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CORPORATE ENVIRONMENTAL STRATEGIES AND THEIR IMPLEMENTATION

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Recently, many companies have taken a proactive approach to the environment, transforming the nature of their organization and products to reflect this. They are discovering that well-formulated environmental strategies can lead to a number of business advantages, such as better quality, reduced costs, improved environmental image, and the opening of new markets.¹ In the best examples of this approach, relations with stakeholders (such as regulators, local communities, and environmental groups) improve along with business profits.

However, the implementation of these highly acclaimed strategies raises several issues for firms about the extent to which new activities should be integrated with existing ones, the speed with which changes should be initiated, and the scope and consistency of change across business units and geopolitical boundaries. This article examines the environmental strategies and implementation schemes of three companies in different industries: Volvo, Polaroid, and Procter & Gamble.

Context: Environmental Pressures as a Strategic Opportunity

Many firms are taking a hard look at their environmental performance as a result of rapidly changing stakeholder pressures. Government regulators have assembled a dizzying series of laws under which firms must report and ensure

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environmental compliance. International organizations have written treaties calling for better global business conduct, and non-governmental organizations (NGOs)—which are becoming more and more internationally focused and professionally operated—are appealing to governments and businesses alike to change course. Shareholders and consumers are also applying pressure to corporate management, and even industry groups are calling for environmental standards and voluntary action. All of this adds up to an uncertain, but certainly changing, future for which industry must prepare.

To react to these pressures, most multinational firms have declared general strategies toward the environment. For example, over 80% of Fortune 500 firms have written environmental charters.² Many have also joined industry alliances seeking to pool resources and share risk in responding to the environmental pressures in their industry. A growing number of industry codes prescribe improved practices, including the widely-publicized Valdez Principles, signed by General Motors and Sun Oil.³ Clearly, what was thought of as radical business practice five years ago has become mainstream for firms.

In deciding on an environmental strategy, managers must consider the company's position with respect to both market and nonmarket factors.⁴ Market strategy involves using environmental issues to create a competitive advantage for the company through cost savings and increased profits. For example, products like organic produce and recycled paper can command premium prices in some markets due to their "green" attributes.⁵ Nonmarket strategy, on the other hand, centers on interactions with stakeholders—regulators, local communities, and environmental interest groups. These strategies involve creating value by improving overall, not just market, performance and image.

For the environment and other "values"-driven issues, nonmarket strategy is critical if firms expect to contribute to the ongoing shaping of their operating context. Many effective nonmarket strategies provide opportunities for firms to create dialogue with other stakeholders, rather than reacting only when forced to do so. For example, some large industrial projects have chosen to engage the local community in discussions prior to siting or expanding facilities, in order to avoid costly nonmarket conflicts later in project development. Other nonmarket strategies may provide competitive advantages by recognizing new opportunities created by regulation or public sentiment. In these ways, some multinationals are able to capitalize on a more environmentally restrictive business context.⁶

Implementing Corporate Environmental Strategy

Well-formulated corporate environmental strategies provide the framework for taking advantage of both nonmarket pressures and market opportunities. However, the real challenge lies in moving from the formalities, generalities, and value statements of a corporate strategy document to the reality of implementation at the plant and project level. Implementation

TABLE I. Programmatic Alternatives in Environmental Management

Structures for environmental goal setting	A structure for environmental management to internalize and meet regulatory and more proactive environmental goals, through allocating environmental responsibility, specifying the flow of internal and external information, and offering guidelines on how to carry out its environmental goals
Mechanisms to monitor and review environmental performance	Monitoring of environmental achievement through direct reporting of environmental activity and environmental auditing
Incentives and controls to encourage environmental achievement	Establishment of incentives and controls to emphasize the company's commitment to environmental performance, and to encourage employees to perform in a manner that is consistent with this commitment
Guidelines and tools for environmental investments	Creation of financial guidelines and management tools to suggest how managers can consider such benefits as long-term financial savings and avoided costs when making environmental investments
Methodologies and tools to assist in environmental decision making	Development of tools to help evaluate the environmental impacts of product and process decisions, systems to record company activities and their associated risks, and/or standard operating procedures to guide employees when performing environment-related tasks
Guidelines for communication and negotiation with stakeholders	Communication and negotiation with company stakeholders, including participation in environmental debates and financial support of environmental activities

involves making difficult decisions about the degree to which new initiatives should either be woven into or kept separate from existing activities. The speed of implementation and the scope of change across geopolitical boundaries are also critical issues. Implementation of environmental strategy represents a critical, under-examined aspect of corporate activities in the 1990s.

To compare environmental strategy implementation at three firms, we created a series of representative categories within which firms must choose actions to fit their overall strategy. As presented in Table 1, we call the options a firm has under these categories "programmatic alternatives." These types of structures, guidelines, incentives, and tools are called upon in the implementation process.

Each company has its own profile of alternatives within this framework. "Cookbook" approaches to environmental implementation, which suggest a common set of choices, may be encouraged by some consulting firms, industry groups, and NGOs. However, each firm must find its own style of implementation, according to the pressures bearing on its unique core business.

Strategy and Implementation at Volvo, Polaroid, and Procter & Gamble

The three companies we examined all differ in size, markets of operation, context, and culture. However, each attempted to use environmental issues proactively, developing a unique strategy (market and/or nonmarket) and implementing it on existing activities. The following case studies summarize each firm's overall strategy, path of implementation (related to its unique programmatic alternatives for implementation), and results. They are all based on interviews and communications with officials at the companies.

Volvo

The Volvo Group currently consists of five product companies: Volvo Car Corporation, Volvo Trucks and Busses, Volvo Penta (marine and industrial engines), Volvo Aero (aircraft and space engines), and Volvo Construction Equipment. The Group's sales in 1994 totaled over SEK155 billion (approximately \$21 billion).⁷ In 1989, Volvo chairman Pehr Gyllenhammar formed an environmental task force whose members included the top managers of each Volvo Company to set a new environmental strategy. Gyllenhammar was responding to a change in the salience of environmental issues in Sweden and elsewhere during the 1980s. At that time, the magnitude and scope of environmental pressures from regulators and environmental activists were increasing, and this was perceived to threaten the long-term survival of Volvo's products. In response, the task force decided to change Volvo's approach to environmental management.

As described by one employee, the task force was a way for Gyllenhammar "to manifest a true conviction that industry had to show the way and to find a better image for the company—we were not the ones trying to back off from our responsibilities. We wanted to fix them."⁸ Guided by Gyllenhammar's vision, the task force developed Volvo's environmental strategy. In many ways, this new initiative was a natural extension of Volvo's already strong record of social concern. As consumer interest grew, Volvo hoped to leverage its reputation for safety by marketing its products on environmental performance as well. Building on their earlier strategy of selling safety, Volvo sought to make the environment a "cornerstone" of the company and strove to develop a unique corporate environmental profile. This meant, in part, that the company would begin focusing on staying ahead of legislation.⁹ Volvo also wanted to increase its legitimacy and credibility in the political arena, a goal which could be achieved through extensive communication of Volvo's environmental activities to company stakeholders.

If Volvo managers were going to claim that they "cared" about the environment, however, it was important that they could back up these claims. For production, Volvo pledged within financial constraints to adopt manufacturing processes that have the least possible impact on the environment. For products,

Volvo pledged to develop and market products with superior environmental properties.

To implement this strategy, Volvo established new management structures for setting goals. Each section of the Volvo Group, including divisions like the Truck Group, is required to participate in this process. Top-level managers set broad long-term goals for the Volvo subsidiaries, while project level managers set more specific minimum standards and mid-range goals. As a result of this flexibility, many of the environmental changes that were focused on at different plants, and across diverse product lines, were tailor-fit to specific business units. Volvo's truck plants, for instance, had a different set of priorities than its car plants, because of different social demands on the two products.¹⁰

Volvo initiated one of the most extensive environmental training programs in industry history. All employees, as well as suppliers and dealers, would be trained—in total, about 70,000 people. The training program included instruction on several environmental issues and the action the corporation was taking on them. It also provided information on what each employee could personally do to improve environmental performance at Volvo. Volvo also developed two new tools to assist in environmental decision making at the product and process design stages. These tools would help employees evaluate material and chemical choices from an environmental point of view and bring a total life cycle consideration to bear on the beginning of product and process development.¹¹

Many of its environmental programs were slowed down due to the recession of the early 1990s, but the Volvo Group executive members recently revisited the environmental strategy and began to push harder for environmental changes. As explained by the current Director of Environmental Affairs, Anders S. Rison Karrberg, "We are going to be one of the top three companies by the year 2000." This new vision was communicated throughout the organization. At the same time, improved financial performance allowed managers in the company to respond aggressively to this renewed commitment.

Corporate wide "working groups" were established in four major areas: recycling, environmental information, production, and EMAS (the standardized European Eco-Management and Auditing System). The Group also developed Volvo Environmental Management Standards (VEMS) to further direct member companies. Where needed, company level environmental structures were also changed for increased coordination and empowerment. The car company formed an Environmental Competence Center, for example, when the AB Volvo Board suggested that it had to have a clearer and stronger priority on environmental performance. This center acts as a strong pressure group to integrate environmental issues into company decision making, and clearly identifies where the responsibility for environmental programs lies within the company.¹²

These new organizational and management initiatives have made Volvo better equipped to set and achieve environmental goals throughout the product

life-cycle. Goal setting activity directly enhances each divisions capability for continual improvement. Volvo's 850 model incorporated a number of design changes that enhanced fuel efficiency and the vehicle's recyclability. The implementation of VEMS and new technology systems have increased Volvo's ability to monitor and use environmental information over the total life cycle, making it easier to integrate environmental concerns into the design stages of products and processes. Environmental guidelines for suppliers and distributors, as well as research on vehicle scrapping and recycling, are additional components of this life cycle approach. Technology changes in the paintshop of Volvo's Torslanda production plant made it, at the time, the lowest emitter of volatile organic compounds (VOCs) among auto plants throughout the world. Volvo intends to continue its life cycle focus and has announced that by the year 2000, the first Volvo with a "complete" life-cycle declaration may be introduced (the declaration will include about 80% of the auto's life cycle).¹³

Since these changes, environmental management staff report more commitment, support, and resources from within the company for environmental initiatives. In addition, external groups seem to be responding positively to the changes. Volvo is well prepared for certification under ISO 14000 and the more stringent European Eco-Management and Auditing System (EMAS) as a result of its environmental strategy.¹⁴ However, the nonmarket benefits of improved regulator relations were achieved at some expense—it is costly to be the lowest VOC emitter in the world.

To date, Volvo has not aggressively marketed its cars on their environmental merits. However, the car company is in the midst of a self-styled paradigm shift from "boxy and boring" to "safe but sexy" vehicles. Volvo wants to retain its values-oriented buyer niche while broadening the appeal of its cars. Integrating the environment with its other core values—quality, safety, attractiveness, and fun to drive—will be a key challenge. Consumer preference for environmental cars is not driving sales for Volvo or for any other carmaker. For the company's long-term strategy, however, the environment is believed to be critical to retaining a good corporate citizen image.¹⁵

Polaroid Corporation

The Polaroid Corporation has been designing, manufacturing, and marketing cameras, film, light polarizing filters, lenses, and chemical optical and industrial products since 1937. In 1995, its net sales totaled approximately \$2 billion. In the past, Polaroid's strategy towards pollution control was one mainly of compliance with regulation and reliance on "end-of-pipe" controls. It focused a large portion of its waste treatment activities on the use of incineration. In the early 1980s, Harry Fatkin, Polaroid's director of Health, Safety, and Environment, began to find compliance an "elusive goal which required continually running hard to stay in place." Federal and state environmental regulations kept changing, and regulators from the two levels of government did not always agree. Fatkin and others began to feel that compliance was a losing strategy.¹⁶

After serving on a government-sponsored panel on waste reduction, Fatkin argued to others in the company that by preventing pollution in the first place, Polaroid could avoid being trapped in the "regulatory rotary."¹⁷ In addition, preventing the use of chemicals at the source of generation would help protect the company from being held liable for problems associated with hazardous waste disposal. It would also help rectify Polaroid's image, tarnished in 1987 when Greenpeace accused Polaroid of being one of the largest polluters in Massachusetts. Fatkin brought the idea of pollution prevention to a meeting of the Health, Safety, and Environment Steering Committee, whose members included MacAllister Booth, the president and CEO of Polaroid. As a result of this meeting, senior management decided to commit resources to a major company-wide environmental initiative.

Unlike Volvo, Polaroid's program was initiated by middle management, but senior management quickly bought in. In 1987, Booth announced the Toxic Use and Waste Reduction (TUWR) Program at an annual stockholders meeting. He stated that the ultimate goal of the program was to eliminate nearly all toxic emissions to the environment. He committed Polaroid to reducing, per unit of production, the amount of chemicals used and waste generated throughout the corporation by ten percent every year for five years, beginning in 1988. TUWR was a part of broader program that also included compliance and community outreach.

The use of toxics would be measured with a tracking system called the Environmental Accounting and Reporting System (EARS), which grouped chemicals into toxicity categories, targeting the most toxic substances for more urgent reduction or elimination. An important aspect of the data-tracking system was its divorce from Polaroid's financial accounting systems. Per-unit reduction, it was felt, should be the goal, and economic benefits would accrue naturally from this process.

The TUWR program was implemented in a top-down fashion. The overarching program goal of almost 50% toxic use reduction in five years was generated at the corporate level, and was purposely set ambitiously and without an in-depth "feasibility study." The point, senior managers believed, was to inspire and drive change with ambitious goals and strong signals from the top. However, some engineers and workers questioned the lack of flexibility and total feasibility of the goal.

Senior management also agreed on the initial EARS program architecture, and then expected divisions to assume responsibility for the new activities of reporting chemical use by toxicity and finding ways to reduce use. Some employees, faced with these new duties, objected to the system and its complexity. Engineers in its chemical manufacturing facility felt that it was improperly taking process control away from them. The priority for chemical use under the new system was prescribed by the EARS toxicity ranking, rather than the engineer's discretion after considering all the factors involved in that particular manufacturing system.

In one instance, chemists objected to the company's assignment of dimethyl sulfate to the most-toxic rank. Although it is acutely toxic, its high boiling point and low volatility make it relatively easy to handle. It is extremely useful and controllable, and alternative (lower-ranked) chemicals would likely pose greater hazards. In response to engineers' complaints over flexibility, divisions were told exceptions could be made for those toxic chemicals which they judged integral to certain tasks.

To address the organizational obstacles, Polaroid used a strong educational campaign. In addition to a strong message of commitment from senior management, carrying with it a "Just Do It" mentality, Polaroid officials undertook an extensive informational campaign that emphasized the value of the system. An additional method of encouraging divisional participation was through the performance review process. Polaroid managers were evaluated based on seven criteria, one of which was the environment. It is made clear that TUWR progress was an important element of total performance. In addition, through the data-tracking system, divisional reductions in toxic use were easily credited.¹⁸

After its first five years of experience with toxic reduction, Polaroid found that significant economic benefits had accrued from improved materials accounting and waste reduction resulting directly from its TUWR program. Product and process quality improvements were also implemented as a direct result of the close scrutiny required for the data-tracking component of the program. Polaroid officials believe that TUWR has become a central part of its environmental management program.¹⁹

On the downside, however, Polaroid found it increasingly difficult to reduce waste after the first years of the program. Once initial changes had been made, Polaroid found that major reductions in the most toxic materials would only result from large-scale process changes. These take substantial investment of time and resources, and they only show progress at the end of the process retooling effort. For example, a move to aqueous-based film coatings was considered a major, long-term goal for Polaroid in both reducing toxic materials use and reducing production costs. The realization of aqueous-based coating took longer than expected; it will be widely implemented in the company in 1997.²⁰

Polaroid's EARS system is relatively complex and proscriptive. It introduced significant new burdens for engineers and workers, through its new data-reporting requirements for materials use. Building more user friendliness into the system might have avoided some of the organizational resistance Polaroid faced during implementation. In addition, had Polaroid linked its material use reductions to cost savings directly, the program might have lessened the perceived burden of new duties on employees. Linking toxic reduction and divisional cost reduction, through materials purchasing and disposal, for example, might have helped workers to see stronger rewards in their new labors.

As a result of Polaroid's environmental initiatives, they have enjoyed greatly improved public relations with regulators. Polaroid played a central role

in the design of an innovative state law focused on reporting toxic material use. Polaroid's proactive stance on environmental issues allowed it to be better prepared for the new law's reporting requirements. In addition, many local and national environmental groups respect Polaroid and cite it as a positive example of industry environmentalism. However, some environmentalists are still dissatisfied with Polaroid because they had not taken more radical steps to redesign their "disposable" cameras to lessen the overall environmental impact of producing that type of product line.

Procter & Gamble

Established in 1937, Procter & Gamble (P&G) is a leading consumer products company in the United States and abroad. Its net sales for all of its geographic areas totaled \$30.3 billion for 1995.²¹ Over the course of the 1980s, legislation, consumer comments, and the popular trade press were all sending signals to Procter & Gamble that environmental issues were becoming broader in scope and, more important, a larger factor in consumer decisions. Monitoring these signals, several managers at the corporate and business level, including John Smale, P&G's chief executive at the time, all reached the same conclusion: Making P&G's products environmentally compatible was not only socially responsible, but was also a valuable opportunity in the marketplace.²²

Through its international operations, P&G was already integrating global environmental concerns into their business initiatives. In 1988, as a response to increasing environmental demands in Germany, P&G introduced Lenor, a fabric softener in a super concentrated form, and sold it in a plastic refill pouch that reduced packaging by 85%. This move actually increased P&G's brand sales by 12% and helped to alleviate pressures from government regulators and environmental activists.²³

Smale recognized that the same pressures and opportunities would soon exist in the United States marketplace. Motivated by P&G's success with Lenor, in the summer of 1988, he asked one of his vice presidents to establish an environmental group to prepare a solid waste position for the company. In light of the growing pressure for environmentally compatible products and the business opportunities that existed for such products, the environmental strategy undertaken by P&G focused on reducing and preventing environmental impacts of product and packaging design, manufacture, distribution, use, and disposal. Equally important to this technical strategy was to sell these environmental improvements just as they would any other product improvement demanded by the public, and to communicate extensively about its environmental activities with company stakeholders.²⁴ The team developed an environmental policy and a specific solid waste policy, along with principles and guidelines to inform employees of the corporation's intentions with respect to environmental activities.²⁵

P&G's approach utilizes source reduction methods and integrates the use of post-consumer recycled materials in packaging. It has become P&G's goal to

prevent and reduce environmental impact from its products and packaging wherever possible. Every production team must address two questions: Can less material be used in the packaging? and Can more recycled material be used in the packaging? To encourage compliance with these goals, managers for each product category are required to establish a goal for their particular products: for example, to increase the use of recycled plastic by 20% in a year. These category goals and results are reviewed every six months by a management group headed by P&G's chief executive.

In addition to pursuing material reduction and recycling, P&G worked with suppliers to facilitate plastic recycling by generating markets for these recycled materials. In fact, they worked to create an entire recycling infrastructure in many communities. Additionally, consumer input on the environmental appropriateness of P&G products and packaging is obtained via questions integrated into focus group product evaluations, a hallmark of P&G product development.²⁶

P&G has achieved environmental benefits with continued economic performance. The benefits of P&G's source reduction initiatives have even exceeded the initial expectations within the company. For instance, Downy refill pouches, with a super-concentrated product, reduce package size by 75%, thereby costing consumers less, and actually increasing Downy market share.²⁷ Source reduction has also provided an opportunity for promoting brand sales through the introduction of new product/package combinations. By pursuing environmental goals, P&G created new business and marketing opportunities that increased its profits. Other consumer products companies like Colgate and Lever Brothers have followed P&G's lead in developing concentrated detergents and powders, using more recycled plastic, and advertising environmental attributes to consumers.²⁸

In general, P&G improved stakeholder relations with regulators and environmentalists. However, P&G still was seen by some environmentalists as not doing enough. Disposable diapers remain a major concern of environmental groups. Although P&G has been sponsoring experiments with composting diapers and other consumer waste for many years, it has been sued by the Attorney Generals of ten states for falsely advertising the recyclability and environmental friendliness of its diapers.²⁹ It has also been criticized by the Environmental Defense Fund for not allowing deeper participation of environmental organizations in its waste reduction and disposal activities.³⁰

In addition, P&G has noted that its consumer-driven environmental approach is limited by the geographic and product-specific diversity of demand for its products. For example, managers of some product lines in health and beauty care were reluctant to eliminate paperboard packaging because of consumer sensitivity to smaller-looking shelf products. However, once they tried selling antiperspirants and deodorants without cartons, three million pounds of paperboard a year were removed from the municipal waste stream.

Comparing Strategies and Implementation

The three companies examined in our work formulated their environmental strategies to be, wherever possible, consistent with their operating context and characteristics and also with their existing market and nonmarket competencies. Volvo formulated a strategy to deal with increasing pressures from *nonmarket* regulators, community groups, and consumers. Its strategic emphasis on cooperation with government regulators was consistent with the existing consensual business-government relations in Sweden. When developing this strategy in response to regulatory pressure, however, Volvo also considered product and financial issues that might constrain implementation. Among the areas of Polaroid's business, production wastes were the most targeted by *non-market* regulations and environmentalists, and the company focused its strategy on production, following a decision-making process similar to Volvo's. Procter and Gamble, seeking to capitalize on increasing *market* demands for environmentally friendly consumer products, focused its strategy on the post-consumer waste created by its products and packaging, an approach consistent with their traditional concern for meeting consumer needs.

These firms also took their capabilities for implementation into account in defining environmental programs. Tailoring their programmatic choices to their organizational competencies facilitated the initiation of proactive environmental policies. The ease of implementation in these firms may have depended on the degree of consistency between existing structures and new environmental strategy. By ensuring adequate consistency, existing core business strategy is less likely to be disrupted.³¹

Table 2 compares and summarizes some of the key programmatic choices made at these firms. Each of the three companies examined tended to develop environmental goal setting structures that matched the level of contextual and product diversity in their firm. Volvo and P&G, with diverse products and geographic locations, designed goal-setting components with enough flexibility to incorporate these differences. Volvo's division leaders, and P&G's brand teams, were given discretion to set goals and implementation styles that matched their activities. Polaroid, however, with less diverse products and manufacturing locations, designed a program with an ambitious, measurable goal of reducing toxic waste per unit of production by 10% for five consecutive years.

Volvo and P&G designed programs that were well matched with their company culture. Volvo's use of informal control mechanisms fit well with the independent nature of the product companies and a company culture that supported Volvo's socially responsible activities. By considering environmental protection as another consumer need, P&G was able to match its programs to the company's culture and its existing decision-making processes. Rather than establishing major new managerial or engineering processes, P&G fit its environmental components with its existing brand management culture and consumer focus group driven design process.

TABLE 2. Environmental Management Programs Compared

Programmatic Choices	Volvo	Polaroid	P&G
Structure for environmental goal setting			
• Management Structure	Groups at division level and managers at lower levels to set goals	Committee at corporate level	Broad goals set by corporate level team; Specific goals set by each division, guided by teams
• Focus of Goals	All areas – product, production, training, management	Use and disposal of hazardous material in production	Product waste management and consumer research
• Flexibility	Very flexible	Less flexible	Some flexibility
Mechanisms to monitor and review environmental performance			
• Reporting Structure	Reviewed at each level of organization	Reviewed by top management	Reviewed by top management
• Auditing	Plant audits	Chemicals monitored through database	Plant audits
Incentives and controls to encourage environmental achievement			
	Environmental Training used as informal incentive	Division performance reviews; Training to encourage employees	Brand performance reviews
Guidelines and tools for environmental investment			
	Pick best technology with regard to environment or send decision to higher level	No formal criteria	Resources available for customer demanded changes
Methodologies and tools to assist environmental decision making			
	Life cycle tool; Chemical data base	Chemical data base for risk identification	Life cycle analysis
Guidelines for communication and negotiation with stakeholders			
	At group and company level; Environmental standards for suppliers and dealers	Mainly at corporate staff level	At corporate and brand level; Work with suppliers, customers and community groups

Successful implementation of corporate environmental strategies proved challenging for all three companies, particularly when they were attempting to address the concerns of outside interest groups. All of these firms found conflicts between their environmental strategies, as they had tailored them to corporate competencies, and the expectations of outside stakeholders.

For Volvo, its environmental strategy and program, which includes the continued production of larger, safer, and more fuel efficient automobiles, was inconsistent with pressures from environmental interest groups. This problem

will grow as these interest groups increase in size and power. Competitors, such as Mercedes-Benz, have responded to these pressures from external groups by revising their product strategy to offer a full range of products, including a small, fuel efficient "city car."

Polaroid and P&G faced similar conflicts. For Polaroid, interest groups applauded their waste management practices, but continued to show discontent over their disposable camera product. P&G exhibited similar incongruity between its environmental activity and its organizational context. P&G's strategy mainly emphasizes waste management with regard to its product packaging, but has not developed adequate solutions for the environmental problems created by some of the products themselves, especially its huge disposable diaper business. P&G has invested millions of dollars in exploring the feasibility of composting for municipal waste in general, and its disposable diapers in particular.³² It has yet to find technically and economically feasible methods of disposal for its diapers. To address the conflict between its product strategy and environmental ethics, P&G has undertaken several aggressive communication campaigns. However, these campaigns have been challenged by environmentalists and public officials.

The Implementation Challenge

Tailoring environmental strategy to existing practices facilitated internal implementation at the companies we studied, but it was also a source of conflict. Further challenges to implementation arose as a result of the need to develop new management structures, as well as from inconsistencies between goals and resources, and across business divisions and diverse geographic markets.

Companies moving from compliance to more proactive goals may need to adapt existing management structures or create entirely new ones. The structures that have evolved for compliance purposes were often created to buffer the organization from environmental pressures and may not have the capability or lines of communication necessary for implementing a proactive strategy. Both Volvo and P&G chose to develop new management structures to implement their environmental strategies, hoping to develop distinctive competencies in the area. Changing the structure of an organization is extremely difficult, as it involves the awesome task of changing the individual and group relationships within it. As was shown at Volvo and P&G, resistance to strategic change and new environmental programs can be reduced by tying these initiatives to the existing company culture and organizational competencies and including them in performance review.

Matching goals to resource availability became an additional barrier for Volvo and Polaroid at various times. This problem recently became apparent at Polaroid, as goals have become harder to reach and the divisions have needed increased financial, technical, and human resources to meet them. One lesson for this firm and others is the need to design flexible goals that account for the

time necessary to develop major new environmentally sound production methods.

Environmentally proactive companies may encounter additional difficulties when individual business units vary in their environmental commitments and capabilities. Environmental groups and regulators hone in on business units with outlying levels of environmental performance. When P&G's health and beauty care products were slower to eliminate cardboard packaging, for example, environmental groups saw this as an opportunity for leverage.

Multinational companies confront another problem that stems from geographic diversity. When social and regulatory trends in their home country dictate corporate environmental practices worldwide, a company might respond sluggishly to the operating context in the host countries. For those companies that do recognize variations in environmental pressures, yet another problem is presented. These firms may allow environmental practices in foreign operations to be dominated by the culture and norms of the host country, leading to undesired inconsistency in company activities. This danger in the environmental arena was recognized as early as the 1970s, but accepted as a necessary evil of global operation.³³ Today, as environmental standards continue to gain complexity in many countries, finding the right balance in addressing the needs of different organizational substructures and geographic units is a necessary ingredient for effective implementation.³⁴

Factors Contributing to Successful Implementation

While changing their approach to environmental strategy and internal management, each of these three firms experienced varying degrees of strain and conflict. Their experiences demonstrate that the process of change is facilitated by certain characteristics:

- visible commitment of senior management to corporate environmental policy, along with active encouragement of environmental initiatives that emerge from lower levels of the organization;
- creation of a management structure that removes buffers and encourages integration between environmental issues and all other business operations;
- formulation of an environmental strategy and supporting management system that blends with the attributes of the existing corporate culture;
- recognition and adjustment to the needs and abilities of organizational substructures; and
- recognition and adaptation to the initiatives taken by domestic and international environmental and consumer groups.

Many of these points may be familiar to practitioners and management scholars, and the importance of reiterating them lies with a few critical benefits they provide. One is that while support from top managers is crucial to success,

proactive environmental initiatives often come from middle and lower parts of the organization. Recognition and encouragement of these initiatives are often keys to successful strategy implementation. A second benefit of following these points is that they can help environmental strategy coincide with existing corporate strategy and organization, softening tensions in the organization that often arise from organizational change.

Even with major organizational change, firms are far from assured of regulatory relief or good relations with environmental groups. In fact, environmentalists will naturally continue to object to many of the environmentally unfriendly products produced by corporations. Firms need to move beyond image-building by demonstrating commitment to continued improvements in the environmental performance of their products and processes. Only then can corporations expect greater acceptance by many of these groups.

Conclusions

Environmental issues are forcing many senior corporate executives to rethink how they conduct their businesses. This process involves not only an evaluation of the environmental impacts of existing products and production processes, but also an assessment of environmental liabilities and opportunities throughout the corporate value chain. Proactive companies recognize that strategic opportunities exist for companies that move early on environmental issues, a move that often requires the establishment of new environmental management systems. Since moving too fast can pose significant costs, most companies are moving incrementally toward a vision of the "sustainable" corporation.

In recent years, the importance of corporate environmental behavior has been permanently elevated throughout the world. More and more senior managers will be turning toward new environmental strategies as shareholders, interest groups, and regulators begin to question not only whether a company is operating in the red or the black, but also in the "green."

Notes

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 7. Volvo Annual Report, 1994. Because of changes in exchange rates, the numbers given in U.S. dollars are approximate and are based on a rate of 1 SEK = \$0.135.
 8. Inge Horkeby, Manager Environmental Protection, Volvo Technical Development Department, Interview with Sandra Rothenberg, Gothenburg, Sweden, January 15, 1992.
 9. Olle Boethius, Environmental Affairs, Volvo Car Corporation, Interview with Sandra Rothenberg, Gothenburg, Sweden, 20 January 1992.
 10. Sandra Rothenberg and James Maxwell, "Extending the Umbrella of Social Concern: Volvo's Proactive Approach to Environmental Management," *Corporate Environmental Strategy*, 3/2 (Fall 1995).
 11. Ibid.
 12. Ibid.
 13. "Volvo Miljoemaerks foere ar 2000" [A Volvo will be environmentally labeled before the year 2000], *Ny Teknik*, Issue 6, (1994).
 14. Rothenberg and Maxwell (1995), op. cit.
 15. Interview, William Shapiro, Manager, Regulations and Compliance, Volvo Cars of North America, December 3, 1996.
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 17. Ibid.
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