explanations in the comment box below.
    ❍ Not known
    Comment:

If yes, amongst the following options please allocate 100% to indicate where you get the most value from your philanthropic/corporate citizenship strategy:

❍ ❑ Improved business environment in communities, e.g. increased acceptance, education etc.: _________ %
❑ Alignment of social and economic goals to improve long-term business prospects: _________ %
❑ Corporate Reputation: _________ %
❑ Customer Loyalty: _________ %
❑ Employees Loyalty: _________ %
❍ Not applicable. Please provide explanations in the comment box below.
❍ Not known

Comment:

72. Please characterize your company's current types of contributions to the social/economic development of communities:

❍ ❑ Employee volunteerism
❑ Product and services donations
❑ Funding independent charitable/nonprofit organizsation/s or foundation/s
❑ Direct project financing
❑ Education services to local communities through employees
❑ Using lobbying process to influence governments to address social concerns
❍ No contributions
❍ Not applicable. Please provide explanations in the comment box below.
❍ Not known

Comment:

73. What percentage of your last reported annual pre-tax earnings/profits (EBIT) is allocated to philanthropic/social investment spending? (Should you have negative EBIT, please specify the philantropic/social contribution percentage level calculation in the comment box.)

❍ _________ % of pre-tax earnings/profits (EBIT)
❍ Not applicable. Please provide explanations in the comment box below.
❍ Not known

Comment:

Documents (pages):

http://

A.2. DJSWI Market Sector Leaders (2002)

Company Name	Economic Sector	Sales (million)	Employees	Country
3M	Industrial Goods & Services	18,232 $	67,072	USA
BT Group	Telecommunications	18,727 £	99,900	United Kingdom
CRH	Construction	11,080 £	54,239	Ireland
Dofasco	Basic Resources	3,555 $	7,400	Canada
DuPont	Chemicals	27,000 $	55,000	USA
Intel	Technology	30,141 $	78,000	USA
Lend Lease	Financial	10,114 A$	9,090	Australia
Marks & Spencer	Retail	8,019 £	60,000	United Kingdom
Novozymes	Healthcare	5,803 DKK	3,900	Denmark
Pearson	Media	4,048 £	30,000	United Kingdom
Procter & Gamble	Non-cyclical Goods & Services	43,377 $	98,000	USA
Severn Trent	Utilities	2,015 £	15,000	United Kingdom
Royal Dutch/ Shell Group	Energy	268,892 $	119,000	Anglo-Dutch
Swiss Reinsurance	Insurance	30,740 CHF	8,000	Switzerland
Teijin	Consumer, cyclical	874,568 ¥	23,265	Japan
Unilever	Food & Beverage	42,942 €	234,000	Netherlands
Volkswagen	Consumer, cyclical	87,153 €	336,843	Germany
Westpac Banking	Banks	13,010 A$	26,760	Australia

Data: Financial year 2003.

A.3. Research questionnaire template

1. Corporate Governance

1.1. Composition

- Have any of the members of the Board of Directors of "company name" experience in the field of sustainable development? If so, which members have experience in the sustainable development field and what kind of experience do they have?
- Have the members of the Board of "company name" received any kind of training in sustainable development and/or corporate social responsibility? If so, we would appreciate some details.

1.2. Structure

- Does "company name" have any board committee to deal with sustainability issues? (For instance, a Corporate Social Responsibility Committee.)
- If so, please could you tell us:
  — Its main role and responsibilities.
  — Its composition and membership. We would like to know if the committee is made up of non-executive members exclusively or is made up of non-executive and executive members.
  — Is there any formal communication mechanism between the "committee name" and the board? If so, we would appreciate it if you could give some details.
- Does "company name" have any external advisory group that advises the Board on sustainable development issues?

1.3. Process

- How many times a year are sustainable development issues discussed at board meetings?
- How long in advance of the meetings do board members receive information on those sustainable development matters?
- Does the board invite experts on sustainable development to board meetings? If so, how often?

1.4. Corporate values: typology and internalization mechanisms

- Please, could you review and check the corporate values that appear on page [xx] of the enclosed report? Is that the complete list of "company name" values?
- How does the Board of "company name" promote within the company its corporate values related to sustainability?
- How does the Board of "company name" promote its corporate values related to sustainability externally? (For instance, to other parties in its supply chain)
- How does the Board of Directors of "company name" check the level of awareness of and compliance with corporate values within the company?
- How does the board of directors make sure that other parties in its supply chain embrace "company name" values related to sustainability?

1.5. Roles and tasks

Our view of sustainability considers innovation and stakeholder dialogue key attributes of a sustainable enterprise. A company that embraces the concept of sustainable development should be able to know about and address stakeholder concerns, and make sure that sustainability is integrated in R&D and innovation processes. The next questions are related to the tasks of the board in relation with these issues.

- How does the Board of "company name" make sure that sustainable development is a key variable in company R&D and innovation processes?
- How does the Board of "company name" make sure that sustainable development is a key variable in the strategy formulation process?

- To what extent and how do board members of "company name" participate in the dialogue with stakeholders?
- To what extent and how do board members promote dialogue with stakeholders within "company name"?

2. Integration of sustainable development in corporate strategy

2.1. Strategy formulation

- How does "company name" integrate sustainable development in the strategy formulation process?

2.2. Strategy implementation

- Has "company name" implemented a management tool similar to the balanced scorecard proposed by Kaplan and Norton?
- If so,
  - — To what extent has it been adapted to integrate sustainability topics? In what way?
  - — Could we get a copy of the "company name" balanced scorecard to see how sustainable development is embedded in it?

3. Dialogue with stakeholders

3.1. Stakeholder identification mechanisms

- How does "company name" identify the key local, national and international stakeholders with whom to establish dialogue activities?
- What are the company's main mechanisms or channels to establish dialogue with its different stakeholders?

3.2. Stakeholder dialogue impact on R&D and innovation processes

- To what extent and how do the results of the dialogue with stakeholders influence R&D and innovation processes?

3.3. Stakeholder dialogue impact on strategy formulation

- To what extent and how do the results of the dialogue with stakeholders influence the strategy formulation process?

4. Resources and capabilities related to sustainability

First, in order to share with you our view of this concept, we will offer a definition of resources and capabilities.

Resources and capabilities are those tangible and intangible strategic assets that enable a company to develop persistent competitive advantages.

Strategic assets can be, for instance, technological (technological stock and innovation capabilities), know-how (inside and outside of the company), regulatory (patents, contracts, licences), positional (physical location, network of contacts, reputation and competitive information), etc.

4.1. Like any successful company, "company name" has developed a portfolio of resources and capabilities to obtain competitive advantages

- Among "company name" portfolio of resources and capabilities, which ones are related to sustainability?
- How have "company name" key resources and capabilities evolved and are evolving because of sustainability?

4.2. According to the information we have gathered from public sources and SAM opinion, we have outlined some of the main strategic assets that "company name" may possess

- Please, could you review the main strategic assets that appear on page [xx] of the enclosed report? Please complete and/or modify the list.

5. Integration of sustainable development in new products and services development processes

- Have the principles of sustainable development been implemented into product and services development processes? If so, in which way?

- Do you have any example of a product or service that has been recently developed along the principles of sustainable development?

6. Social issues management

- Does "company name" have any specific policy to deal with social and natural (i.e. labor rights, child labor, biodiversity, etc.) issues? If yes, we would appreciate some details.

We have already found the information we needed for this section on your web page. You can read it on page [xx] of the report.

However, if you think that we could add some new useful information about this topic, please be so kind as to provide us with it.

A.4. Questionnaires sent to SAM Research [33]

1. 3M

1. Corporate Governance

1.1. Have any of the members of the Board of Directors of 3M experience in the field of sustainable development? If so, which members have experience in the sustainable development field and what kind of experience do they have?

1.2. Have the members of the Board of 3M received any kind of training in sustainable development and/or corporate social responsibility? If so, we would appreciate some details.

1.3. 3M has established the Public Issues Committee to address sustainability issues. To this respect,

  1.3.1. Is there any formal communication mechanism between the Public Issues Committee and the board? If so, we would appreciate it if you could give some details.

1.4. Does 3M have any external advisory group that advises the board on sustainable development issues?

1.5. How many times a year are sustainable development issues discussed at board meetings?

1.6. How long in advance of the meetings do board members receive information on those sustainable development matters?

1.7. Does the board invite experts on sustainable development to board meetings? If so, how often?

[33] The following questions were sent to SAM Research to obtain additional information on the companies. SAM Research provided answers to those questions where it could point the authors to publicly available information. Where such public information was not available, the questions were left unanswered. SAM Research did not provide any information to the authors that was not in the public domain.

1.8. How does the Board of Directors of 3M check the level of awareness of and compliance to corporate values related to sustainability within the company?

1.9. Our view of sustainability considers innovation and stakeholder dialogue key attributes of a sustainable enterprise. A company that embraces the concept of sustainable development should be able to know about and address stakeholder concerns, and make sure that sustainability is integrated in R&D and inovation processes. The next questions are related to the tasks of the Board in relation with these issues.

1.9.1. How does the Board of 3M make sure that sustainable development is a key variable in company R&D and innovation processes?

1.9.2. To what extent and how do board members of 3M participate in the dialogue with stakeholders?

1.9.3. To what extent and how do board members promote dialogue with stakeholders within 3M?

2. Integration of sustainable development in strategy formulation process

2.1. Has 3M implemented a management tool similar to the balanced scorecard proposed by Kaplan and Norton? If so,

2.1.1. To what extent has it been adapted to integrate sustainability topics? In what way?

2.1.2. Could we get a copy of the 3M balanced scorecard to see how sustainable development is embedded in it?

2.2. 3M has set up an EH & S Scorecard within its EH & S Management System, which targets the performance of some eco-efficiency metrics.

2.2.1. Is the EH & S Scorecard linked to the company balanced scorecard? If so, we would appreciate some details.

3. Dialogue with stakeholders

3.1. How does 3M identify the key local, national and international stakeholders with whom to establish dialogue activities?

3.2. To what extent and how do the results of the dialogue with stakeholders influence R&D and innovation processes?

3.3. To what extent and how do the results of the dialogue with stakeholders influence the strategy formulation process?

4. Resources and capabilities related to sustainability

First, in order to share with you our view of this concept, we will offer a definition of resources and capabilities.

Resources and capabilities are those tangible and intangible strategic assets that enable a company to develop persistent competitive advantages.

Strategic assets can be, for instance, technological (technological stock and innovation capabilities), know-how (inside and outside of the company), regulatory (patents, contracts, licenses), positional (physical location, network of contacts, reputation and competitive information), etc.

4.1. Like any successful company, 3M has developed a portfolio of resources and capabilities of obtaining competitive advantages.
   4.1.1. Among 3M portfolio of resources and capabilities, which ones are related to sustainability? Please be as specific as possible.
   4.1.2. How have 3M's key resources and capabilities evolved and are evolving because of sustainability?

Intel

1. Corporate Governance

1.1. Have any of the members of the Board of Directors of Intel experience in the field of sustainable development? If so, which members have experience in the sustainable development field and what kind of experience do they have?

1.2. Have the members of the Board of Intel received any kind of training in sustainable development and/or corporate social responsibility? If so, we would appreciate some details.

1.3. Does Intel have any external advisory group that advises the board on sustainable development issues?

1.4. How does the Board of Directors of Intel check the level of awareness of and compliance with corporate values within the company?

1.5. Our view of sustainability considers innovation and stakeholder dialogue key attributes of a sustainable enterprise. A company that embraces the concept of sustainable development should be able to know about and address stakeholder concerns, and make sure that sustainability is integrated in R&D and innovation processes. The next three questions are related to the tasks of the Board in relation with these issues.

1.5.1. How does the Board of Intel make sure that sustainable development is a key variable in the company R&D and innovation processes?

1.5.2. How does the board of Intel make sure that sustainable development is a key variable in the strategy formulation process?

1.5.3. To what extent and how do board members of Intel participate in the dialogue with stakeholders?

2. Integration of sustainable development in corporate strategy

2.1. How does Intel integrate sustainable development in its strategy formulation process?

3. Dialogue with stakeholders

3.1. How does Intel identify the key local, national and international stakeholders with whom to establish dialogue activities?

3.2. To what extent and how do the results of the dialogue its stakeholders influence R&D and innovation processes?

3.3. Intel states that: "To improve our performance over time, we must identify emerging issues and trends, and translate that knowledge into strategies for our business groups. Our stakeholders play an invaluable role in this process. Engaging with customers, suppliers, communities, legislators and employees provide the information and insight we need."

3.3.1. To what extent and how do the results of the dialogue with stakeholders influence the strategy formulation process?

3.3.2. How does Intel transmit up the organization the insights and knowledge obtained from stakeholders (for instance, in Community Advisory Panels)?

4. Resources and capabilities related to sustainability

First, in order to share with you our view of this concept, we will offer a definition of resources and capabilities.

Resources and capabilities are those tangible and intangible strategic assets that enable a company to develop persistent competitive advantages.

Strategic assets can be, for instance, technological (technological stock and innovation capabilities), know-how (inside and outside the company), regulatory (patents, contracts, licenses), positional (physical location, network of contacts, reputation and competitive information), etc.

4.1. Like any successful company, Intel has developed a portfolio of resources and capabilities to obtain competitive advantages.
   4.1.1. Among Intel portfolio of resources and capabilities, which ones are related to sustainability? Please be as specific as possible.
   4.1.2. How have Intel's key resources and capabilities evolved and are evolving because of sustainability?

Lend Lease

1. Corporate Governance

1.1. Have any of the members of the Board of Directors of Lend Lease experience in the field of sustainable development? If so, which members have experience in the sustainable development field and what kind of experience do they have?

1.2. Have the members of the Board of Lend Lease received any kind of training in sustainable development and/or corporate social responsibility? If so, we would appreciate some details.

1.3. Does Lend Lease have any board committee to deal with sustainability issues? (For instance, a Corporate Social Responsibility Committee.)

   1.3.1. If so, please could you tell us:

   — Its main role and responsibilities.
   — Its composition and membership. We would like to know if the committee of non-executive members exclusively or of non-executive and executive members.
   — Is there any formal communication mechanism between this committee and the board? If so, we would appreciate some details on that.

1.4. Does Lend Lease have any external advisory group that advises the board on sustainable development issues?

1.5. How many times a year are sustainable development issues discussed at board meetings?

1.6. How far in advance to the meetings do board members receive information on those sustainable development matters?

1.7. Does the board invite experts on sustainable development to board meetings? If so, how often?

1.8. How does the Board of Lend Lease promote within the company its corporate values related to sustainability?

1.9. How does the Board of Lend Lease promote its corporate values related to sustainability externally? (For instance, to other parties in its supply chain.)

1.10. How does the Board of Directors of Lend Lease check the level of awareness of and compliance with corporate values within the company?

1.11. How does the Board of Directors make sure that other parties in its supply chain embrace Lend Lease values related to sustainability?

1.12. Our view of sustainability considers innovation and stakeholder dialogue key attributes of a sustainable enterprise. A company that embraces the concept of sustainable development should be able to know about and address stakeholder concerns, and make sure that sustainability is integrated in R&D and innovation processes. The next four questions are related to the tasks of the board in relation with these issues.

1.12.1. How does the Board of Lend Lease make sure that sustainable development is a key variable in company R&D&I processes?

1.12.2. How does the Board of Lend Lease make sure that sustainable development is a key variable in the strategy formulation process?

1.12.3. To what extent and how do board members of Lend Lease participate in dialogue with stakeholders?

1.12.4. To what extent and how do board members promote dialogue with stakeholders within Lend Lease?

2. Integration of sustainable development in corporate strategy

2.1. How does Lend Lease integrate sustainable development in the strategy formulation process?

2.2. Has Lend Lease implemented a management tool similar to the balanced scorecard proposed by Kaplan and Norton?

2.2.1. If so, to what extent has it been adapted to integrate sustainability topics? In what way?

2.2.2. Could we get a copy of the Lend Lease balanced scorecard to see how sustainable development is embedded in it?

3. Dialogue with stakeholders

3.1. How does Lend Lease identify the key local, national and international stakeholders with whom to establish dialogue activities?

3.2. Lend Lease has a clear commitment to establish an open dialogue with its stakeholders. In this sense,

3.2.1. What are Lend Lease's specific mechanisms or channels to promote and establish dialogue with stakeholders?

3.3. To what extent and how do the results of the dialogue with stakeholders influence R&D and innovation processes?

3.4. How do the results of the dialogue with stakeholders influence the strategy formulation process?

4. Resources and capabilities related to sustainability

First, in order to share with you our view of this concept, we will offer a definition of resources and capabilities.

Resources and capabilities are those tangible and intangible strategic assets that enable a company to develop persistent competitive advantages.

Strategic assets can be, for instance, technological (technological stock and innovation capabilities), know-how (inside and outside of the company), regulatory (patents, contracts, licences), positional (physical location, network of contacts, reputation and competitive information), etc.

4.1. Like any successful company, Lend Lease has developed a portfolio of resources and capabilities to obtain competitive advantages.

4.1.1. Among Lend Lease portfolio of resources and capabilities, which ones are related to sustainability? Please be as specific as possible.

4.1.2. How have Lend Lease key resources and capabilities evolved and are evolving because of sustainability?

5. Integration of sustainable development in new products and services development processes

5.1. Lend Lease has integrated the principles of sustainable development through the environmental sustainable development (ESD) process. Lend Lease states: "Our objective is to ensure a balance between economics, environment and social goods to provide greater benefits to all. (...) ESD process is predicated on total stakeholder involvement. This ensures that we capture innovation, manage costs, and deliver ongoing benefits for all."

5.1.1. What responsibilities is the company establishing to introduce this process?

5.1.2. What mechanisms does the company use to involve the stakeholders in this process?

5.1.3. Does the company measure the impact of the implementation of this process over the company's performance (reputation, economic results...)?

5.1.4. How does this process affect the company's innovation capacity?

5.2. Has Lend Lease launched any financial service including the principles of sustainable development? (For instance, socially responsible investment funds).

6. Social issues management

6.1. Does Lend Lease have any specific policy to deal with social and natural (i.e. labor rights, child labor, biodiversity, etc.) issues? If so, we would appreciate some details.

Marks & Spencer

1. Corporate Governance

1.1. Have any of the members of the Board of Directors of Marks & Spencer experience in the field of sustainable development? If so, which members have experience in the sustainable development field and what kind of experience do they have?

1.2. Is there any formal communication mechanism between the Corporate Social Responsibility Committee and the Board of Directors? If so, we would appreciate some details.

1.3. Does Marks & Spencer have any external advisory group that advises the board on sustainable development issues?

1.4. How many times a year are sustainable development issues discussed at board meetings?

1.5. How far in advance of the meetings do board members receive information on those sustainable development matters?

1.6. How often does the board invite experts on sustainable development to board meetings?

1.7. To what extent and how do board members of Marks & Spencer participate in the dialogue with stakeholders?

2. Integration of sustainable development in corporate strategy

2.1. Marks & Spencer has two bodies that support the Corporate Social Responsibility Committee. These are the CSR Forum and the CSR Team.

  2.1.1. What are the main roles and responsibilities of CSR Forum and CSR Team?

2.2. Has Marks & Spencer implemented a management tool similar to the balanced scorecard proposed by Kaplan and Norton? If so,

  2.2.1. To what extent has it been adapted to integrate sustainability topics? In what way?

  2.2.2. Could we get a copy of the Marks & Spencer balanced scorecard to see how sustainable development is embedded in it?

3. Dialogue with stakeholders

Marks & Spencer has mapped all its stakeholders to understand exactly what they expect from the company and to establish dialogue and communication mechanisms with them. We are interested in knowing the influence of the insights from dialogue with stakeholders in R&D and innovation processes and strategy formulation process. The next two questions are related to these topics:

3.1. To what extent and how do the results of the dialogue with stakeholders influence R&D and innovation processes?

3.2. To what extent and how do the results of the dialogue with stakeholders influence the strategy formulation process?

4. Resources and capabilities related to sustainability

First, in order to share with you our view of this concept, we will offer a definition of resources and capabilities.

Resources and capabilities are those tangible and intangible strategic assets that enable a company to develop persistent competitive advantages.

Strategic assets can be, for instance, technological (technological stock and innovation capabilities), know-how (inside and outside of the company), regulatory (patents, contracts, licences), positional (physical location, network of contacts, reputation and competitive information), etc.

4.1. Like any successful company, Marks & Spencer has developed a portfolio of resources and capabilities to obtain competitive advantages.
  4.1.1. Among Marks & Spencer's portfolio of resources and capabilities, which ones are related to sustainability? Please be as specific as possible.
  4.1.2. How have Marks & Spencer's key resources and capabilities evolved and are evolving because of sustainability?

Novozymes

1. Corporate Governance

1.1. Have any of the members of the Board of Directors of Novozymes experience in the field of sustainable development? If so, which members have experience in the sustainable development field and what kind of experience do they have?
1.2. Have the members of the Board of Novozymes received any kind of training in sustainable development and/or corporate social responsibility? If so, we would appreciate some details.
1.3. Does Novozymes have any board committee to deal with sustainability issues? (For instance, a Corporate Social Responsibility Committee.) If so, please could you tell us:
  1.3.1. Its main role and responsibilities.
  1.3.2. Its composition and membership. We would like to know if the committee is made up of non-executive members exclusively or non-executive and executive members.
  1.3.3. Is there any formal communication mechanism between this committee and the board? If so, we would appreciate if you could give some details.
1.4. Novozymes has established two committees, environmental & bio-ethic committee and social responsibility committee, that advise the board and executive management and help to ensure that the company's growth strategy is aligned with the principles of sustainable development.

- 1.4.1. Are these committees acting as an external advisory group or are they made up of company executives and managers?
- 1.4.2. Is there any formal communication mechanism between those committees and the board? If so, we would appreciate it if you could give us some details.

1.5. Does the board invite experts on sustainable development to board meetings? If so, how often?

2. Integration of sustainable development in corporate strategy

From Novozymes' last report we know that Executive Management uses the Balanced Scorecard—also called the Novozymes Strategy Map—to monitor how the company is performing financially and commercially. In 2003 this tool will be extended to include targets and indicators based directly on Novozymes' strategies for social responsibility and environment & bioethics. We would like to have a deeper knowledge about the Novozymes Strategy Map. To this respect,

2.1. Please, could you explain which targets and indicators have been included in Novozymes' Strategy Map to integrate strategies for social responsibility and environment and bioethics?

2.2. Could we get a copy of the Novozymes balanced scorecard to see how sustainable development is embedded in it?

3. Dialogue with stakeholders

3.1. Stakeholder Relations is a strategic function placed in the holding company Novo A/S. However, Novozymes wanted to keep this strategic function in its core business. For this reason, in Novozymes this unit is established under the responsibility of Vice President, Anne-Marie Skov, who will be responsible for driving the work for sustainable development.

- 3.1.1. What are the main tasks and responsibilities of Stakeholder Relations unit?

3.2. How does Novozymes identify the key local, national and international stakeholders with whom to establish dialogue activities?

3.3. To what extent and how do the results of the dialogue with stakeholders influence R&D and innovation processes?
3.4. To what extent and how do the results of the dialogue with stakeholders influence the strategy formulation process?

4. Resources and capabilities related to sustainability

First, in order to share with you our view of this concept, we will offer a definition of resources and capabilities.

Resources and capabilities are those tangible and intangible strategic assets that enable a company to develop persistent competitive advantages.

Strategic assets can be, for instance, technological (technological stock and innovation capabilities), know-how (inside and outside of the company), regulatory (patents, contracts, licences), positional (physical location, network of contacts, reputation and competitive information), etc.

4.1. Like any successful company, Novozymes has developed a portfolio of resources and capabilities to obtain competitive advantages.
4.1.1. Among Novozymes portfolio of resources and capabilities, which ones are related to sustainability?
4.1.2. How have Novozymes' key resources and capabilities evolved and are evolving because of sustainability?

5. Integration of sustainable development in new product and services development processes.

5.1. Novozymes states that "We are continuously working to document that our environmental and bioethical policy is reflected in our research and development activities."
5.1.1. Could you describe the content of these guidelines established for research and development activities?

Pearson

1. Corporate Governance

1.1. Have any of the members of the Board of Directors of Pearson experience in the field of sustainable development? If so, which members have experience in the sustainable development field and what kind of experience do they have?

1.2. Have the members of the Board of Pearson received any kind of training in sustainable development and/or corporate social responsibility? If so, we would appreciate some details.

1.3. Does Pearson have any board committee to deal with sustainability issues? (For instance, a Corporate Social Responsibility Committee.) If so, please could you tell us:

  1.3.1. Its main role and responsibilities

  1.3.2. Its composition and membership. We would like to know if the committee is made up of non-executive members exclusively or non-executive and executive members.

  1.3.3. Is there any formal communication mechanism between this committee and the board? If so, we would appreciate some details.

1.4. Does Pearson have any external advisory group that advises the board on sustainable development issues?

1.5. A report from the group control department on social, ethical and environmental risk management is now tabled at each meeting of the audit committee and of the board.

  1.5.1. How far in advance of the meetings do board members receive information on those sustainable development matters?

1.6. Does the board invite experts on sustainable development to board meetings? If so, how often?

1.7. How does the Board of Pearson promote within the company its corporate values related to sustainability?

1.8. Our view of sustainability considers innovation and stakeholder dialogue key attributes of a sustainable enterprise. A company that embraces the concept of sustainable development should be able to know about and address stakeholder concerns and make sure that sustainability is integrated in the R&D and innovation processes. The next three questions are related to the tasks of the board in relation with these issues.

1.8.1. How does the Board of Pearson make sure that sustainable development is a key variable in the company R&D and innovation processes?
1.8.2. To what extent and how do board members of Pearson participate in the dialogue with stakeholders?
1.8.3. To what extent and how do board members promote the dialogue with stakeholders within Pearson?

2. Integration of sustainable development in corporate strategy

2.1. How does Pearson integrate sustainable development in the strategy formulation process?
2.2. Has Pearson implemented a management tool similar to the balanced scorecard proposed by Kaplan and Norton? If so,
2.2.1. To what extent has it been adapted to integrate sustainability topics? In what way?
2.2.2. Could we get a copy of the Pearson balanced scorecard to see how sustainable development is embedded in it?

3. Dialogue with stakeholders

3.1. How does Pearson identify the key local, national and international stakeholders with whom to establish dialogue activities?
3.2. To what extent and how do the results of the dialogue with stakeholders influence R&D and innovation processes?
3.3. To what extent and how do the results of the dialogue with stakeholders (for instance, the employees' forum) influence the strategy formulation process?

4. Resources and capabilities related to sustainability

First, in order to share with you our view of this concept, we will offer a definition of resources and capabilities.

Resources and capabilities are those tangible and intangible strategic assets that enable a company to develop persistent competitive advantages.

Strategic assets can be, for instance, technological (technological stock and innovation capabilities), know-how (inside and outside of the company), regulatory (patents, contracts, licences), positional (physical location, network of contacts, reputation and competitive information), etc.

4.1. Like any successful company, Pearson has developed a portfolio of resources and capabilities to obtain competitive advantages.
   4.1.2. Among Pearson's portfolio of resources and capabilities, which ones are related to sustainability?
   4.1.3. How have Pearson's key resources and capabilities evolved and are evolving because of sustainability?

Procter & Gamble (P&G)

1. Corporate governance

1.1. Have any of the members of the Board of Directors of Procter & Gamble experience in the field of sustainable development (SD)? If so, which members have experience in the sustainable development field and what kind of experience do they have?
1.2. Have the members of the Board of Procter & Gamble received any kind of training in sustainable development and/or corporate social responsibility? If so, we would appreciate some details.
1.3. P&G has established a board committee, the Public Policy Committee that has responsibilities for social, environmental and safety areas. We would like to know the type of communication that exists between the Public Policy Committee and the Board of Directors. In this sense,
   1.3.1. Is there any formal communication mechanism between the Public Policy Committee and the board? If so, we would appreciate some details.
1.4. Does Procter & Gamble have any external advisory group that advises the board on sustainable development issues?
1.5. How many times a year are sustainable development issues discussed at board meetings?
1.6. How far in advance of the meetings do board members receive information on those sustainable development matters?

1.7. Does the board invite experts on sustainable development to board meetings? If so, how often?

1.8. How does the board of directors of Procter & Gamble check the level of awareness of and compliance with corporate values related to sustainability within the company?

1.9. How does the Board of Directors make sure that other parties in its supply chain embrace Procter & Gamble values related to sustainability?

1.10. Our view of sustainability considers innovation and stakeholder dialogue key attributes of a sustainable enterprise. A company that embraces the concept of sustainable development should be able to know about and address stakeholder concerns, and make sure that sustainability is integrated in R&D and innovation processes. The next four questions are related to the tasks of the board in relation with these issues.

1.10.1. How does the Board of Procter & Gamble make sure that sustainable development is a key variable in the company R&D and innovation processes?

1.10.2. How does the Board of Procter & Gamble make sure that sustainable development is a key variable in the strategy formulation process?

1.10.3. To what extent and how do board members of Procter & Gamble participate in the dialogue with stakeholders?

1.10.4. To what extent and how do board members promote dialogue with stakeholders within Procter & Gamble?

2. Integration of sustainable development in corporate strategy

2.1. In 1999, P&G formed the Corporate Sustainable Development department which, among other functions, defines P&G's overall sustainability policy.

2.1.1. Is the Corporate Sustainable Development department participating in defining P&G group-wide strategy? If so, we would appreciate some details.

2.2. Has Procter & Gamble implemented a management tool similar to the balanced scorecard proposed by Kaplan and Norton? If so,
   2.2.1. To what extent has it been adapted to integrate sustainability topics? In what way?
   2.2.2. Could we get a copy of the Procter & Gamble balanced scorecard to see how sustainable development is embedded in it?

3. Dialogue with stakeholders

3.1. How does Procter & Gamble identify the key local, national and international stakeholders with whom to establish dialogue activities?
3.2. P&G is participating in several workshops with scientists, NGOs, regulators, etc. Also, each P&G production facility has site-specific activities to build constructive relationships with local authorities, local industry associations, neighbours, local action groups, opinion leaders and media. In this sense, we would like to know the following:
   3.2.1. To what extent and how do the results of the dialogue with stakeholders influence R&D and innovation processes?
   3.2.2. To what extent and how do the results of the dialogue with stakeholders influence the strategy formulation process?

4. Resources and capabilities related to sustainability

First, in order to share with you our view of this concept, we will offer a definition of resources and capabilities. *"Resources and capabilities are those tangible and intangible strategic assets that enable a company to develop persistent competitive advantages."*

Strategic assets can be, for instance, technological (technological stock and innovation capabilities), know-how (inside and outside of the company), regulatory (patents, contracts, licences), positional (physical location, network of contacts, reputation and competitive information), etc.

4.1. Like any successful company, Procter & Gamble has developed a portfolio of resources and capabilities to obtain competitive advantages.
   4.1.1. Among Procter & Gamble's portfolio of resources and capabilities, which ones are related to sustainability?
   4.1.2. How have Procter & Gamble's key resources and capabilities evolved and are evolving because of sustainability?

5. Integration of sustainable development in new products development processes

Procter & Gamble makes human health and environmental risk assessment the biggest human and environmental safety in all its ingredients and products. At the same time, P&G uses the Product Sustainability Assessment Tool (PSAT), which starts off with a series of questions that challenge each project team to evaluate whether a new initiative is consistent with sustainable development. We would like to have a deeper knowledge about the PSAT. In this sense,

5.1. What is the content and guidelines of the PSAT? How does it work?
5.2. Could you provide us with a practical example in which PSAT has been used?

Volkswagen

1. Corporate Governance

1.1. Does Volkswagen have any board committee to deal with sustainability issues? (For instance, a Corporate Social Responsibility Committee.)
   1.1.1. If so, could you please tell us:
      — Its main role and responsibilities.
      — Its composition and membership. We would like to know if the committee is made up of non-executive members exclusively or non-executive and executive members.
      — Is there any formal communication mechanism

between this committee and the board? If so, we would appreciate some details on that.

1.2. Does Volkswagen have any external advisory group that advises the board on sustainable development issues?

1.3. How many times a year are sustainable development issues discussed at board meetings?

1.4. How far in advance of the meetings do board members receive information on those sustainable development matters?

1.5. Does the board invite experts on sustainable development to board meetings? If so, how often?

1.6. Our view of sustainability considers innovation and stakeholder dialogue key attributes of a sustainable enterprise. A company that embraces the concept of sustainable development should be able to know about and address stakeholder concerns, and make sure that sustainability is integrated in R&D and innovation processes. The next four questions are related to the tasks of the board in relation with these issues.

  1.6.1. How does the Board of Volkswagen make sure that sustainable development is a key variable in the company R&D+I processes?

  1.6.2. How does the Board of Volkswagen make sure that sustainable development is a key variable in the strategy formulation process?

  1.6.3. To what extent and how do board members of Volkswagen participate in the dialogue with stakeholders?

  1.6.4. To what extent and how do board members promote dialogue with stakeholders within Volkswagen?

2. Integration of sustainable development in corporate strategy

2.1. Volkswagen's Research Department is experimenting with a sustainability balanced scorecard in co-operation with academia.

  2.1.1. Could we get a copy of this pilot balanced scorecard to see how sustainable development is embedded in it?

3. Dialogue with stakeholders

3.1. To what extent and how do the results of the dialogue with stakeholders influence R&D and innovation processes?

3.2. How do the results of the dialogue with stakeholders influence the strategy formulation process?

Severn Trent

1. Corporate Governance

1.1. Have the members of the Board of Severn Trent received any kind of training in sustainable development and/or corporate social responsibility? If so, we would appreciate some details.

1.2. How many times a year are sustainable development issues discussed at board meetings?

1.3. How far in advance of the meetings do the board members receive information on those sustainable development matters?

1.4. Does the board invite experts on sustainable development to board meetings? If so, how often?

1.5. From your web site we have learned that the *Severn Trent Environmental Advisory Panel* is developing a vision of corporate sustainability for the company.

   1.5.1. Could we have updated information about the development of the corporate sustainability vision?

1.6. How the does the board of directors make sure that other parties in its supply chain embrace Severn Trent's values related to sustainability?

1.7. How does the Board of Severn Trent's make sure that sustainable development is a key variable in the company R&D and innovation processes?

1.8. To what extent and how do board members of Severn Trent participate in the dialogue with stakeholders?

2. Intregration of sustainable development in corporate strategy

2.1. Has Severn Trent implemented a management tool similar to the balanced scorecard proposed by Kaplan and Norton? If so,

2.1.1. To what extent has it been adapted to integrate sustainability topics? In what way?
2.1.2. Could we get a copy of the Severn Trent balanced scorecard to see how sustainable development is embedded in it?

3. Dialogue with stakeholders

3.1 To what extent and how do the results of the dialogue with stakeholders influence R&D and innovation processes?
3.2 To what extent and how do the results of the dialogue with stakeholders influence the strategy formulation process?

4. Resources and capabilities related to sustainability

First, in order to share with you our view of this concept, we will offer a definition of resources and capabilities.

Resources and capabilities are those tangible and intangible strategic assets that enable a company to develop persistent competitive advantages.

Strategic assets can be, for instance, technological (technological stock and innovation capabilities), know-how (inside and outside of the company), regulatory (patents, contracts, licences), positional (physical location, network of contacts, reputation and competitive information), etc.

4.1. Like any successful company, Severn Trent has developed a portfolio of resources and capabilities to obtain competitive advantages.
4.2. Among Severn Trent's portfolio of resources and capabilities, which ones are related to sustainability?
4.3. How have Severn Trent's key resources and capabilities evolved and are evolving because of sustainability?

5. Social issues management

5.1. Does Severn Trent have any specific policy to deal with social and natural (i.e. labor rights, child labor, biodiversity, etc.) issues? If so, we would appreciate some details.

Unilever

1. Corporate Governance

1.1. Have any of the members of the Board of Directors of Unilever experience in the field of sustainable development (SD)? If so, which members have experience in the sustainable development field and what kind of experience do they have?

1.2. Have the members of the Board of Unilever received any kind of training in sustainable development and/or corporate social responsibility? If so, we would appreciate some details.

1.3. Unilever has established a board committee, the External Affairs and Corporate Relations Committee, to get advice on external matters of relevance to the business—including issues of corporate social responsibility and the business code of conduct—and to review the corporate relations strategy.

1.3.1. Is there any formal communication mechanism between the External Affairs and Corporate Relations Committee and the board? If so, we would appreciate some details.

1.4. Does Unilever have any external advisory group that advises the board on sustainable development issues?
(Comment: we know that the Unilever Environment Group has four external advisors who contribute independent views on Unilever's plans and advice on emerging and long-term environmental issues, but we are not sure if this organ advises to the board.)

1.5. How many times a year are sustainable development issues discussed at board meetings?

1.6. How far in advance of the meetings do board members receive information on those sustainable development matters?

1.7. Does the board invite experts on sustainable development to board meetings? If so, how often?

1.8. Our view of sustainability considers innovation and stakeholder dialogue key attributes of a sustainable enterprise. A company that embraces the concept of sustainable development should be able to know about and address stakeholder concerns, and make sure that sustainability is integrated in R&D and innovation processes. The next two questions are related to the tasks of the Board in relation with these issues.

1.8.1. How does the Board of Unilever make sure that sustainable development is a key variable in the company R&D and innovation processes?

1.8.2. To what extent and how do board members of Unilever participate in the dialogue with stakeholders?

2. Integration of sustainable development in corporate strategy

We have found clear and complete information about this topic on Unilever's web site. For this reason, we just have a couple of question on this issue.

2.1. Has Unilever implemented a management tool similar to the balanced scorecard proposed by Kaplan and Norton? If so,

2.1.1. To what extent has it been adapted to integrate sustainability topics? In what way?

2.1.2. Could we get a copy of the Unilever balanced scorecard to see how sustainable development is embedded in it?

3. Dialogue with stakeholders

3.1. In 1998, Unilever began the process of developing a methodology for measuring and managing Unilever's performance on corporate social responsibility. In this context, Unilever identified seven particular stakeholder groups: shareholders, employees, consumers, suppliers and trade customers as business partners; government, the local communities and societies where we do business; academics and others with whom we conduct research.

3.1.1. How does Unilever identify these seven key stakeholders with whom to establish dialogue activities?

3.2. To what extent and how do the results of the dialogue with stakeholders influence R&D and innovation processes?

4. Resources and capabilities related to sustainability

First, in order to share with you our view of this concept, we will offer a definition of resources and capabilities.

Resources and capabilities are those tangible and intangible strategic assets that enable a company to develop persistent competitive advantages.

Strategic assets can be, for instance, technological (technological stock and innovation capabilities), know-how (inside and outside of the company), regulatory (patents, contracts, licences), positional (physical location, network of contacts, reputation and competitive information), etc.

4.1. Like any successful company, Unilever has developed a portfolio of resources and capabilities to obtain competitive advantages.
   4.1.1. Among Unilever's portfolio of resources and capabilities, which ones are related to sustainability?
   4.1.2. How have Unilever's key resources and capabilities evolved and are evolving because of sustainability?

Westpac Banking

1. Corporate governance

1.1. Have any of the members of the Board of Directors of Westpac Banking experience in the field of sustainable development? If so, which members have experience in sustainable development and what kind of experience do they have?
1.2. Have the members of the Board of Westpac Banking received any kind of training in sustainable development and/or corporate social responsibility? If so, we would appreciate some details.
1.3. Does Westpac Banking have any external advisory group that advises the board on sustainable development issues?
1.4. How many times a year are sustainable development issues discussed at board meetings?
1.5. How far in advance of the meetings do board members receive information on those sustainable development matters?

1.6. Does the board invite experts on sustainable development to board meetings? If so, how often?
1.7. How does the board of directors make sure that other parties in its supply chain embrace Westpac Banking values related to sustainability?
1.8. To what extent and how do board members of Westpac Banking participate in the dialogue with stakeholders?
1.9. To what extent and how do board members promote dialogue with stakeholders within Westpac Banking?

2. Integration of sustainable development in corporate strategy

2.1. Has Westpac Banking implemented a management tool similar to the balanced scorecard proposed by Kaplan and Norton? If so,
    2.1.1. To what extent has it been adapted to integrate sustainability topics? In what way?
    2.1.2. Could we get a copy of the Westpac Banking balanced scorecard to see how sustainable development is embedded in it?
2.2. Westpac states that "Executives' remuneration philosophy is to link performance rewards to achievements against a balanced scorecard. This means individual executive performance objectives include measures linked not only to financial objectives but also to delivering for staff, customers and the broader community."
    2.2.1. What are the non-financial indicators used to link performance reward to executives?
2.3. In a similar way, employment performance processes and practices are based on merit and employee appraisal systems are developed around a balanced scorecard approach.
    2.3.1. Are any of these measures related to CSR dimensions? If so, we would appreciate some details.

3. Dialogue with stakeholders

3.1. How does Westpac Banking identify the key local, national and international stakeholders with whom to establish dialogue activities?

3.2. Westpac uses stakeholders advisory panels as a way to ensure that their views are not lost in initiatives development. We would like to have a deeper knowledge about the way it works with those stakeholders' panels.
   3.2.1. Could you please provide us with some information about the dynamics and processes of stakeholder advisory panels?
   3.2.2. Is the information and knowledge obtained from this dialogue mechanism transmitted up in the organization? If so, we would appreciate some details on that.
3.3. To what extent and how do the results of the dialogue with stakeholders influence R&D and innovation processes?
3.4. To what extent and how do the results of the dialogue with stakeholders influence the strategy formulation process?

4. Resources and capabilities related to sustainability

Resources and capabilities are those tangible and intangible strategic assets that enable a company to develop persistent competitive advantages.

Strategic assets can be, for instance, technological (technological stock and innovation capabilities), know-how (inside and outside of the company), regulatory (patents, contracts, licences), positional (physical location, network of contacts, reputation and competitive information), etc.

4.1. Like any successful company, Westpac Banking has developed a portfolio of resources and capabilities to obtain competitive advantages.
   4.1.1. Among Westpac Banking's portfolio of resources and capabilities, which ones are related to sustainability?
   4.1.2. How have Westpac Banking's key resources and capabilities have evolved and are evolving because of sustainability?

Companies that responded partially to our questionnaire

The following companies have responded partially to our questionnaire, so we have collected almost all the information we needed.

However, we still lack some information. Next, I detail in each case the remaining information we would like to complete.

BT

- We would like to have access to all the information available about the integration of sustainability dimensions in the company's balanced scorecard.

DuPont

- We would like to have access to all the information available about the integration of sustainability dimensions in the company's balanced scorecard.

Shell

- We would like to have access to all the information available about the integration of sustainability dimensions in the company's balanced scorecards.
- Questions:
  - — Among Shell's portfolio of resources and capabilities, which ones are related to sustainability?
  - — How have Shell's key resources and capabilities evolved and are evolving because of sustainability?

Teijin

- We would like to have access to all the information available about the integration of sustainability dimensions in the company's balanced scorecards.
- Questions:
  - — Among Teijin portfolio of resources and capabilities, which ones are related to sustainability?
  - — How have Teijin's key resources and capabilities evolved and are evolving because of sustainability?

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About the authors

Joan Enric Ricart holds a Ph.D. in Industrial Engineering from the Polytechnic University of Catalonia, and an M.A. and Ph.D. in Managerial Economics from Northwestern University (USA). He also holds a doctorate in Economics from the Autonomous University of Barcelona, and has worked as a research fellow at Harvard Business School. Currently Professor of General Management at IESE Business School, University of Navarra, he is also Associate Dean for Research and Chairman of the Doctoral Program of the same school's General Management Department. His areas of research interest are strategic management, the economics of organizations, corporate governance and organizational design.

Miguel Ángel Rodríguez holds a Ph.D. in Business Administration from the Polytechnic University of Catalonia and an M.B.A. from Santa Clara University, as well as a B.A. in Classical Languages from the Autonomous University of Barcelona and a B.A. in Spanish from the University of Zaragoza. He is currently a lecturer, research associate and Academic Director at the Center for Business in Society of the IESE Business School, University of Navarra, and also teaches at the Polytechnic University of Catalonia and Pompeu Fabra University. His areas of research interest include business and sustainable development, and corporate responsibility from the perspective of strategic management and corporate governance.

Pablo Sánchez is a research assistant at IESE Business School. He holds a B.A. in Economics from the University of Barcelona and is currently a Ph.D. candidate in Management at the Polytechnic University of Catalonia. His research interests center on strategy in low-income markets, corporate governance and sustainability.

Lara Ventoso holds a B.A. in Business Administration from the University of Wales and an M.A. in Environment Studies from the Escuela de Organización Industrial in Madrid. She worked for the Madrid 2012 Olympic Candidature in the Environment Department.