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ENVIRONMENTAL STRATEGY:
A MODEL FOR STRATEGIC POSITIONING AND
PERFORMANCE IMPROVEMENT

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ENVIRONMENTAL STRATEGY: A MODEL FOR STRATEGIC POSITIONING AND PERFORMANCE IMPROVEMENT

Summary

In recent years, research into environmental strategy has produced some invaluable work that has brought a rapid advance in knowledge in what is a relatively new field. Models have been created to conceptualize the different strategies that companies adopt in dealing with environmental issues.

In this paper, we discuss a new framework for the positioning of companies through environmental strategy. This framework is the result of a research project undertaken by IESE in collaboration with a number of companies. One of the conclusions to be drawn from the project is that the most important variables when analyzing companies' attitudes and actions in relation to the environment are: "internalization of the environmental impact of the company's activities" and "perception of synergies between environmental strategy and business strategy". The main contribution of this study, however, is a model for "integral environmental management". This model, used as a conceptual framework for self-assessment, becomes a guide and a tool that enables companies to progress towards what we might call environmental excellence, i.e. a stage at which the company achieves maximum compatibility between improving its environmental impact and taking advantage of environment-related business opportunities.

ENVIRONMENTAL STRATEGY: A MODEL FOR STRATEGIC POSITIONING AND PERFORMANCE IMPROVEMENT (1)

I. Introduction

This paper starts by briefly reviewing the main frameworks of environmental strategy. It then briefly summarizes the research project mentioned above. After this, it presents a “model for integral environmental management”. The core of the paper consists of a presentation of the new framework for strategic positioning, an analysis of the different environmental attitudes proposed, and a description of the strategic environmental actions actually implemented by companies. Before any conclusions are drawn, an explanation is given of how companies can use the model as a tool to accelerate learning and improve their environmental performance.

II. Models of environmental strategy

In recent years, various attempts have been made to construct models of the different environmental strategies that companies follow. Applying the criteria proposed by Hass (2), these models of environmental strategy can be classified into two large groups, according to their underlying structure: those that situate the different ways of focusing environmental issues along a continuum, in a progression; and the categorical models, i.e. those that classify companies’ environmental strategies on the basis of definitions of certain variables. This section will review these two types of model.

1. Progression along a continuum

Most models of environmental strategy belong to this type. All of them use certain parameters to evaluate companies’ attitudes to environmental issues, and on the basis of the results of this evaluation locate the companies along the continuum that has previously been defined. They differ in the parameters they use and in the number of stages they propose. Table 1 shows the main models, together with the stages each one envisages.

Table 1. Progressive models of environmental strategy

Authors	Stages defined				
Hunt & Auster (1990)	Beginner	«Firefighter»	Responsible citizen	Pragmatist	Proactivist
Müller & Koechlin (1992)	Inactive: ignores		Reactive: responds	Proactive: anticipates	Hyperactive: provokes
Roome (1992)	Non-compliance	Compliance	Compliance plus	Business and environmental excellence	Leadership
Greeno (1993)	Problem-solving		Manage for compliance		Manage for assurance
Newman (1993)	Reactive		Proactive		Innovative

Another study which could be included in this section is that of Hart (1995). Hart, too, defines certain stages of environmental maturity, but unlike the previous authors he does not include parameters for assessing and classifying the companies in these stages. Also, whereas in the other models we see that companies are classified according to their attitude to environmental issues, Hart looks at companies' environmental actions. This reveals another basic difference between Hart's model and the others: the stages it proposes are not mutually exclusive; on the contrary, companies can –and usually do– act in several stages at the same time. Table 2 shows Hart's model:

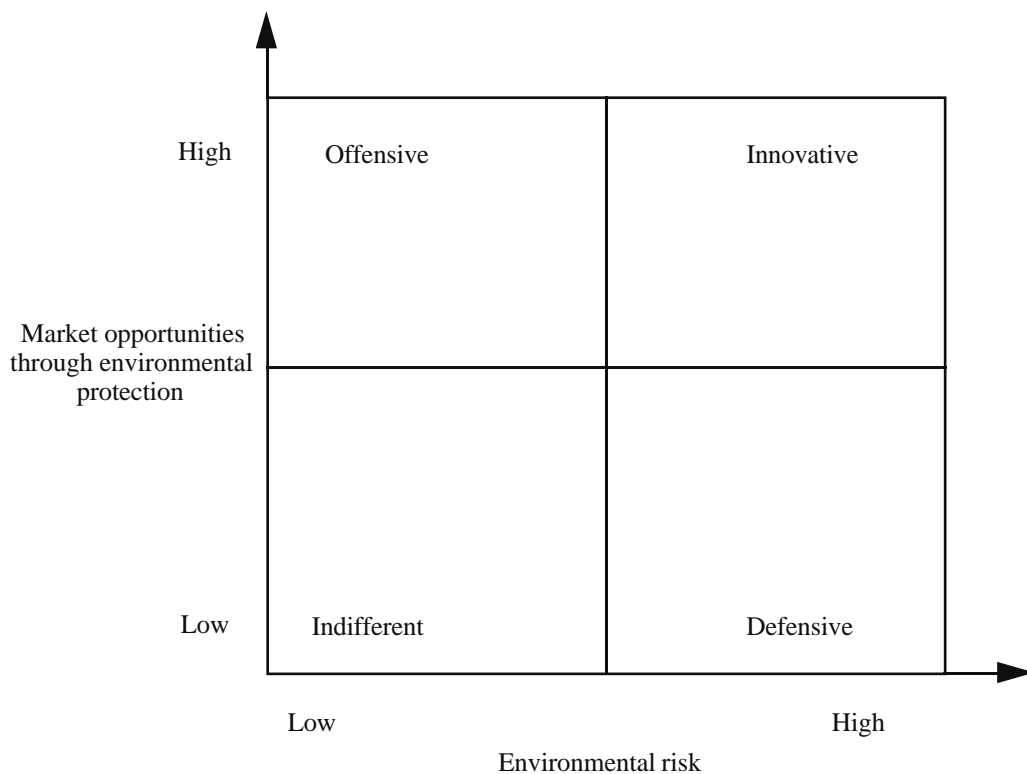
Tabla 2. Hart's model

Hart	Pollution prevention	Product Stewardship	Sustainable development
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2. Categorical models

As we have already said, the categorical models distinguish between four or more different types of environmental strategy by defining certain variables. Unlike the progressive models, the categorical models do not consider –at least not explicitly– the possibility of advancing from one category to another. The chart below presents Steger’s model (1993), which, judging from the way it is quoted in subsequent studies, can be said to be the best known.

Figure 1. Steger's model



To help the reader understand the objectives of the framework for strategic positioning via environmental management and the methodology used to construct it, the next two sections of this paper describe the «Working group on environmental management» research project and the «Integral environmental management model».

III. Working group on environmental management

At the end of 1995, IESE decided to start a research project, called «Working group on environmental management». The purpose of this project was to explore the implications of environmental issues for corporate strategy and action. It was considered essential that a number of companies take part, contributing their experience, knowledge and practical concerns. In order to maximize the group’s value, it was decided that the participating companies should have substantial experience in environmental management and should

represent different sectors of business. At the moment, the following companies are involved: Enher Group, BYSE Group, Henkel Group, Sharp, and Tetra Pak (3), with a minimum of two representatives per company, one of whom is the company's highest-ranking officer in charge of environmental issues.

One of the project's goals was to develop a model of environmental management. Like the most popular quality models, such as the European Foundation for Quality Management's European Quality Model or the Malcolm Baldrige Award, this model of environmental management should provide a framework for self-assessment, helping companies to evaluate their environmental management, and then design and implement an improvement plan. In short, the aim was to provide companies with a tool that would enable them to improve their environmental performance more rapidly (4), the ultimate purpose being to make their activities consistent with the idea of sustainable development.

Another project that the working group felt it should carry out was an environmental strategy definition exercise. This exercise consisted of three parts: external analysis, positioning, and analysis of key competencies. The section on positioning used Steger's and Hart's models as frameworks, with the aim of reflecting on companies' attitudes (Steger) and actions (Hart) in relation to the environment. After this exercise, which was performed and presented to the group by the members of each of the participating companies, the Chief Operating Officers and the environment managers of the BYSE Group, Pulcra (5) and Tetra Pak were interviewed in depth. The interviews lasted an average of two hours, using an open questionnaire divided into five parts:

1. *Introduction.* The purpose of this part was to ascertain the company's attitude to environmental issues and find out which areas of the company were involved in environmental management. All the questions related to both the current situation and the situation forecast for the medium term.
2. *External analysis.* This section of the questionnaire sought to analyze the extent to which each of a number of environmental factors and forces already influenced or might in the future influence the industrial sector the company competed in.
3. *Positioning.* The purpose of this section was to analyze the company's positioning on environmental strategy. As in the previous sections, both the current situation and that forecast for the medium term were considered, using Hart's and Steger's models. As explained above, Hart's model was used to investigate the company's environmental actions and Steger's to reflect on its attitude to environmental issues.
4. *Internal analysis.* This section of the questionnaire sought to ascertain how and to what extent the company made environmental issues an integral part of its strategy and areas of action. Specifically, the following issues were considered:
 - Company's relationship with environmental factors and forces.
 - Strategy formulation.
 - Key capabilities.
 - Policy deployment.
 - Consistency between strategy, on the one hand, and remuneration, promotion and recruitment systems, on the other.

5. *Self-assessment process.* This section analyzed the company's expectations regarding the self-assessment process that was to be implemented in each of the group's member companies, using the integral environmental management model as a framework for reflection.

On the basis of this attempt to use the two frameworks and of the in-depth interviews, the following conclusions were reached:

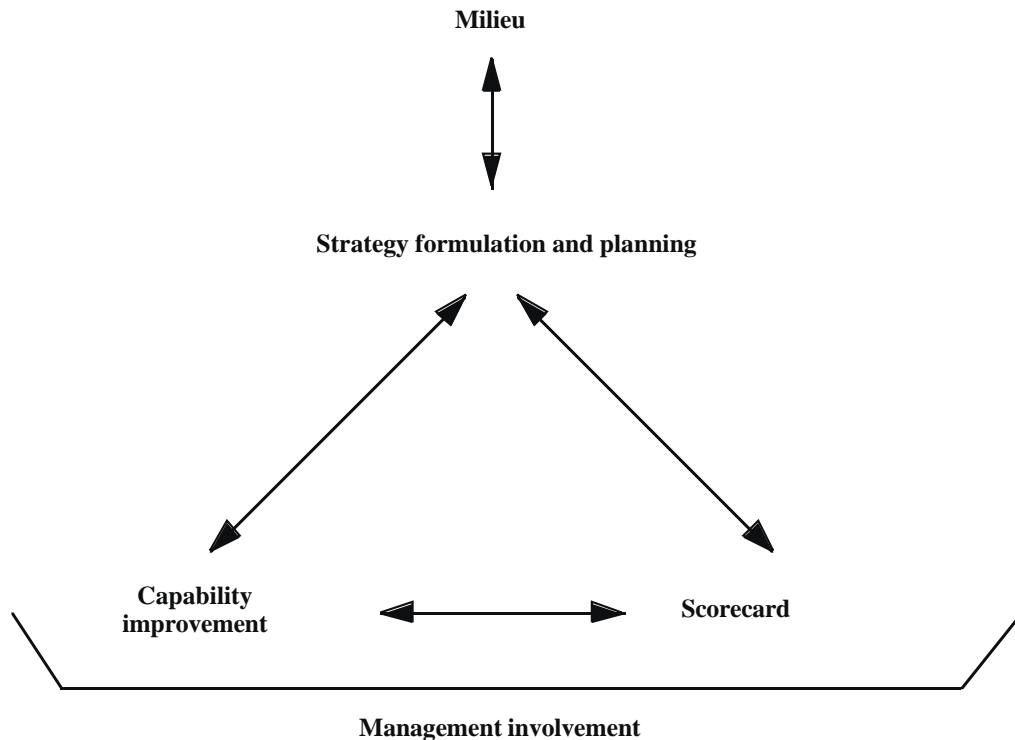
1. Steger's model was too rigid. It was felt that, contrary to what the model itself postulates, companies can influence both of the variables included in the model (environmental risk and market opportunities arising from environmental action). In other words, it was felt that environmental risk depends not only on the activities that a company is engaged in, but also on the extent to which the company has internalized its environmental impact. Likewise, the existence of environmental opportunities depends not only on the industry a company competes in, but also on the company's ability to identify and seize opportunities, which in many cases implies developing or implementing technologies compatible with sustainable development. It was concluded that companies in the same industry, and therefore with similar environmental problems, could end up being classified in different compartments in the model.
2. Neither of these models provided tools that would enable companies to speed up the process of improving their environmental performance (6).

These conclusions, together with the potential seen in the self-assessment process based on the integral environmental management model, led the working group to develop a new framework for the positioning of companies through environmental strategy. As we have already said, before we introduce this framework, we shall first discuss the integral environmental management model.

IV. Integral environmental management model

As can be seen in Figure 1, the model consists of five dimensions: milieu, strategy formulation and planning, capability improvement, management involvement, and scorecard.

Figure 2. Integral environmental management model



As the arrows linking its five dimensions indicate, the model considers that companies must make their strategy formulation and planning dependent on the knowledge and information acquired from their milieu, their key indicators (scorecard), and their operational structure (capability improvement). If they do this, their strategy and their plans will take current internal and external realities into account and will clearly show the direction the organization should be heading. In other words, they will indicate where the company aims to be at some point in the future, and how to get there.

Also, it is not enough for companies to include information on their milieu in their strategy formulation processes; one of their strategic goals must also be to influence the changes taking place in their milieu, so as to be able to improve both their competitive position and the physical milieu they operate in at the same time. Not only must they consider their current capabilities, they must also plan how to develop the capabilities they are going to need in the future if they want the desired changes in the competitive and physical milieu to actually take place. And they must take into account not only the results provided by their indicators, but also the indicators themselves, since these indicators depend on the company's strategy at any given moment and must therefore change along with the strategy and the milieu.

The scorecard indicators must enable companies to monitor both the exercise of their existing capabilities and the progress they have made in acquiring the capabilities they are going to need for the future outlined in their strategy. Finally, the model includes the dimension of management involvement, as this was considered an absolutely essential aspect of any learning and improvement process.

Each dimension of the model is subdivided into two or more subdimensions, which are presented in the form of questions (7). The idea is that a company should be able to use the model as a reference framework for self-assessment by answering the questions, reflecting on its own actions in each subdimension, and drawing up an inventory of these actions.

In the sixth section of this paper, we shall discuss in somewhat greater depth how the self-assessment process can foster improvements in an organization's environmental and business performance. Before that, in the following section, we shall introduce our proposed framework for environmental strategy.

V. Framework for strategic positioning and performance improvement through environmental management

As has already been pointed out, the framework presented here is the fruit of the investigations of the working group on environmental management, the interviews conducted with the COOs and senior environment officers of three of the collaborating companies, and the desire to offer companies a tool that will help them not only to analyze their situation but also to improve their environmental performance.

Consequently, the variables that have been considered most important when analyzing the way companies focus environmental issues –i.e. their attitude to environmental issues– and hence when classifying their strategic frameworks for action are:

1. Internalization of the environmental impact of the company's activities.
2. Perception of synergies between environmental strategy and business strategy.

1. Internalization of the environmental impact of the company's activities

We define «internalization of the environmental impact of the company's activities» as the organization's awareness that its activities (both those related to its processes and those related to its products and services) and its relationships (of whatever type) with its milieu have an impact (by action or by omission) on the environment.

Organizations with a *high degree of internalization* have the following features (insofar as they are relevant to the company's business):

- They assess the environmental risks of their activities.
- They know the main global, transnational and local environmental problems.
- They try to reduce consumption of all types of natural resources, both in their production processes and in their products and services.
- Whenever possible, they try to replace non-renewable resources with renewable resources managed in a sustainable manner.

- They try to eliminate or, if this is not possible, reduce the use of toxic and hazardous materials.
- They try to eliminate or reduce all types of emissions –into the atmosphere, into water or onto the land– that are harmful to the environment.
- They take into account and try to reduce the environmental impact of their products and services throughout their life cycle, i.e. «from cradle to grave».
- They consider any opportunities they have of carrying out actions that are beneficial to the environment. These opportunities may arise from the nature of the industry they compete in or from their influence on this industry.
- They maintain an unconditionally open attitude when communicating their environment-related policies, activities and results.
- They maintain an open attitude when listening to their stakeholders (8), and learn from them.
- They are open to establishing cooperative relationships with their stakeholders.
- They try –by honest means– to build themselves a reputation for environmental commitment.

2. Perception of synergies between environmental strategy and business strategy

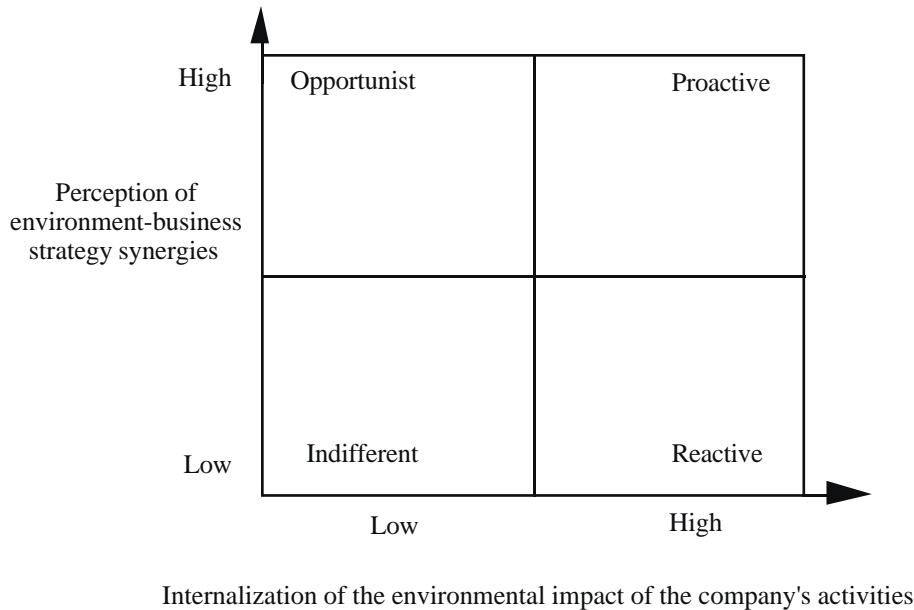
We define «perception of synergies between environmental strategy and business strategy» as the organization's ability to see the interrelationships between environmental issues and their competitive activities, in terms of costs, sales and market management.

Organizations with a *high perception* have the following features in common (insofar as they are relevant to their business):

- They are aware that any type of change taking place in their milieu –including, of course, changes to do with the environment– creates a challenge. And that if this challenge is well managed, it may provide significant opportunities.
- They try to understand the main environmental problems, from the viewpoint of their customers and from that of their stakeholders in general.
- They use environmental improvement as a differentiation strategy, even when their industry's products or services are usually considered commodities.
- They are aware that environmental values, although they may not always be expressed with the same force, are deeply held by citizens. Therefore, without neglecting the importance of other attributes such as price or quality, they include environmental considerations in their product and service design processes.
- They believe that emissions and waste are symptoms of inefficiency in the use of resources. Consequently, they believe that reducing them may generate cost savings.

On the basis of these two variables, we can define a two-by-two matrix (see Figure 3 below), in which a company's environmental attitude can be characterized as "indifferent", "opportunist", "reactive" or "proactive".

Figure 3. Environmental attitude



In the following pages we shall analyze some of the organizational features associated with each of these four attitudes. In the course of this analysis, we shall rate the different types of organization on the following issues, which, as can be seen, are the same as the five dimensions of the integral environmental management model:

- Relationship with the milieu
- Strategy formulation and planning
- Capability improvement
- Scorecard
- Management involvement

To make the differences between the four attitudes easier to appreciate, we shall analyze some fairly extreme positionings, even though they rarely occur in practice. In other words, indifferent organizations are defined as those where both internalization and perception are at a very low level; opportunist organizations have a high level of perception and a low level of internalization; reactive organizations have a high level of internalization and a low level of perception; and proactive organizations have a high level of both internalization and perception.

Indifferent organizations

– *Relationship with the milieu.* In indifferent organizations, consideration for the physical milieu and any other type of relationship with possible stakeholders is virtually non-existent. Most likely, this is possible because their activities have no significant impact on the environment, or because the authorities do not exert any significant coercive pressure. In some cases, the small size of the organization may favour low visibility. Since they are not noticed by stakeholders such as the Government, environmentalist groups, the press or their customers, they have not felt themselves under any obligation to internalize their impact on the environment.

– *Strategy formulation and planning, capability improvement, scorecard, and management involvement.* As indifferent organizations are not pressured by their stakeholders and do not see any advantage in taking environmental issues into account, environmental considerations play no part in their strategy formulation and planning process. Therefore, the environment is not present either in their operational structure or in their scorecard, nor does it receive any attention from management.

At present, most business organizations can be classified as indifferent. This is because most small and medium-sized companies, particularly those belonging to highly fragmented industries that offer their products or services to non-industrial customers, maintain an attitude of indifference towards the environment. As we have already said, it is not so much their objective environmental impact –which in some cases, particularly if we take all these companies together, can be considerable– that makes this attitude possible as their lack of visibility and the consequent absence of pressure from stakeholders to implement environmental improvement measures. This segment could also include, for example, the vast majority of Spanish banks. In this case, it is not size but their low environmental impact “a priori” that enables them to maintain an attitude of indifference.

Opportunist organizations

– *Relationship with the milieu.* In opportunist organizations, concern for the physical milieu and relationships with stakeholders pursue a dual goal: to identify unsatisfied needs that may become opportunities, and to gain environmental credibility. Consequently, these organizations tend to adopt a PR approach in their communications, giving only such information about their activities as will benefit their positioning, and paying attention only to such information as interests them because it may reveal an opportunity.

– *Strategy formulation and planning.* The environment does not form part of their core strategic focus, such as their mission, vision, principles and lines of strategy. On the contrary, it is a predominantly tactical issue, located on the periphery of their strategy; it varies in importance according to trends and the local socioeconomic situation, as these may affect stakeholders’ values and behavior. When environmental objectives are set, they usually affect production (because of possible cost reductions) or marketing and communications (because of the advantages to be gained by positioning the company’s products as “green”).

– *Capability improvement.* The capabilities that opportunist organizations improve for environmental reasons tend to have to do with improving the environmental impact of a production process, with the aim of picking «low-hanging fruit» and giving their products and services a «green» image. Environmental investments are authorized by management only if their payback is seen as quick and certain.

– *Scorecard*. Their environmental indicators are consistent with the nature of their concern for environmental issues. Opportunist organizations measure the cost impact of activities aimed at improving the environmental performance of their processes, and the sales impact of activities related to “green” marketing.

– *Management involvement*. Generally speaking, the level of involvement of the organization’s management in environmental activities is low. Only the managers of the areas most directly affected monitor the progress of any activities that are carried out.

Many companies have tried to exploit the business opportunities that have arisen as a result of the growing environmental awareness among consumers since the early ’70s. However, experience has shown that such attempts end in failure if there is no internal consistency behind the claimed environment-friendliness of the products. In other words, if, apart from the ability to discover environment-based business opportunities, there is no serious effort to internalize the environmental impact of the company’s activities.

An example of this attitude could be the Canadian distribution company Loblaw, at least judging by the information available to the authors (9). In 1988, Loblaw launched a line of “green” products under the umbrella of their white label President’s Choice. This launch took place after a trip made by the company’s president, Richard Currie, to Europe to learn at first hand about the latest trends in the European retail distribution sector. In the course of his visit, Richard Currie discovered that, in line with the growing concern for the environment, consumers were demanding products that were less harmful to the environment and that some distribution chains were making efforts to satisfy this demand. On returning to Canada, Richard Currie found, from market surveys conducted by Macleans and by his own company, that Canadian consumers’ environmental values had increased and that their main concern was the state of the physical environment. Seeing an unsatisfied need and a market opportunity that was consistent with Loblaw’s differentiation strategy, Richard Currie decided to launch a line of “green” products. However, in spite of an initially favourable response from consumers, the initiative became the subject of a number of controversies. Several environmentalist groups and the Canadian Consumers’ Association made harsh attacks against the move and questioned the company’s motives. What had happened? In theory, the company’s “green” products satisfied consumers’ need to do something for the environment and, if nothing else, they were more environment-friendly.

In order to analyze the causes, let us look at two other examples: the case of Mobil Oil Corporation and its photodegradable plastic refuse bags, and that of DuPont, with its advertising campaign to publicize its Conoco Oil subsidiary’s decision to use double-lined tanks in its oil tankers (Ottman, 1993). Both companies were accused of cynicism. In the first case, for attempting to mislead the consumer by advertising as “degradable” bags that would take, at best, hundreds of years to decompose, given the lack of light when buried in landfills. Mobil Oil’s venture ended in heavy fines and a severely tarnished image. In the case of DuPont, Friends of the Earth welcomed the decision as they considered that it would no doubt reduce the risk of oil slicks in the event of accidents. However, in its public statements, Friends of the Earth continued to stress the many other examples of environmental aggression committed by DuPont and concluded by recommending that the company behave in a more environment-friendly fashion.

We can draw two conclusions from these examples. First, that the failure to internalize environmental problems may lead opportunist companies to make serious mistakes, owing to their failure to understand and think seriously about environmental issues. We can also infer that when companies seek to position themselves as “green” without really

having internalized what this means, they run the risk of attracting the scrutiny of numerous stakeholders, who will most probably set about analyzing just how much truth lies behind their speedy “conversion”; and when they discover inconsistencies, they will make these companies the target of their environment awareness creation campaigns. In short, it appears that a basically opportunist positioning in the environmental field is, to say the least, dangerous.

Reactive organizations

– *Relationship with the milieu.* Reactive organizations measure the impact of their activities on the environment and share their results and improvement efforts with their stakeholders. They relate openly and honestly with these stakeholders, try to understand them, are inclined to establish cooperative relationships with them and appear to be predisposed to satisfying their wishes, although naturally within the limits imposed by the need to remain competitive.

– *Strategy formulation and planning.* Usually, these organizations have made caring for the environment an integral part of the strategy formulation process. There is a strong environmental commitment in their corporate mission and values. Respect for the environment has much the same level of importance as business objectives. However, as these organizations do not perceive any opportunities either to reduce costs or to increase sales through environmental action, this commitment is focused on goals that basically affect the areas of production, environment, purchasing and R&D. Generally, they seek to reduce the environmental impact of their activities and products, insofar as this is economically feasible, and to communicate these efforts effectively to their stakeholders.

– *Capability improvement.* These organizations show considerable interest in improving all the capabilities related to their processes, products and stakeholder contact. Given the considerable influence of R&D on the environmental performance of products and production processes, they focus their R&D process on reducing consumption of raw materials (particularly non-renewable, toxic or hazardous raw materials), energy, emissions and waste generation, as well as their products’ environmental impact throughout their life cycle. If it is within their power, they also try to improve the environmental impact of their suppliers’ activities. In the investment decision-making process, environmental improvement prevails over other strictly financial criteria. Lastly, the communication and environment areas endeavour to keep up to date on the regulatory framework on the environment; they try to improve their information on scientific progress in the environmental field and their ability to build a solid reputation for environmental commitment among their stakeholders.

– *Scorecard.* In the environmental area, these organizations will basically include indicators of the environmental performance of their processes and products.

– *Management involvement.* In general, the management of reactive organizations is committed to improving their organizations’ environmental impact. However, only managers in the areas of production, environment, communications and R&D, and general management, are actually involved in environment-related activities. Therefore, it is the managers of these areas who try to keep the organization’s environmental strategy alive in employees’ minds, obtain their commitment and involvement in the environmental improvement process, acknowledge the effort and achievements of the people within the organization and of stakeholders, and facilitate and promote improvement activities.

To summarize, this segment would include those organizations whose basic features include: a sincere commitment to improving environmental performance, normally in response to demands made by stakeholders such as the Government, customers, opinion-creating groups, etc.; and also, for various reasons, a marked lack of vision of the possible synergies between environment and business. The case of Tetra Pak could be a paradigm of this type of company. On several occasions, Tetra Pak, the inventor and primary manufacturer of the familiar Tetra Brik containers, has been the target of criticism for the allegedly unecological nature of its product. This has led it to try to improve its image and environmental performance. Tetra Pak has implemented a large number of internal measures aimed at minimizing the environmental impact of its production processes. Its subsidiary Tetra Pak Iberia was the second company in Spain –only hours behind the first– to obtain the certification of its environmental management system. It has also made several improvements to its containers, steadily and significantly reducing the volume of materials used, buying only paper produced by sustainable means, and including only a small fraction of bleached paper. Finally, tremendous efforts have been made to make the containers recyclable and to create the infrastructure that would make this recycling possible. To date, however, the company has been unable to convert its no doubt laudable efforts into business opportunities. As the company’s environment officer says, «Our efforts have been confined to strengthening our market position. We hope that they will bear fruit when the concept of sustainable development emerges as the basic value.»

Proactive organizations

– *Relationship with the milieu.* Proactive organizations share with reactive organizations an interest in establishing open, honest, cooperative relationships with stakeholders, and in understanding their concerns and ideas. They are also concerned about measuring the impact of their activities on the environment and sharing the results with their stakeholders. However, they go beyond reactive organizations in the way they consider the state of the environment. They are aware that there is a limit to what our planet can cope with, that we are approaching saturation, and that therefore what is required is a proactive approach to changing the direction of events, actually promoting change. Also, since they see environmental challenges as opportunities to improve their competitive position, not only are proactive organizations able to adapt to the changes taking place in their milieu (whether as a result of environmental issues or of other factors); they also seek to influence the changes, so as to put themselves in a stronger competitive position. They share with opportunist organizations an interest in understanding their stakeholders’ needs and demands; they know that it is possible to find ways of satisfying these stakeholder needs while at the same time improving their own financial performance.

– *Strategy formulation and planning.* In proactive organizations, as in reactive organizations, the environment is consubstantial with strategy formulation. And as in opportunist organizations, environmental goals are closely linked with what could be described as financial goals. We could say that they are two sides of the same coin; consequently, the goals of one area are not achieved at the expense of those of the other. It is also possible –without forcing the argument– to give both an environmental and a financial reading to the same goal. We can deduce from the above that in proactive companies all areas have a role to play in improving the organization’s environmental performance, as they do in improving the organization’s competitiveness in general; all areas therefore have certain goals to meet. However, proactive companies go beyond reactive and opportunist companies in considering that their strategic vision must be compatible with a sustainable vision of their physical environment.

– *Capability improvement.* In practice, it is impossible to give equal emphasis to improving all of an organization's capabilities. Therefore, while seeking to maintain high standards of performance in all areas, proactive organizations give priority at any given time –depending on their strategy, and therefore also on the situation of the milieu– to those areas that require major improvements. When it is a question of improving environmental performance, preferential attention is usually given to capabilities associated with managing human resources, financial resources, purchasing, plant, crisis situations, information systems, stakeholder relations, production, R&D and technology. In the chemical, electrical or paper industries, for example, R&D and technology can be crucial to a company's efforts to contribute proactively to sustainable development.

– *Scorecard.* The specifically environmental indicators that proactive organizations include in their scorecards are directly related to their strategy formulation and capability improvement planning. Therefore, issues such as a product's environmental performance during its entire life cycle, emissions, waste, technological innovation, the environmental performance of suppliers, and stakeholder satisfaction usually feature in these scorecards.

– *Management involvement.* In proactive companies, all levels of management are committed to the process of improving their organization's environmental performance. Obviously, their degree of direct involvement in the process will depend on their area and level of responsibility. Generally speaking, these organizations' managers act as mobilizers and facilitators of the improvement process; they give recognition to the effort and improvements made by the people –inside and outside of the company– who work with them, and try to maintain fluid, effective relationships with stakeholders. Their specific functions include: transmitting the organization's vision and strategic framework; reaching agreements with their collaborators on goals that contribute to the organization's general goals; empowering their collaborators, insofar as this is desirable, always within a reference framework; and assessing their collaborators' efforts and results, with the aim not so much of controlling them as of enhancing their learning and, therefore, the organization's general skills.

The number of organizations that could be considered proactive is growing steadily. However, only a few have advanced significantly towards what we could call environmental excellence. Let us look at a couple of examples: Bank of America and Monsanto. In the first case, because this company belongs to an industry in which most organizations usually maintain an indifferent attitude towards environmental issues. In the second case, because it represents an industry whose viability in a future world of sustainable development is, to say the least, doubtful, unless it succeeds in replacing the technologies it uses at present.

In the finance industry, the Bank of America can be considered to be the leader, or one of the leaders, not only in the United States but also in the world, in the field of the environment, owing to its social commitment and sensitivity towards environmental issues. As its Chief Executive Officer, Richard Rosemberg, said in 1989, “the most effective strategy is that which satisfies our stakeholders' expectations, which considers that the business world should concern itself actively with the social challenges of our time.” This organization was the first North American financial institution to adopt an environmental policy. Its environmental principles are shown in Figure 4.

Figure 4. Environmental principles of the Bank of America

<p>The Bank of America undertakes to operate consistently with the following environmental principles:</p> <ol style="list-style-type: none"> 1. The Bank of America will follow responsible environmental practices in all of its operations and facilities. 2. The Bank of America will consider its customers' and suppliers' environmental responsibility as a relevant factor in all its business decisions 3. The Bank of America will request advice and technical expertise in the development and management of its environmental programmes and practices. 4. The Bank of America will make a particular effort to identify companies and organizations that are trying to find solutions to environmental problems and provide them suitable support. 5. The Bank of America will provide its active and retired employees with information related with environmental issues in order to help them make informed decisions. 6. The Bank of America will broaden the scope of its recycling, energy and waste management programmes. 7. The Bank of America will acknowledge and reward its employees for actions performed in support of these principles. 8. The Bank of America will periodically assess the results that it is obtaining in identifying and concerning itself with environmental issues. 9. The Bank of America undertakes to improve its understanding of the total social impact of government and corporate actions that affect the environment and the economy.

Source: Lawrence, Anne T., «Bank of America and the Carlsbad Highlands Foreclosure», in press.

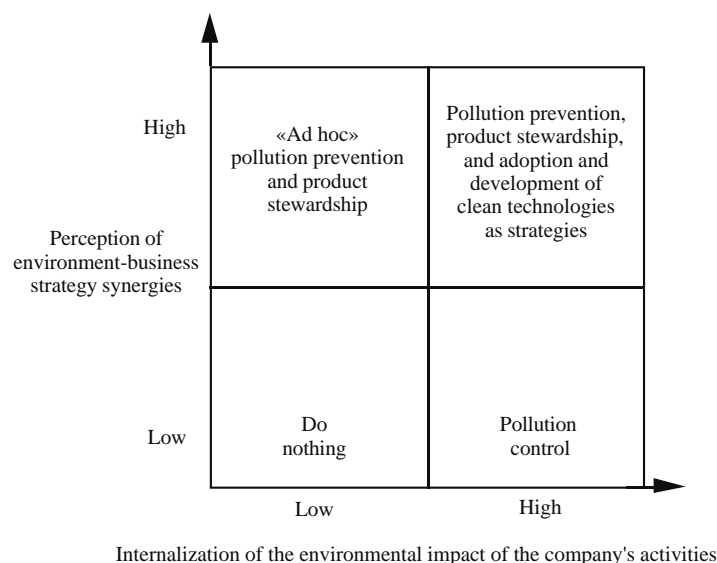
In order to achieve the goals set by this policy, the Bank of America has created a unit, called the Department of Environmental Programmes and Policies, headed by one of its senior vice-presidents. It has also taken its environmental goals to the entire organization and has implemented plans to give material form to its principles, improving its environmental impact while at the same time generating and taking business opportunities by creating products and markets that are beneficial to the environment.

Monsanto (10) is fully aware of the current state of environmental deterioration. It also knows that it is impossible to continue using existing technologies, bearing in mind the population growth forecasts and the need to increase wealth creation, not only to satisfy the resulting future needs but also to palliate the unsatisfied needs of a majority of the world's present population. After a decade of progress in pollution prevention and in reclaiming facilities, land, etc. previously polluted by the company, Monsanto has now found opportunities for increasing its turnover by developing new products and environmentally sustainable technologies, mainly related to biotechnology and information. As its CEO, Robert

Shapiro, says, “We are entering a period of unprecedented discontinuity. The companies that follow the old business model will become obsolete and will die. In Monsanto, we are trying to invent new businesses in line with the concept of environmental sustainability. Perhaps we still do not know exactly what these businesses will be like, but we want to grow them because the world cannot avoid needing long-term sustainable development.” The company has therefore mobilized its employees to learn more about the planet’s problems and to reflect on what Monsanto can do to offer solutions to these problems. For example, in its agricultural businesses, Monsanto has understood that the processes of desertization, salinization and loss of humus affecting a large part of the world’s arable land make current methods of increasing productivity through irrigation and the use of fertilizers and pesticides unsustainable. Thus, it has developed a new potato that is able to repel the Colorado beetle and is resistant to the virus that attacks its leaves; using this potato will mean not having to manufacture, transport, distribute and apply thousands of tonnes of chemicals. Then there is the so-called “B.t. cotton”, which has been genetically modified to develop the B.t. toxins that are produced naturally in the soil, making it immune to the cotton worm.

It follows from the above analyses that, if we look at companies’ environmental actions, we see that reactive organizations prefer to exercise “pollution control”, both in their production processes and in their products, whereas proactive and opportunist organizations reveal their strategic positioning through what is usually called “pollution prevention” and “product stewardship”. Proactive organizations have an additional strategy of adopting and developing “clean” technologies. The differences between the activities of proactive and opportunist organizations are due to their differing degrees of internalization of environmental issues: while the former have internalized them to a considerable degree and have taken them to the heart of their strategy, the latter do not view them as a responsibility but only as an opportunity. Therefore, the depth and scope of pollution prevention and product stewardship activities will be very different in each case. In proactive organizations, all operational areas will be influenced by strategic considerations which seek to reduce the company’s environmental impact, develop sustainable products and technologies, and generate financial profit; in opportunist organizations, in contrast, the only important aspect will be that of improving business performance. Consequently, using the same two variables as in the previous case, we can rate companies’ environmental involvement as follows:

Figure 5. Environmental involvement



VI. Integral environmental management model: a tool for accelerating learning and environmental performance improvement

Various management models have been developed to satisfy organizations' need to accelerate their learning and improvement processes. One thing these models have in common, generally speaking, is their integral approach. That is to say, they consider all or most of a business organization's management areas. The idea is that companies will use these models as frameworks for assessing the quality of their management, and then design and implement improvement plans. Thanks to the integral nature of these frameworks, the resulting improvement plans are *balanced*, in the sense that they do not pursue improvements in certain areas at the expense of others; they also have a *major impact*, since the thinking involved in the self-assessment process makes it possible to select areas for improvement and improvement actions that match the time and the organization's circumstances.

However, the management models referred to above, among which we might single out those used as the basis for quality awards in the United States (Malcolm Baldrige Award), Japan (Deming Prize) and Europe (European Quality Award), have been developed with a view to improving companies' competitiveness, as understood by TQM. In other words, their purpose has been to induce companies to speed up the pace of progress towards customer satisfaction and zero defects.

The purpose of the integral environmental management model is to provide companies that already have a proactive attitude towards the environment –or that would like to move towards such an attitude from indifferent, opportunist or reactive positions– with a reference framework that will help them to improve their environmental performance. Improving environmental performance means reducing negative impacts on the environment and increasing the use or generation of new products or cleaner technologies that contribute to making the idea of sustainable development possible. Therefore, the purpose of this model is to make companies more effective in their learning and environmental performance improvement processes, to speed up these processes, and to help companies detect opportunities in the constant challenges posed by the environment. *The integral environmental management model is a frame of reference which companies can use to conduct environmental management self-assessment processes, culminating in the development and implementation of plans for improving their environmental performance.*

Using the model, the self-assessment process takes place in five stages: actions inventory; analysis of strengths and areas for improvement; preparation of an action plan; implementation of this plan; and finally, analysis of the results. As in any improvement process, an organization that uses this tool will initiate a further self-assessment after six months or one year (11).

As the reader will have noticed, the dimensions included in the model match the criteria used to classify organizations as indifferent, reactive, opportunist or proactive. Consequently, this model is a tool that enables organizations to move more quickly towards proactive positions in environmental strategy, or to consolidate and build on such positions.

VII. Conclusions

In recent years we have witnessed major advances in the field of environmental strategy. The work of Hart, Steger, Newman and others has enabled scholars to conceptualize

the environmental strategies that companies use to meet the challenges posed by the physical environment they operate in. In this sense, the objective of the present study has been to take a further step forward, one that will perhaps enable our discipline to continue advancing along this road, in which new questions will inevitably arise.

At present, the writers of this paper are working with the companies taking part in the environmental management project in carrying out their self-assessment process. The results they obtain will shed more light on the effectiveness of the integral environmental management model as a tool for helping companies to improve their environmental performance. The main conclusions will be reported as soon as possible.

It also seems desirable to try to demonstrate empirically the validity of the proposed framework for environmental positioning. This will be one of the researchers' concerns in the near future. In addition to validating the framework, an attempt will be made to confirm the following hypotheses:

Hypothesis I. At present, most business organizations in Spain have a very *low* perception of the synergies between environmental performance and business opportunities, and a *low* level of internalization of their own impact on the environment.

Hypothesis II. The second largest cluster, in terms of number of companies, is found in positionings that could be defined as: *medium-low* or *medium-high* «internalization» with *medium-low* «perception».

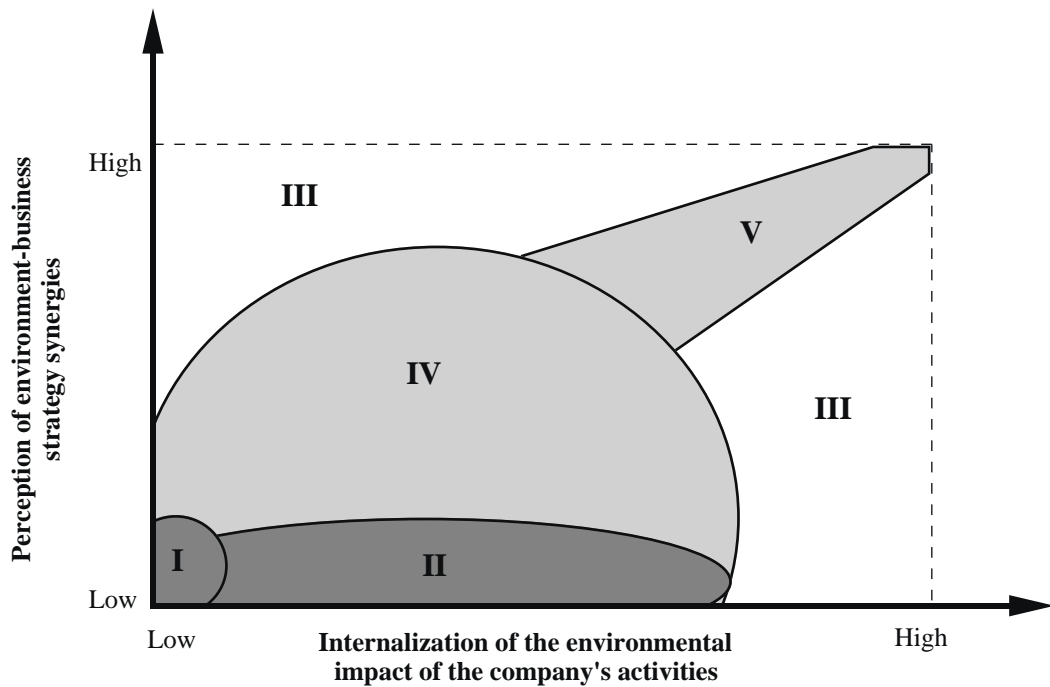
Hypothesis III. There are no companies with extreme «opportunistic» or «reactive» positionings.

Hypothesis IV. The degree of correlation between the two variables, i.e. «internalization» and «perception», becomes greater as we approach and enter the «proactive» segment.

Hypothesis V. Only a small number of companies out of the total population occupy highly proactive positionings (i.e. high «perception» with high «internalization»).

The following Figure shows the expected distribution in diagram form (the intensity of the colour is directly proportional to the expected concentration of companies).

Figure 6. Environmental positionings: hypothesis regarding their frequency



As possible reasons –which would have to be confirmed empirically– for this distribution, we could enumerate the following:

1. As we mentioned when analyzing “indifferent” organizations, most companies are small or medium-sized. Their size and the resulting lack of visibility mean that, to a large extent, they escape the main stakeholders’ attention and scope for control (Hypothesis I).
2. Irrespective of their size, companies that compete in industries whose direct impact on the environment is, in principle, small see no obvious reason to consider the potential synergies between environment and business (Hypothesis I).
3. The environmental demands of Government, environmentalist groups, industrial customers and other stakeholders will lead a large proportion of the companies operating in industries traditionally considered “dirty” to respond reactively, seeking to comply with legal and customer requirements and avoiding disputes with “opinion-creating” organizations. This means that their degree of internalization of their environmental impact will be greater than their perception of possible synergies between environment and business (Hypothesis II).
4. It seems highly unlikely that there are companies that internalize their environmental impact to any great degree without generating some kind of business opportunity (Hypothesis III).

5. We mentioned earlier the risks run by companies that adopted opportunistic positionings on environmental strategy. In view of these risks, we can say that this type of positioning is practically unsustainable. Consequently, it can be said that the possibility of there being purely opportunist companies is virtually nil (Hypothesis III).
6. It seems plausible to say that in companies that adopt proactive environmental strategies, the degree of «internalization» and the degree of «perception» will follow similar patterns. This may be due to the fact that a high degree of “internalization” will only be sustainable from a financial viewpoint if it is accompanied by a high degree of perception of business opportunities. Likewise, a high degree of «perception» can only be protected against accusations of opportunism if it is accompanied by a high degree of credibility with regard to «internalization». One could also postulate that the ability to see business opportunities in environmental issues may naturally lead companies to increase their degree of «internalization» in parallel (Hypothesis IV).
7. On the basis of the experience recorded in the literature, and of direct personal experience, only a small number of companies currently occupy, in the writers’ opinion, highly proactive positionings (Hypothesis V).

As we said, in the near future we intend to carry out deductive studies that will enable us to verify the validity of the framework and hypotheses proposed. However, other studies on the subject, performed in different geographical or cultural contexts, would no doubt provide valuable contributions. □

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- (1) The concept “improvement of environmental performance” is used on numerous occasions in this paper. It involves the idea of engaging in activities that tend progressively to reduce negative impacts on the environment, such as emissions or resource consumption, as well as that of using or creating new products or cleaner technologies that help make sustainable development possible. Adopting the Brundtland Commission’s now classic definition, we consider sustainable development to be “that which enables the needs of present generations to be satisfied without endangering the capacity of future generations to satisfy theirs”.
 - (2) Hass, Julie L., “Environmental Green Management Typologies: An Evaluation, Operationalization and Empirical Development”, *Business Strategy and the Environment*, vol. 5, 1996.
 - (3) See Exhibit 1 for a brief description of these companies.
 - (4) Section IV of the paper presents the basic structure of the model. See Exhibit 2 for a complete description.
 - (5) Pulcra is the Henkel Group’s chemical division.
 - (6) This conclusion can be extended to the other models described above.
 - (7) See Exhibit 2 for the full version of the integral environmental management model, where both its dimensions and subdimensions can be found.
 - (8) Stakeholders are all those people or groups of people who have some kind of interest in a company’s activities.
 - (9) See the HBS case “Loblaw Companies Limited. President’s Choice G.R.E.E.N.: Something Can Be Done”.
 - (10) Magretta, Joan, “Growth through Global Sustainability”, *Harvard Business Review*, January-February 1997.
 - (11) See Exhibit 3 for a more detailed description of the self-assessment process, including the different approaches to self-assessment, the stages of the process, the rules for drawing up the actions inventory, and the scoring criteria.

Exhibit 1

Companies taking part in the working group on environmental management

Enher (Empresa Nacional Hidroeléctrica del Ribagorzana), belonging to the *Endesa* group, is a full-cycle electricity company (i.e. it produces, transports and distributes electricity), supplying the Catalan and Aragonese markets. It produces more than 15,000 GWh per year, 82% from hydroelectric sources and 18% from thermal sources. Industrial and services consumption accounts for 70% and domestic uses for the remaining 30%. Annual sales turnover amounts to approximately 200 billion pesetas.

The *Henkel Ibérica* group is a subsidiary of the German multinational *Henkel KGaA*. Its turnover amounts to 90 billion pesetas per year and it operates nine factories in Spain and one in Portugal. It consists of the following business areas: detergents/cleaning products; cosmetics/body hygiene; industrial and branded glues; industrial hygiene/cleaning and surface treatments; and *Pulcra*. *Pulcra* is the chemical division and accounts for approximately 9% of the group's sales. It manufactures basic chemicals for the following industries: food products, sugar and fermentation, cellulose and paper, cosmetics, tanned hides, detergents and conditioners, basic chemicals, paints, plastics, and textiles.

The *BYSE Electrodomésticos* group is a subsidiary of the German multinational Bosch Siemens Hausgeräte. With a turnover in excess of 100 billion pesetas and six production plants, it is the leading company in the Spanish white goods market, with its brands Bosch, Siemens, Neff, Balay, Superser, Crolls and Lynx.

Sharp Electronics España is a subsidiary of the Japanese multinational Sharp Corporation. In its Sant Cugat del Vallès factory it produces LCD colour televisions, telecopiers, and LCD overhead projectors for the domestic and European market, as well as developing new products and adapting them to the tastes and requirements of the destination countries. Its annual turnover is about 30 billion pesetas.

Tetra Pak Iberia is a subsidiary of the Swedish multinational *Tetra Pak International*. Each year it produces more than 4.5 billion Tetra Briks in its Arganda del Rey (Madrid) plant, basically to supply the Spanish and Portuguese markets. It also sells complete packaging systems.

Exhibit 2

Integral environmental management model

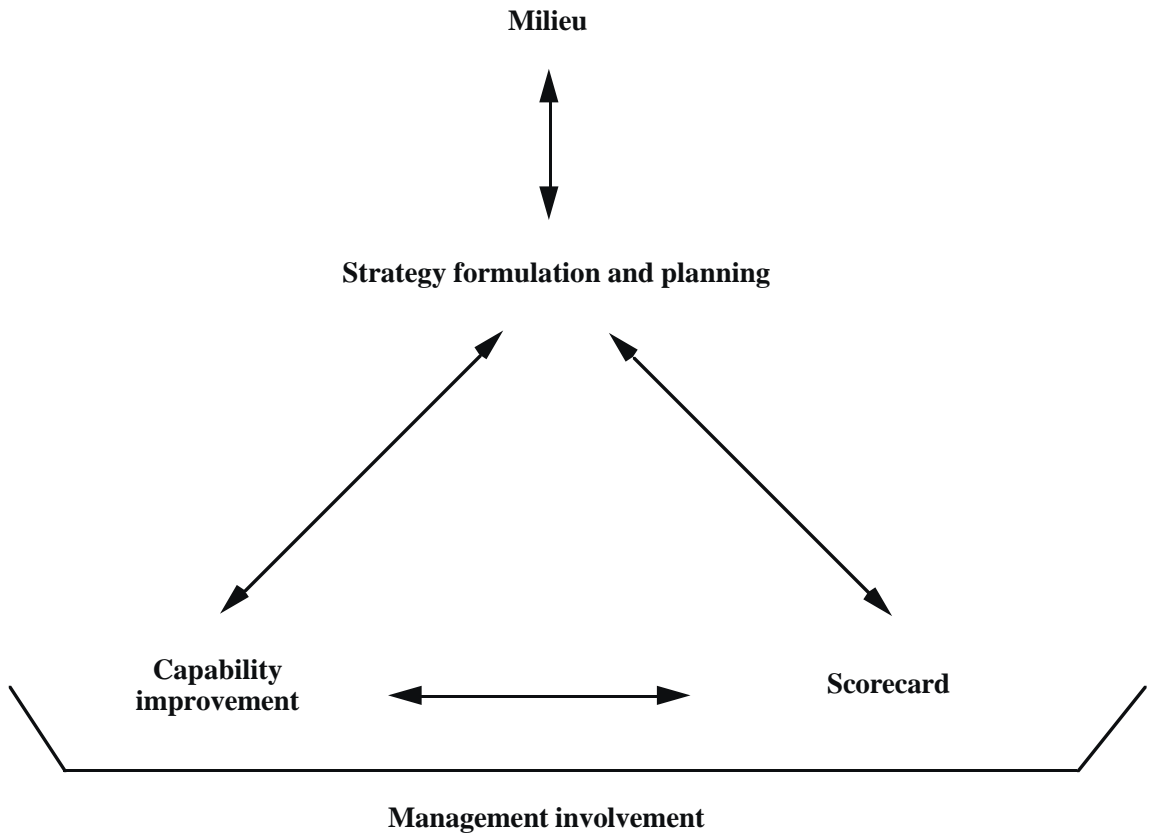


Exhibit 2 (continued)

DIMENSION	SUBDIMENSIONS	AREAS
I. Milieu	<ol style="list-style-type: none"> 1. How do we determine what are the priority environmental issues for our organization? 2. How do we <i>communicate</i> with our milieu, <i>learn</i> from it and <i>influence</i> it? 3. How do we ensure suitable, prompt knowledge of the regulatory framework on environmental issues as it affects our company? 	<p>Possible areas to be considered:</p> <ol style="list-style-type: none"> a) Analysis of the environmental impact of our activities. b) Comparative analysis of the importance that our «neighbours» in particular and society as a whole give to various environmental problems and the importance these problems have for our industry/company. <p>Possible environmental factors and forces (areas) to be considered::</p> <ol style="list-style-type: none"> a) Government agencies. b) Customers. c) Suppliers. d) Competitors (current and potential). e) Investors. f) Banks and insurance companies. g) Environmentalist groups. h) Employees (current and prospective). i) Third World countries. j) Other industries. k) Own industry. l) Press. m) Universities, business schools, research centres. n) Neighbours.

Exhibit 2 (continued)

DIMENSION	SUBDIMENSIONS	AREAS
<p>II. Strategy formulation and planning.</p>	<p>1. How do we integrate the knowledge we acquire on the milieu, our scorecard and our capability improvement in our strategy formulation?</p> <p>2. How do we integrate our strategy formulation (and, therefore, the knowledge we acquire on the milieu, our scorecard and our capability improvement) in our goal planning and deployment process?</p> <p>3. How do we define the critical nature of our processes and capabilities in general?</p>	<p>Possible areas to be considered:</p> <ul style="list-style-type: none"> a) Vision. How do we see our organization in the future? What will its impact on the environment be? b) Mission. What is our organization's raison d'être? Does it take into account our relationship with the physical environment? c) Values. What environmental values do the members of our organization share? d) Principles. What are the environmental principles on which our management is founded? e) Strategic goals. What are the goals or strategic lines of action that we have defined on the basis of the above. <p>Possible areas to be considered:</p> <ul style="list-style-type: none"> a) Analysis of our present capabilities and those required to compete in the future. b) Interrelationship between strategic goals and critical processes.

Exhibit 2 (continued)

DIMENSION	SUBDIMENSIONS	AREAS
<p>III. Capability improvement: «Inputs»</p>	<p>How do we manifest our strategy formulation and planning in the way we manage the improvement of the capabilities listed below?</p> <ol style="list-style-type: none"> 1. Support of human resources management for improving our environmental performance. 2. Support of financial resources management for improving our environmental performance. 3. Suppliers' environmental management. 	<p>Possible areas to be considered:</p> <ol style="list-style-type: none"> a) Training. b) «Green» improvement teams. c) Existence of «green champions». d) Empowerment. e) Goal-setting. f) Consistency of recruitment, remuneration, promotion, etc. systems with strategy, goals and critical processes. <p>Possible areas to be considered:</p> <ol style="list-style-type: none"> a) Accounting of environmental costs. b) Consistency of the investment decision-making process, as related with our environmental performance, strategy, goals and critical processes. <p>Possible areas to be considered:</p> <ol style="list-style-type: none"> a) Assessment of their environmental impact. b) Assessment of their critical nature. c) Establishment of partnership relationships. d) Surveys on our performance as customers. e) Consistency with strategy, goals and critical processes.

Exhibit 2 (continued)

DIMENSION	SUBDIMENSIONS	AREAS
<p>III. Capability improvement: «Inputs»</p>	<p>How do we manifest our strategy formulation and planning in the way we manage the improvement of the capabilities listed below?</p> <p>4. Inventory management.</p> <p>5. Consideration of the environmental impact of the raw materials used.</p> <p>6. Efficiency in energy use.</p> <p>7. Consideration of our facilities' impact on our environmental performance.</p>	<p>Possible areas to be considered:</p> <ul style="list-style-type: none"> a) Assessment of their dangerousness. b) Reduction of toxic and/or hazardous materials. <p>Possible areas to be considered:</p> <ul style="list-style-type: none"> a) Assessment of their toxicity. b) Assessment of their renewableness. c) Reduction of consumption. d) Reduction of diversity of materials. <p>Possible areas to be considered:</p> <ul style="list-style-type: none"> a) Assessment of the environmental impact of the energy consumed. b) Reduction of energy consumption. c) Cogeneration. <p>Possible areas to be considered:</p> <ul style="list-style-type: none"> a) Energy efficiency. b) Consistency with strategy, goals and critical processes.

Exhibit 2 (continued)

DIMENSION	SUBDIMENSIONS	AREAS
<p>III. Capability improvement: «Inputs»</p>	<p>How do we manifest our strategy formulation and planning in the way we manage the improvement of the capabilities listed below?</p> <p>8. Analysis of the impact of technology on our environmental performance.</p> <p>9. Support of information systems for the improvement of our environmental performance.</p>	<p>Possible areas to be considered:</p> <ul style="list-style-type: none"> a) Analysis of the environmental impact of new technologies. b) Development of new technologies. c) New uses for existing technologies. d) Consistency with strategy, goals and critical processes. <p>Possible areas to be considered:</p> <ul style="list-style-type: none"> a) Integration of environmental information systems in the organization's information systems. b) Support of information systems for environmental impact management and improvement activities.

Exhibit 2 (continued)

DIMENSION	SUBDIMENSIONS	AREAS
<p>III. Capability improvement: Processes</p>	<p>How do we manifest our strategy formulation and planning in the way we manage the improvement of the capabilities listed below?</p> <p>10. Process management.</p> <p>11. Product and services design process.</p> <p>12. Production process.</p>	<p>Possible areas to be considered:</p> <ul style="list-style-type: none"> a) Process performance indicators. b) Process performance goals. c) Consistency between process performance goals and strategy. d) Continuous improvement of processes. e) Process reengineering. <p>Possible areas to be considered:</p> <ul style="list-style-type: none"> a) Design for the Environment (DFE). b) Consideration of the products/services' environmental impact during their entire life cycle (life cycle assessment). c) Consistency with goals and strategy. <p>Possible areas to be considered:</p> <ul style="list-style-type: none"> a) Design for the Environment (DFE). b) Consideration of the production processes' environmental impact. c) Consistency with goals and strategy.

Exhibit 2 (continued)

DIMENSION	SUBDIMENSIONS	AREAS
<p>III. Capability</p>	<p>How do we manifest our strategy formulation and planning in the way we manage the improvement of the capabilities listed below?</p> <p>13. Processes for managing and measuring our stakeholders' satisfaction.</p> <p>14. Crisis management process.</p> <p>15. Other processes.</p>	<p>Possible areas to be considered:</p> <ul style="list-style-type: none"> a) Activities performed to obtain their satisfaction. b) Systems for measuring their satisfaction (procedures, direct and indirect measurements...). c) Consistency with goals and strategy. <p>Possible areas to be considered:</p> <ul style="list-style-type: none"> a) Procedure considered in the event of a crisis. b) Communication with people and organizations concerned.

Exhibit 2 (continued)

DIMENSION	SUBDIMENSIONS	AREAS
<p>III. Capability improvement: «Outputs»</p>	<p>How do we manifest our strategy formulation and planning in the way we manage the improvement of the capabilities listed below?</p> <p>16. Environmental performance of our products/services/packaging during storage, carriage, etc.</p> <p>17. Environmental performance of our products/services/packaging during use.</p> <p>18. Level of reuse, recycling, composting, etc. of our products/services/packaging.</p>	<p>Possible areas to be considered:</p> <p>a) Results and trends. b) Improvement goals. c) Consistency with strategy and goals.</p> <p>Possible areas to be considered:</p> <p>a) Results and trends. b) Improvement goals. c) Consistency with strategy and goals.</p> <p>Possible areas to be considered:</p> <p>a) Results and trends. b) Improvement goals. c) Consistency with strategy and goals.</p>

Exhibit 2 (continued)

DIMENSION	SUBDIMENSIONS	AREAS
<p>III. Capability improvement: «Outputs»</p>	<p>How do we manifest our strategy formulation and planning in the way we manage the improvement of the capabilities listed below?</p> <p>19. Waste management.</p> <p>20. Emissions management.</p>	<p>Possible areas to be considered:</p> <ul style="list-style-type: none"> a) Results and trends. b) Classification. c) Reuse. d) Costs. e) Improvement goals. f) Consistency with strategy and goals. <p>Possible areas to be considered:</p> <ul style="list-style-type: none"> a) Results and trends. b) Classification. c) Reuse. d) Costs. e) Improvement goals. f) Consistency with strategy and goals.

Exhibit 2 (continued)

DIMENSION	SUBDIMENSIONS	AREAS
<p>IV. Management involvement</p>	<p>What are our managers doing to promote the improvement of our organization's environmental performance?</p> <ol style="list-style-type: none"> 1. To what extent do our managers act as mobilizers and facilitators of the improvement process? 2. How do our managers communicate the organization's strategy and its environmental goals 3. How do our managers negotiate environmental goals with their collaborators? 4. How do our managers empower their subordinates to promote their involvement in and commitment to the environmental improvement process? 5. How do our managers assess their collaborators in order to promote their learning and the improvement of the organization's environmental performance? 6. How do our managers communicate with the stakeholders and establish cooperative relationships with them? 7. How do our managers recognize the achievements and effort of the organization's members and other stakeholders? 	

Exhibit 2 (continued)

DIMENSION	SUBDIMENSIONES	AREAS
V. Scorecard	<p>1. What dimensions are included in our scorecard? How is our scorecard matched with our strategy formulation, planning and areas of action?</p> <p>2. What results are we obtaining? How do we assess our results?</p> <p>3. Where are we obtaining the results? (Answer the question when relevant.)</p>	<p>Possible areas to be considered:</p> <ul style="list-style-type: none"> a) Environmental performance. b) Stakeholder satisfaction. c) Customer satisfaction. d) Employee satisfaction. e) Financial. g) Internal efficiency. h) Learning and innovation. i) Appeal of our industry. j) Performance as customers. <p>Possible areas to be considered:</p> <ul style="list-style-type: none"> a) Comparison with goals that have been set. b) Comparison with past results. c) Comparison with our competitors' results. d) Comparison with best-in-class organizations.

Exhibit 3

**The self-assessment process using the integral environmental management model:
concept, approaches to self-assessment, stages of the process, rules for drawing up the
actions inventory, and scoring criteria**

1. Concept

Self-assessment can be defined as the process of systematically and regularly reviewing the main areas of management and the results of an organization which, using a management model as a reference framework, has set itself the goal of developing and implementing an improvement plan. The integral environmental management model seeks to become the reference framework for environmental management assessment processes in Spanish companies. The approach is basically internal (self-assessment for the purpose of learning and improving environmental performance) rather than external (assessment by an outside agent in order to obtain an environmental certification). The model also builds on the idea that environmental management should be fully integrated in a company's strategy formulation process and, consequently, in all or most of its operational areas.

2. Approaches to self-assessment

In order to ensure the greatest possible impact on the improvement process, self-assessment using this model is flexible and can be approached in several different ways. Depending on their needs, circumstances, characteristics and capability for improvement, business organizations can adopt any of the following approaches (12):

– *Detailed or selective reference framework - actions inventory.* The purpose of self-assessment can be to improve environmental performance in those areas that are under the direct control of the organization's (or organizational unit's) top decision-making levels; in that case it will be selective. Alternatively, it may seek to improve the organization's environmental performance overall, in which case it will be more detailed. There is also the extreme possibility, within the selective approach, of conducting a self-assessment in which the model acts simply as a framework for reflection on the part of the organization's (or organizational unit's) management, without drawing up an actions inventory. In this case, the model will help management to quickly and selectively identify areas and actions for environmental improvement, without neglecting management areas that are critical for the organization or unit.

– *Unit - entire organization.* Self-assessment may be performed in only one unit (possibly as a pilot test), in each of the organization's units, or in the entire company. It is even possible to perform self-assessment processes in organizational units that are not business units. In this case, these units will perform the self-assessment taking into account only those dimensions that are relevant to them.

(12) All the possible approaches are presented in terms of two extremes, although each is in fact a continuum and companies are obviously free to adopt any position in-between.

Exhibit 3 (continued)

– *Not scoring - scoring.* Some companies may carry out the self-assessment merely in order to improve their knowledge of their strengths and areas for improvement, without making a quantitative assessment of their environmental performance. Others may consider it important to score in order to measure the progress achieved in successive self-assessments, make internal and external comparisons, and even induce a degree of healthy competition between organizational units.

– *Internal - internal and external.* Self-assessment can be performed by members of the organization without any outside help during the actions inventory, prioritization, and action plan preparation and implementation stages, or it may be performed with the assistance of people from outside the organization, such as consultants, members of other companies, etc.

3. Stages

However the self-assessment is carried out, it is advisable to go through certain stages in order to ensure that the assessment has the greatest possible impact. The main stages of the self-assessment process are:

– *Preparation.* During this phase, it is vital to obtain the commitment of the organization's management to the self-assessment process. Management will have to understand the model and the consequences of the self-assessment process that is to be performed; it will have to decide the approach to be adopted in the assessment, design the working plan and create a task force. Finally, the task force's members must receive appropriate training on the model and the self-assessment process.

– *Draw up the actions inventory and analyze strengths and areas for improvement.* In this stage, the task force will draw up an inventory of the organization's actions in each of the model's dimensions and subdimensions, and in whatever areas it considers advisable. After this, it will proceed to analyze the organization's strengths and the areas where it could improve its environmental performance. The task force will also make a quantitative assessment of the organization's or organizational unit's environmental performance in each of the dimensions and subdimensions, if it has decided to use that approach. In this stage, management involvement is crucial.

– *Development and implementation of the action plan.* On the basis of the above analysis, the organization's management, with the assistance of the task force, will prioritize the improvement areas and actions, and will develop and implement an improvement plan.

– *Progress follow-up.* As has already been said, the self-assessment process must be carried out systematically and at regular intervals. Consequently, besides monitoring the progress achieved with the action plan, the self-assessment process will have to be repeated after a certain period of time (between 6 and 12 months).

Exhibit 3 (continued)

4. Rules for drawing up the actions inventory

When drawing up the inventory of the organization's actions in the four dimensions (milieu, strategy formulation and planning, capability improvement, and management involvement), the task force must also consider *what* is done, *how* it is done and *where* the action is performed. In short, it must answer the following questions:

- *What are we doing?* That is, describe the action.
- *How are we doing it?* At this point, the task force must analyze whether the action is performed in a systematic and integrated fashion in the organization's operational structure. It will also have to find out whether there is a regular procedure for reviewing and improving that action. In short, in order to analyze how we are doing something, we need to answer three questions: Are we performing the action systematically? Does the action form part of our regular operations? Do we review and improve the action regularly?
- *Where are we performing the action?* The purpose of answering this question is to analyze whether the deployment is adequate. In other words, whether the action is performed in all those areas of the organization where it would be advisable to do so.

Furthermore, when reflecting on the indicators and results that appear in the «scorecard» dimension, the task force has to consider not only *what* indicators are used but also *how* these results compare with previous results, current objectives, and the results obtained by other organizations, and also *where* the results are being obtained. In short, the following questions need to be answered:

- *What are we measuring?* In other words, whether the indicators used are the most suitable, bearing in mind the organization's strategy and situation.
- *How are we doing it?* A result on its own is meaningless. In order to be able to evaluate a result, we need to compare it with a pre-set objective, analyze the trend and, as far as possible, compare the result with those of our competitors and other organizations that serve as benchmarks.
- *Where are we measuring and obtaining the result?* The purpose of answering this question is to analyze whether the deployment is adequate. In other words, whether the result is being measured and obtained in all of the areas of the organization where it may be desirable to do so.

The model considers that organizations should take *all of the dimensions* and subdimensions into account in their self-assessment processes. The subdimensions, in turn, include *several areas that organizations may take into account* in their self-assessment processes. At this level, the model is designed to be flexible. Consequently, it will be up to the organizations themselves to define the areas that will actually be considered, on the basis of their particular circumstances and characteristics.

Exhibit 3 (continued)

5. Scoring criteria

If the organization decides to carry out the self-assessment process using the integral environmental management model to obtain a numerical assessment of its own environmental performance, then the scoring criteria will be as follows:

- All of the model's dimensions will have the same weight of 100 points. The basic reason for this is that the model is a system in which the different dimensions are interrelated. Consequently, it is vital to learn and improve in each of them. We consider that giving different weights to different dimensions could convey a dangerous message, in that certain dimensions might be given preference over others. Furthermore, the model is not designed to provide a basis for awarding prizes; its purpose is to facilitate self-assessment, learning and improvement.
- In principle, and for the same reasons as above, all of the subdimensions must also have the same weight, although an organization may decide to alter this weighting, depending on its characteristics and circumstances.
- In the «milieu», «strategy formulation and planning», «capability improvement», and «management involvement» dimensions, the scoring will be as follows:
 - What are we doing? 1-100 points
 - How are we doing it? 0.1 - 1 (multiplier of «what»)
 - Where are we doing it? 0.1 - 1 (multiplier of «what»)
- In the «scorecard» dimension, the scoring will be as follows:
 - Subdimension 1: 1-100 points.
 - Subdimension 2: 0.1 - 1 (multiplier of subdimension 1)
 - Subdimension 3: 0.1 - 1 (multiplier of subdimension 1)

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