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Corporate strategists must learn how to cope more effectively with the constantly changing and increasingly complex outside forces that affect the structure, goals, and operations of their organizations. Their survival depends on it.





How to Use Environmental Analysis in Strategy Making

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he environment of an organization consists of the outside forces that directly or indirectly influence its goals, structure, size, plans, procedures, operations, input, output, human relations, and so on. Environmental analysis is the study of these forces, the relationships among them, and their effects and potential effects on the organization. The increasing rate of change in all aspects of the environment and the expectation that future organizations will be more complex and more dependent on their environ-



ments indicate that, to survive, organizations must conduct environmental analysis.

An environmental analysis helps an organization achieve compatibility with its environment. This compatibility should be a product of strategy making, as Chandler defines it in *Strategy and Structure* — "the determination of the basic long-term goals of action and the allocation of resources necessary for carrying out these goals." Chandler views strategy making as a "response to shifting demands, changing sources of supply, fluctuating economic conditions, new technological developments, and the action of competitors." He perceives changes in strategy as the result of awareness of opportunities and needs caused by changes in the environment and the creative response to these changes.

Although various aspects of environmental analysis and strategy making have been studied extensively, the complex process in which formal analysis is actually used in strategy making has not been systematically investigated. What follows is a report of the findings of one such investigation and recommendations based on the findings.

## A descriptive model

On the basis of research conducted by the author over a ten-year period, four organizations that had environmental analysis units (EAU) advising strategy-making teams (SMT) were selected for in-depth study. These case studies provided data for the preparation of a descriptive model of how environmental analysis was being incorporated into strategic decision making in these organizations at that time. (See chart on page 6.)

The descriptive model is composed of ten phases and their relationships.

Phase 1: Informal and unsystematic environmental scanning. The strategy-making team's constant exposure to the extra-organizational environment enabled it to perform environmental scanning. Although the scanning was casual, informal, and unsystematic, it built an awareness of potential causes for strategy changes.

Phase 2: Perceived environmental causes for strategy changes. The existence of environmental forces and awareness of their effect on the organization did not come suddenly to the SMT's attention. The SMT was aware of potential causes for strategy changes. While this awareness fluctuated over time, it alone did not intitiate strategy changes.

Phase 3: The trigger. The trigger was an event or set of events that initiated either strategy changes or a request for environmental data, or both. Events acted as triggers for a specific strategy-making team if they were preceded by awareness of an environmental effect in a related area. Events that served as triggers took place outside the organization (for example, the





action of a pressure group or a sudden change in the labor market); inside the organization (such as structural changes in the organization or preparation of a budget); or across organizational boundaries (such as the hiring of a new executive).

*Phase 4: Strategy changes.* Only strong triggers produced strategy changes. There was some evidence that the strength of a trigger was related to the time pressure perceived by the SMT; for example, triggers close to the due date of a yearly budget preparation were strong triggers.

Phase 5: Request for environmental data. Most triggers resulted in a request for environmental data alone; only a few triggers were strong enough to cause strategy changes. Even if the strategy-making team decided on immediate action, it still required data for a follow-up or for future needs; thus, in such cases, a request for environmental data usually accompanied strategy changes.

Phase 6: Assignment of environmental analysis project and definition of topic. The definition of an environmental analysis topic by the SMT was influenced by the existing perception about the environment and the trigger. The composition of the SMT, its members' past experiences, and their positions influenced their perceived environment: different teams reached different definitions. The trigger illuminated for the SMT what its members saw as the manifest and immediate aspects of the environment. Thus the assignment of an environmental analysis project reflected, among other things, a specific strategy-making team and its action orientation. A project was assigned in meetings with heads of the environmental analysis unit, at which time the strategy makers described their need for environmental data.

Phase 7: Operational definition of the environmental analysis topic. An operational definition of the project was performed in the environmental analysis unit. Being a staff function, the unit was able to widen the topic beyond its manifest and immediate aspects. The cases studied suggested that the operational definition was a product of:

1. The EAU's interaction with the strategy-making team. The SMT looked for applicable contributions of the project; interaction helped match the operational definition to the assignment definition.

2. The abilities of the unit. These depended on its members, the disciplines in which they had trained, their professional level, and the approaches and research techniques they had mastered. The environmental analysis project was defined to match these abilities.

3. The unit's past experience. When experience in other projects showed that strategy changes were not a direct project of their recommendations, it contributed to a functional definition that focused on the practicability of the study and its academic excellence, rather than on its applicability.

Phase 8: Collection and analysis of environmental data. It consumed





time to collect and analyze the environmental data—design of the study, field research, validation of sources, data processing, and analysis. If the trigger did not repeat itself during this period, the strategy-making team's interest was deflected into other topics.

Phase 9: Preparation of a report and preparation of the analysis to the strategy makers. This phase ended a project. The analysis usually included the environmental analysis unit's recommendations for strategy changes. These recommendations were not directly adopted. Various aspects of the process contributed to the lack of a phase of translation of environmental analysis into specific strategy changes. Among the problems with the process were the gap between the assignment definition and the operational definition of the topic; the preoccupation of the SMT with other subjects when the recommendations were made; the limited focus of the environmental analysis and its being disjointed from other areas; and the lack of consideration by EAU, by virtue of its assignment and data, of internal political and organizational factors. However, the analysis and recommendation did have an indirect impact: they enriched perception of the environmental and of alternatives for changes.

Phase 10: Indirect impact of environmental data and analysis on strategy making. This phase paralleled phases 8 and 9. The exposure of the strategy-making team to new data and analyses was an educational process that enriched the team's perception of the environment. The study showed that this enriched perception of the environment had an impact on future strategy making. This impact was defined as indirect because strategy changes did not immediately follow and actual strategy making was not a direct product of EAU recommendations.

## Implications of the findings

What are the implications of this model, based as it is on an intensive analysis of actual practice in four organizations? There are, obviously, implications for both the strategy-making process and the use of environmental analysis.

#### The strategy-making process.

Studying four organizations elucidated the important role of triggers in the complex process of strategy making. Phases 2, 3, and 4 in the descriptive model are not unique to the use of environmental analysis in this process. There are two requirements for strategy changes—perceived causes for strategy changes and a related trigger. These two may produce strategy changes. The cases pointed out the existence of triggers that initiated the strategy-making process, but did not reflect their characteristics or their relationships with other phases of the process.



The field investigation, however, strengthened previous findings that the strategy-making process is heavily dependent on the structural context and the specific actors. Perceptions about the environment, responses to triggers, definitions of study topics, and the impact of data and their analysis were highly subjective: the strategy-making process may change with changes in the composition of the team, in their positions in the organization, in their past experience, in their abilities, and in the interpersonal relationships among them.

The existence of staff units for environmental analysis or corporate planning and their location in the organization have an impact on the strategy-making team. These units can serve as "time buffers" to whom requests for studies or plans are assigned when a trigger occurs. Thus, although strategy making itself is not assigned to these units, it is delayed. The delay may serve to dull the perceived need for change, or to provide time for studying alternative changes.

#### Use of environmental analysis

The descriptive model points out that formal environmental analysis has been used only indirectly in strategy making. The SMT's initial perception of the environment—a product of casual, informal, and unsystematic environmental scanning—widened and became more profound through exposure to new data and analysis. This educational process depended heavily on the relationships between the SMT and the EAU.

There was no phase of direct translation of environmental analysis into strategy changes. This missing phase is highly subjective because it is performed with partial data; it has to be modeled to the specific SMT. In order to perform this phase, the SMT has to be well acquainted with the previous phases of the analysis, but because of daily pressures, this investment in time was impossible. Furthermore, thorough understanding of the analysis requires skills similar to those of the analysts, which the SMT did not possess; the vocabulary used, the assumptions, the approaches, and the techniques employed in the environmental analysis were alien to the managers. On the other hand, the EAU could not perform this translation phase for the SMT. Differences in past experience, time orientations, skills, and abilities did not permit interchangeability of functions between the two groups.

## A better way

Correction of these malfunctions of the process, which became evident during the study, is the basis for a recommended model. (See chart, page 10.) The accompanying additional recommendations are based on the practice of environmental analysis as revealed in the field research. The discussion focuses on deviations from the descriptive model and includes







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clarification of the participants' roles, changes in existing phases and their relationships, and recommendation of additional phases.

# 1. Clarification of roles

Normative approaches, which stress the availability of complete information, its objectivity, and its rationality, contribute to unfulfilled expectations. Strategy makers expect to delegate part of their responsibility to the EAU. Furthermore, when recommendations of the environmental analysis unit are delayed or when they do not fulfill the SMT's expectations in regard to scope or feasibility, doubts about the unit arise. These doubts may focus on the composition of the unit, its abilities, or its obligation to the organization.

On the other hand, professional environmental analysts assume a rational economic strategy-making process; thus they tend to disregard internal political and organizational factors. They expect the SMT to make full use of the analysis, to apply their recommendations completely, and to give the EAU the power to prescribe strategy. In addition, the lack of any provable, direct impact of their work on strategy making causes frustration among the analysts who doubt the moves and integrity of the strategy makers.

These unfulfilled expectations contribute to a snowballing of misunderstandings, ill feeling, and miscommunication, which impedes the impact of environmental analysis on strategy making. Consequently, it is important that strategy makers, environmental analysts, and researchers in academic institutions be acquainted with the fact that data and analysis are only one kind of input to the strategy-making process.

The main task of the environmental analysis unit is to make the results of its analysis known and understood. Analysts should not expect full use of their analysis or the power to prescribe strategy. Top-level managers should not expect to delegate strategy making to specialists. Clarification of the process in the minds of the participants will prevent the crystallization of unrealistic expectations, which sabotage the use of environmental analysis in strategy making. The prevention of these expectations will contribute to the improvement of communication between the two groups and will facilitate preliminary interaction.

## 2. Changes in existing stages

The two-phase definition of a project (phases 6 and 7 in the descriptive model) was critical to the process. The purpose of this definition was to serve as a link between the strategy-making team and the environmental analysis unit, facilitating the convergence of needs and skills. Instead, the study revealed that the definition served to magnify the differences between the two groups. On the other hand, when intensive interactions between the two groups did exist, they matched the operational definition with the assignment

definition. Thus it is recommended that these two separate phases be combined, and, using joint efforts, the two groups should produce an assignment definition that can be used as an operational definition.

The indirect impact of environmental data on strategy making (phase 10 in the descriptive model) drew input from two adjacent phases; the collection and analysis of data (phase 8) and the report of the analysis (phase 9). More frequent exposure of the strategy makers to the data and its analysis will enhance the educational process, which is the essence of the indirect impact. This additional exposure can be achieved through periodical progress reports. Such meetings between the two groups will also serve to familiarize analysts with the strategy makers' needs.

The efficiency of these additional relationships—as well as of existing ones—depends on the quality of the communication between the groups. It is essential that this communication be improved. Organizations should select, from among the possible methods of improving communication, one that fits their needs. Two possible methods are formal management education and job rotation.

Formal management education produces managers with analytic skills, which may serve as a basis for future communication with analysts. Conversely, analysts acquainted with the nature of managerial needs will be more able to communicate with strategy makers. The limitations of this method are clear.

Job rotation may improve communication: When a top-level manager has previously served as a member of an environmental analysis unit, it will be easier for him to communicate with analysts. However, management tends to require from managers—especially general managers—a wide variety of skills, such as operations management, long-range planning, financial management, use of information systems, knowledge of business quantitative methods, and so on. It is difficult to acquire all of these skills through job rotation in one lifetime.

Environmental analysis is one staff function to managers. Thus various methods for improving communication with staff members and making them more effective could be applied.

#### 3. Additional phases (in recommended model)

Phase la: On-going systematic study of the environment. When an analysis is limited to specific projects, it covers only some areas in the environment, leaving blind spots in others. An on-going systematic study of the environment, on the other hand, can locate existing and potential impacts of the environment on the organization.

This phase has to be directed by and complementary to the phase of informal environmental scanning. It should aim at broad coverage of the environment rather than at deep analysis. It would serve two purposes: it would be a complementary source for identifying perceived environmental



causes for strategy changes, and its output may serve as a trigger for strategy changes or for requests for detailed environmental data.

Phase 11. Translation of environmental analysis into specific strategy changes. The basic malfunction of the practice that was revealed in our study is the lack of translation of environmental analysis into specific strategy changes. Direct use of environmental analysis in strategy making requires that this phase be incorporated into the process.

When large amounts of data are collected and analyzed, it may prove useful to establish a special team whose task is to make an environmental analysis action oriented. For this team, new knowledge about the environment will be an input; the analysis itself will be done by research units. The task of the team will be to recommend actions to the strategy makers, based on the environmental analysis.

Another and not totally different way to add this phase is to use advisers. People who have the personal trust of the strategy makers can acquaint them with work of professional departments that have special skills. Advisers may be especially useful in organizations in which the nature of the career of a strategy maker is totally different from that of an analyst—for example, when a government minister is a politician and an analyst is a civil servant.

However, the use of action teams or advisers inserts a third group between the decision makers and the analysts, thus contributing to their alienation instead of to their fruitful cooperation. It is preferred that the translation of environmental analysis into specific strategy changes be performed cooperatively by analysts and strategy makers, as recommended in the model. The findings of the field research raised doubts about such a recommendation; only practical experience can determine the feasibility of having the analysts and strategy makers cooperate in translating the analysis into a plan for changes.

These recommendations are, of course, for organizations for which the descriptive model resembles the way environmental analysis is currently used in strategy making. For managers in strategy-making jobs, the descriptive model is a starting point for evaluating the process of environmental analysis and its use in strategy making in their organizations.

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