The TOWS Matrix ---
A Tool for Situational Analysis

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This article has two main purposes One is to review general considerations in strategic planning and the second to introduce the TOWS Matrix for matching the environmental threats and opportunities with the company's weaknesses and especially its strengths. These factors per se are not new; what is new is systematically identifying relationships between these factors and basing strategies on them. There is little doubt that strategic planning will gain greater prominence in the future. Any organization—whether military, product oriented, service-oriented or even governmental—to remain effective, must use a rational approach toward anticipating, responding to and even altering the future environment.

Situational Analysis: A New Dimension in Strategic Planning

Today most business enterprises engage in strategic planning, although the degrees of sophistication and formality vary considerably Conceptually strategic planning is deceptively simple: analyze the current and expected future situation, determine the direction of the firm and develop means for achieving the mission. In reality, this is an extremely complex process, which demands a systematic approach for identifying and analyzing factors external to the organization and matching them with the firm's capabilities.

The purpose of this article is twofold: first, the concept of strategy and a model showing the strategic process are introduced. This part not only provides an overview of strategic planning, but also alerts the reader to the various alternatives available for formulating a strategy. The second purpose of the article is to propose a conceptual framework for identifying and analyzing the threats (T) and opportunities (O) in the external environment and assessing the organization's weaknesses (W) and strengths (S) For convenience, the matrix that will be introduced is called TOWS, or situational analysis. Although the sets of variables in the matrix are not new, matching them in a systematic fashion is. Many writers on strategic planning suggest that a firm uses its strengths to take advantage of opportunities, but they ignore other important relationships, such as the challenge of overcoming weaknesses in the enterprise to exploit opportunities. After all, a weakness is the absence of strength and corporate development to overcome an existing weakness may become a distinct strategy for the company. Although efforts are now being made to gain greater insights into the way corporate strengths and weaknesses are defined, much remains to be done.[1]

The TOWS matrix, discussed later in detail, also serves as a conceptual framework for future research about the combination of external factors and those internal to the enterprise, and the strategies based on these variables.

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Equally important, the matrix 'forces' practicing managers to analyze the situation of their company and to develop strategies, tactics, and actions for the effective and efficient attainment of its organizational objectives and its mission.

Strategic Planning

The term 'strategy' (which is derived from the Greek word 'strategos', meaning 'general') has been used in different ways. Authors differ in at least one major aspect, Some, such as Kenneth Andrews,[2] Alfred D. Chandler[3] George A. Sterner/John B. Miner,[4] and Richard Vancil,[5] focus on both the end points (purpose, mission, goals, objectives) and the means of achieving them (policies and plans). But other writers such as Igor H. Ansoff[6] and Charles W. Hofer/Dan Schendel[7] emphasize the means to the ends in the strategic process rather than the ends *per se*. The great variety of meanings of the word 'strategies' is illustrated in the glossary of one book:

> [Strategies are] general programs of action and deployment of emphasis and resources to attain comprehensive objectives; the program of objectives of an organization and their changes, resources used to attain these objectives, and policies governing the acquisition, use, and disposition of these resources; tile determination of the basic long-term objectives of an enterprise and the adoption of courses of action and allocation of resources necessary to achieve these goals.[8]

In this article, primarily because of space limitations, the narrow meaning will be used, that is, the ends will not be emphasized so that sufficient attention can be given to the analysis of the current situation. It is assumed that the purpose of the firm has already been established, yet is subject to change after an evaluation of the situation.

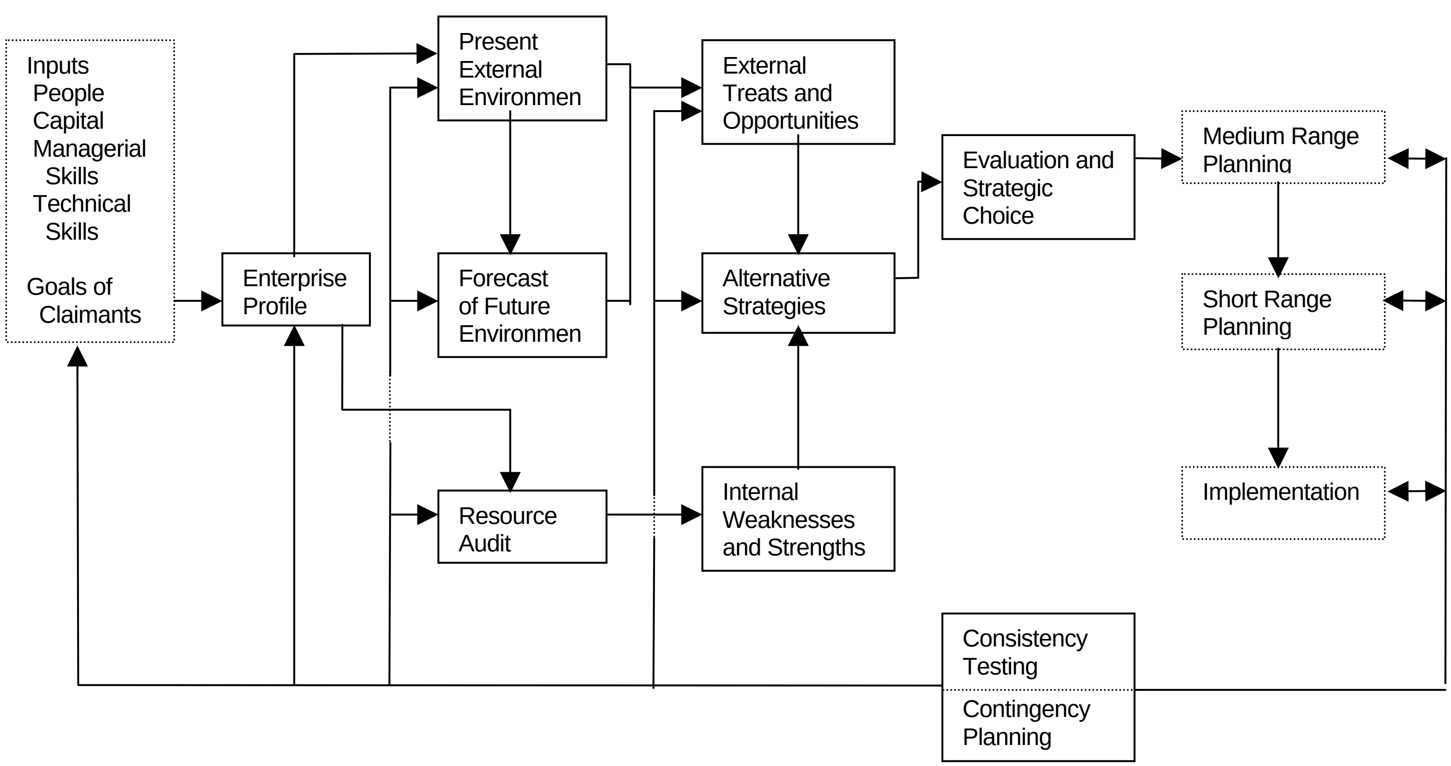

Figure 1. Strategic planning process

Although specific steps in the formulation of the strategy may vary, the process can be built, at least conceptually, around the following framework:

(1) Recognition of the various organizational inputs, especially the goal inputs of the claimants to the enterprise.
(2) Preparation of the enterprise profile.
(3) Identification of the present external environment.
(4) Preparation of a forecast with predictions of the future environment.
(5) Preparation of a resource audit with emphasis on the company's internal weaknesses and strengths.
(6) Development of alternative strategies, tactics and other actions.
(7) Evaluation and choice of strategies.
(8) Consistency testing.
(9) Preparation of contingency plans.

These steps—shown in Figure 1—then, serve as the framework for the discussion that follows.

Inputs for Strategic Planning

Strategic planning, to be effective, must carefully consider the inputs into the system. These inputs, de-emphasized in this discussion, are enclosed by broken lines, as shown in Figure 1. They include people, capital, managerial and technical knowledge and skills. In addition, various groups of people make demands on the enterprise. Unfortunately, many of the goals of these claimants are incongruent with each other and it is the manager's task to integrate these divergent needs and goals.

Employees, for example, want higher pay, more benefits and job security. *Consumers* demand safe and reliable products at a reasonable price. *Suppliers* want assurance that their products are purchased. *Stockholders* want not only a high return on their investment but also security of their money. Federal, state and local *governments* depend on taxes paid by the enterprise; they also expect the enterprise to comply with their laws. Similarly, the *community* demands that enterprises be 'good citizens', providing jobs and emit a minimum of pollutants. *Other claimants* to the enterprise may include financial institutions and labor unions; even competitors have a legitimate claim for fair play. It is clear that many of these claims are incongruent with each other, and it is management's job to integrate the legitimate objectives of the claimants.

The Enterprise Profile

The way an enterprise has operated in the past is usually a starting point to determine where it will go and where it should go. In other words, top executives wrestle with such fundamental questions as:

> 'What is our business?'
> 'Who are our customers?'
> 'What do our customers want?'
> 'What should our business be?'

These and similar questions should provide answers about the basic nature of the company, its products and services, geographic domain, its competitive position and its top management orientation and values. These topics demand elaboration.

Geographic Orientation. A company must also answer questions such as:

'Where are our customers?'
'Where are those who should be our customers, but are not at present?'

Companies need to develop a profile of their geographic market. While some firms may restrict themselves to the eastern part of the United States, others view the whole country as their region of operations. Many large companies, of course, conduct their business on different continents.

Competitive Situation. Business firms usually do not have an exclusive market; instead, they compete with other firms. But current market share is not necessarily a sufficient indicator of a firm's long-range potential. One must also consider other factors and competitive items such as price, quality, cost, services, product innovation, distribution systems, facilities and locations.

The assessment of the competitive situation involves several steps. First, key success factors must be identified. Then the relative importance of these key success factors needs to be estimated. Next, the firm's competitive position in respect to these key success factors must be evaluated and ranked. Thus, only a careful analysis of the current competitive position provides an indication of the company's future growth and profits.

The competitive analysis, especially for large firms, is done for individual business units, product lines or even specific products. Moreover, the competitive analysis focus is not only on the present situation, but also looks into the more distant future.[9] This analysis becomes intricate for firms that compete in the national and international markets.

Top Management Orientation. An enterprise profile is shaped by people, especially executives. They set the organizational climate, they influence the atmosphere in the organization and they determine the direction of the company. For example, management may not pursue opportunities in the liquor business because it conflicts with top management's values that are against the production and consumption of alcohol. Another example of the influence of values may be management's commitment to socially responsible actions, believing that these activities will benefit the enterprise in the long run.

The External Environment: Threats and Opportunities

In the analysis of the external environment, many diverse factors need to be considered. Today, the threats certainly would include the problems of inflation, energy, technological change and government actions. The diverse factors—which can be either threats or opportunities—can be grouped into the following categories: economic, social and political factors, products and technology, demographic factors, markets and competition, plus others.

Economic Factors. The general state of the economy certainly affects strategy formulation. For example, the expansion phase of the business cycle in the 1960s created an abundance of business opportunities while the recession in the first half of the 1970s required many industries to change their strategy, and drastically reduce their business activities. The strategist, of course, takes other economic factors besides the business cycle into account, such as the level of employment, the availability of credit and the level of prices. Also, individual companies are affected differently by economic factors. What is a threat to one firm is an opportunity for another.

Social and Political Factors. Social developments also influence the business strategy. For instance, consumerism and consumer protection movements require the firm's attention to product safety and truth in packaging. Similarly, managers are confronted by a host of federal, state and local laws and regulations. The public's demand for clean air, clean water and a clean environment is often considered a threat to business. At the same time, these factors can become opportunities, as shown by the car emission test requirements in many states which presented opportunities for the companies to develop, produce or operate such test equipment.

Products and Technology. Products need to be adjusted to technological changes. For example, the astonishing success of the Volkswagen Beetle in the 1960s diminished in the 1970s. New customer demands for optional equipment, safety requirements and competition, along with new technology, gave rise to a new generation of VWs. It must be remembered that in almost all situations success is only temporary and product innovation is needed to ensure a competitive advantage for the firm. Of course, innovation is also costly and risky and the failure rate of new products is high; yet, a policy of no innovation at all may cause the demise of a company.

Demographic Factors. Demographic changes significantly affect business. In the United States there are geographic shifts such as the movement of many people to the 'sun belt'. White-collar jobs tend to increase proportionally to blue-collar occupations. Income levels are expected to change, although the direction is less clear and may vary for different sectors of the labor market. The age composition will also change with elderly people making up an increasing proportion of the population. The strategist must take these and other factors into account because they influence the preferences for the kinds of products and services demanded by consumers.

Markets and Competition. In the United States, coping with competition in the marketplace is a corporate way of life. The following questions and the answers to them are crucial for formulating a strategy:

'Who are our competitors?'
'How does our company compare with the competition’
'What are the strengths and weaknesses of our competitors?'
'What are their strategies?'
'How do we best compete?'

Other Factors. There are, of course, many other factors that might be particularly important to a specific firm. The availability of raw materials, suppliers and the transportation system, are a few examples. The ever-changing environment demands continuous scanning for opportunities and threats. A company that discovers customer needs and provides the products and services demanded, certainly has a better chance for success than an enterprise that ignores such changes.

Information Gathering and Forecast of the Future. To collect data on the various factors is, to say the least, a tedious task. The study by Jerry Wall of 1211 executives, all readers of the *Harvard Business Review*, gives some insights on how companies collect information about their competitors. The sources used most frequently include: company sales persons, published sources, and personal and professional contacts with competitors and customers. Other less frequently used sources include: formal market research, brokers, wholesalers and other middlemen, analyses of processes and products of competitors, and suppliers. The least utilized sources include: employees of competitors, advertising agencies and consultants.[10]

Since there are many factors that need to be analyzed, the executives must be selective and concentrate on those factors that are critical for the success of the enterprise. Furthermore, it is not enough for the strategist to assess only the present environment. Planning for the future, and strategic planning in particular, is very much concerned with the more distant future. Thus, managers must anticipate the future and forecast changes in the environment that will crucially affect the enterprise.

The Internal Environment: Weaknesses and Strengths. The demands of the external environment on the organization must be matched with the resources of the firm. Internal strengths and weaknesses vary greatly for different enterprises; they may, however, conveniently be categorized into (1) management and organization, (2) operations, (3) finance and (4) other factors important for a particular organization.

Management and Organization. This category includes not only managerial talent but also the labor force as a whole. It also encompasses labor relations; personnel policies; the appraisal, selection, training and development of employees; and the reward system. The planning and control system as well as the organization structure and climate are equally important for the success of the organization.

Operations. Operations must be carefully analyzed in terms of research and development capabilities, and the adequacy and productivity of the manufacturing facilities available to meet the expected growth and other objectives of the firm. Similarly, marketing must be assessed in terms of product distribution channels, brand name protection, competitive pricing, appropriate customer identification, service, and company image.

Finance. A careful evaluation of the company's strengths and weaknesses also must be made in the areas of capital structure, financing, profitability, the tax situation, financial planning and the accounting system. Many financial ratios are available for making analyses. But financial management not only requires focusing on the past and the present situation; it also demands short- and long-term financial planning congruent with the firm's objectives and strategy.

Other Factors. The focus here is on the obvious factors on which the strengths and weaknesses of the organization must be evaluated. Other factors however such as patents inventions and the firms image may be peculiar to an enterprise or may be prominent during a particular time period.

Strategic Alternatives

The foregoing analysis of environmental opportunities and threats and the company’s strengths and weaknesses, encourages the creative process of developing alternatives. As any experienced manager knows, in almost all situations alternative courses of action are available.

One strategy is to *specialize* or *concentrate.* Thus, a company may utilize its energy and strengths to pursue a single purpose or it may restrict its efforts to only a few aims. For example, American Motors for many years used its limited resources primarily for the production of small cars, rather than competing directly with General Motors, Ford or Chrysler who had a complete product line ranging from relatively small models to large, luxurious cars.

Other alternative strategies are backward and forward integration. In *backward integration* a company may acquire suppliers to ensure a steady flow of materials. In *forward integration* the attempt is to secure outlets for products or services and to reach toward the ultimate user of the product.

Another strategy focuses on *diversification* by moving into new and profitable markets. This may result in greater growth than would be possible without diversification.

Still another strategy would be to focus on innovation -- new products and new services. Thus, a company, vulnerable to obsolescence, may look for new ideas whose time has arrived. Polaroid, a company known for innovation developed through tremendous research and development efforts and the successful SX70 instant picture camera, a truly innovative product. But, as exemplified by the same company, investing in innovation is also risky. Polaroid may have persisted too long and invested too much in promoting Polavision, the instant movie system.

A company may adopt a ‘no change’ strategy and decide to do nothing. Instead of innovation or expansion, a firm may continue to follow the tried and proven path, utilizing existing products and services and letting others make possible mistakes in innovation.

A company may also select an *international* strategy, repeating the approach which was successful in its home country and extending its operations from there to different parts of the world. Companies with global strategies include Unilever, Colgate-Palmolive, Singer, Nestle and IBM, to mention a few.

Still another strategic alternative is for an enterprise to decide on *liquidation,* which may require terminating an unprofitable product line or service. If the company is a one-product firm, this may mean dissolving the company—an especially difficult strategic decision.

In some cases the extreme decision of liquidation may not be necessary. Instead, a *retrenchment* strategy may be more appropriate. To be sure this is often only a temporary measure and may involve reducing operating expenses or restricting the scope of the operation. Still, such a strategy may be a viable alternative to liquidation.

Finally, there is the alternative of engaging in *joint ventures,* which may take different forms**.** For example, corporations may join with foreign firms to overcome political and cultural barriers. Another example of a joint venture is the Alaskan Pipeline which was a project even too big for one of the financially strong oil companies. Still another kind of joint venture occurs when two or more firms pool their resources and establish a new company, which then is jointly owned.

The strategies discussed above provide an overview of possible approaches. Within these categories, of course, many variations are possible. In reality, enterprises often pursue a *combination* of these strategies. What has become clear is that evaluating and choosing a strategy, the next topic of discussion, is not a simple task.

Evaluation and Choice of Strategies

The strategic manager has to evaluate a multiplicity of possible strategies. Clearly, such a manager has to take into consideration both external realities and internal capabilities. Unfortunately, environments are not static, but are *dynamic* and subject to constant change. Thus, the strategist has to make predictions of changes about the future.

In making strategic choices, opportunities must be evaluated in the light of *risks.* There may indeed be profit opportunities for a new product, but the company may not be able to afford the risks involved in the new venture. At other times, however, a firm cannot afford not taking a calculated risk.

Timing is another critical element in the strategic decision. Although early action may at times be desirable (e.g. to be the first in the market), a firm may not be able to take the risk associated with it. On the other hand, a company may have to enter a new field because its survival depends upon it.

Companies do not operate in a vacuum, of course. A new strategic action is usually met with a reaction from one or more *competitors,* this, in turn, requires counteractions. Clearly, strategic choices are made in a dynamic environment and to cope with the many uncertainties demands executives with tolerance for ambiguity.

Consistency Testing

During all stages of strategy formulation, the steps have to be examined for consistency with the enterprise profile, the present and projected environment, and the resources of the firm. In addition, the goals of the claimants to the organization have to be considered since the choice of strategy is not only based on a rational analysis of the facts, but also on personal values and personal goals, especially those of the chief executive officer, an important claimant to the enterprise, as pointed out above.

Alternative strategies are then tested for congruency with other medium- and short-range plans which, in turn, may require adjustments of the master strategy. Similarly, the feasibility of implementing the plans also needs to be examined. For example, the organization structure as well as the availability and suitability of human resources should be considered before strategic choices are made. As shown in the model in Figure 1, consistency testing is necessary at the various steps in the strategic planning process.

Contingency Plans

Contingency plans will have to be prepared. Since the future cannot be predicted with great accuracy, plans need to be made with different premises. To be sure, not all possible contingencies can be taken into account, but those crucial to the survival and success of a firm—such as a cutoff or reduction of oil from foreign sources—should provide premises for alternative plans.

An Operational Model for Analysis of the Situation

As pointed out above, it has been common in the past to suggest that companies identify their strengths and weaknesses, and the opportunities and threats in the external environment. But what is often overlooked is that combining these factors may require distinct strategic choices. To systematize these choices, the TOWS Matrix is proposed in which 'T' stands for threats, 'O' for opportunities, 'W' for weaknesses and 'S' for strengths. Before describing this matrix, however, one should be aware of other 'tools' that have been used effectively in strategy formulation.

Today, strategy designers have been aided by a number of matrixes showing the relationships of critical variables. For example, the Boston Consulting Group developed the *Business Portfolio Matrix,* which essentially shows the linkages between the business growth rate and the relative competitive position of the enterprise (identified by the market share). However, this approach has been criticized as being too simplistic, and the growth rate criterion has been considered insufficient for the evaluation of the industry's attractiveness. Similarly, the market share as a yardstick for estimating the competitive position may be inadequate.

Another useful matrix for developing a firm's strategy is General Electric's *Business Screen.* Basically, the GE matrix consists of two sets of variables: business strengths and industry attractiveness. Each variable is divided into low, medium and high ratings, resulting in a nine-cell grid. Business strengths, for example, evaluates size, growth, share, position, profitability, margins and technology position, to mention a few of the items. Industry attractiveness, on the other hand, is judged in terms of size, market growth, market diversity, competitive structure, industry profitability and so on. But Charles W. Hofer and Dan Schendel suggest that the GE Business Screen does not give adequate attention to new industries that are beginning to grow. Consequently, they suggest a matrix in which the 'competitive position' and their 'stage of product/market evolution' are plotted.[11] Both matrixes, however, appear to give insufficient attention to the threats and constraints in the external environment.

The *TOWS Matrix,* described in this paper, has a wider scope and has different emphases than the ones mentioned above. This matrix does not replace either the Business Portfolio Matrix, the GE Business Screen, or the matrix by Hofer and Schendel, but it is proposed as a conceptual framework for a systematic analysis that facilitates matching the external threats and opportunities with the internal weaknesses and strengths of the Organization.

The TOWS Matrix: A Conceptual Model

The process of strategy formulation, shown before in Figure 1, is now surrounding the TOWS Matrix in Figure 2. Preparation of the enterprise profile, Step 1, deals with some basic questions pertaining to the internal and external environments. Steps 2 and 3, on the other hand, concern primarily the present and future situation in respect to the external environment. Step 4, the audit of strengths and weaknesses, focuses on the internal resources of the enterprise. Steps 5 and 6 are the activities necessary to develop strategies, tactics and more specific actions in order to achieve the enterprise's purpose and overall objectives. During this process attention must be given to consistency of these decisions with the other steps in the strategy formulation process. Finally, since an organization operates in a dynamic environment, contingency plans must be prepared (Step 7).

There are different ways of analyzing the situation. One is to begin with the identification of important problems. A second approach is to start with determining the purpose and objectives of the firm. A third way is to focus on opportunities.[12] The question may be raised whether one should start with the analysis of the external environment or with the firm’s internal resources. There is no single answer. Indeed, one may deal concurrently with the two sets of factors: the external and the internal environment. It is important, therefore, to remember that the process followed here is just one of several options

<table>
<tr><td colspan="4">Step 1. Prepare an Enterprise Profile: (a) the Kind of Business; (b) Geographic Domain;
(c) Competitive Situation; (d) Top Management Orientation</td></tr>
<tr><td></td><td colspan="3">Step 4. Prepare a SW Audit in: (a) Management and Organization;
(b) Operations; (c) Finance; (d) Marketing; (e) Other</td></tr>
<tr><td>Internal Factors

External Factors</td><td>Step 5. Develop Alternatives

Step 6. Make Strategic Choices

Consider Strategies, Tactics, Action

Steps 1 to 6. Test for Consistency. Also Prepare Contingency Plans.
(Step 7)</td><td>List Internal Strengths (S):

(1)</td><td>List Internal Weaknesses (W):

(1)</td></tr>
<tr><td rowspan="2">Step 2. Identify and Evaluate the Following Factors:
(a) Economic
(b) Social
(c) Political
(d) Demographic
(e) Products and Technology
(f) Market and Competition

Step 3. Prepare a Forecast, Make Predictions and Assessment of the Future</td><td>List External Opportunities (O):
(Consider Risks Also)

(1)</td><td>SO: Maxi-Maxi</td><td>WO: Mini-Maxi</td></tr>
<tr><td>List External Threats (T):

(1)</td><td>ST: Maxi-Mini</td><td>WT: Mini-Mini</td></tr>
</table>

*The Steps Are Suggestive and May Vary

Figure 2. Process of corporate strategy and the TOWS analysis

The External Environment. Within the suggested framework, the analysis starts with the external environment. Specifically, the listing of external threats (T) may be of immediate importance to the firm as some of these threats (such as the lack of available energy) may seriously threaten the operation of the firm. These threats should be listed in box 'T' in Figure 2. Similarly, opportunities should be shown in box 'O'.

Threats and opportunities may be found in different areas, but it is advisable to carefully look for the more common ones which may be categorized as economic, social, political and demographic factors, products and services, technology, markets and, of course, competition. As mentioned above, the analysis of these factors must not only pertain to the present but, even more important, the future environment.

The Internal Environment. The firm's internal environment is assessed for its strengths (S) and weaknesses (W), and then listed in the respective spaces in Figure 2. These factors may be found in management and organization, operations, finance, marketing and in other areas. Since they were previously discussed, they will not be repeated here.

Strategies, Tactics and Actions. The TOWS Matrix, Figure 2, indicates four conceptually distinct alternative strategies, tactics and actions. In practice, of course, some of the strategies overlap or they may be pursued concurrently and in concert. But for the purpose of discussion the focus is on the interactions of four sets of variables. The primary concern here is strategies, but this analysis could also be applied to the development of tactics necessary to implement the strategies, and to more specific actions supportive of tactics.

(I) The WT Strategy (mini-mini). In general, the aim of the WT strategy is to minimize both weaknesses and threats. A company faced with external threats and internal weaknesses may indeed be in a precarious position. In fact, such a firm may have to fight for its survival or may even have to choose liquidation. But there are, of course, other choices. For example, such a firm may prefer a merger, or may cut back its operations, with the intent of either overcoming the weaknesses or hoping that the threat will diminish over time (too often wishful thinking). Whatever strategy is selected, the WT position is one that any firm will try to avoid.

(2) *The* WO *Strategy (mini--maxi).* The second strategy attempts to minimize the weaknesses and to maximize tile opportunities. A company may identify opportunities ill the external environment but have organizational weaknesses which prevent the firm from taking advantage of market demands. For example, an auto accessory company with a great demand for electronic devices to control the amount and timing of fuel injection in a combustion engine, may lack the technology required for producing these microprocessors. One possible strategy would be to acquire this technology through cooperation with a firm having competency in this field. An alternative tactic would be to hire and train people with the required technical capabilities. Of course, the firm also has the choice of doing nothing, thus leaving the opportunity to competitors.

(3) The ST Strategy (maxi-mini). This strategy is based on the strengths of the organization that can deal with threats in the environment. The aim is to maximize the former while minimizing the latter. This, however, does not mean that a strong company can meet threats in the external environment head-on, as General Motors (GM) realized. In the 1960s, mighty GM recognized the potential threat posed by Ralph Nader, who exposed the safety hazards of the Corvair automobile. As will be remembered, the direct confrontation with Mr. Nader caused GM more problems than expected. In retrospect, the initial GM response from Strength was probably inappropriate. The lesson to be learned is that strengths must often be used with great restraint and discretion.

(4) The SO Strategy (maxi-maxi). Any company would like to be in a position where it can maximize both, strengths and opportunities. Such an enterprise can lead from strengths, utilizing resources to take advantage of the market for its products and services. For example, Mercedes Benz, with the technical know-how and the quality image, can take advantage of the external demand for luxury cars by an increasingly affluent public. Successful enterprises, even if they temporarily use one of the three previously mentioned strategies, will attempt to get into a situation where they can work from strengths to take advantage of opportunities. If they have weaknesses, they will strive to overcome them, making them strengths. If they face threats, they will cope with them so that they can focus on opportunities.

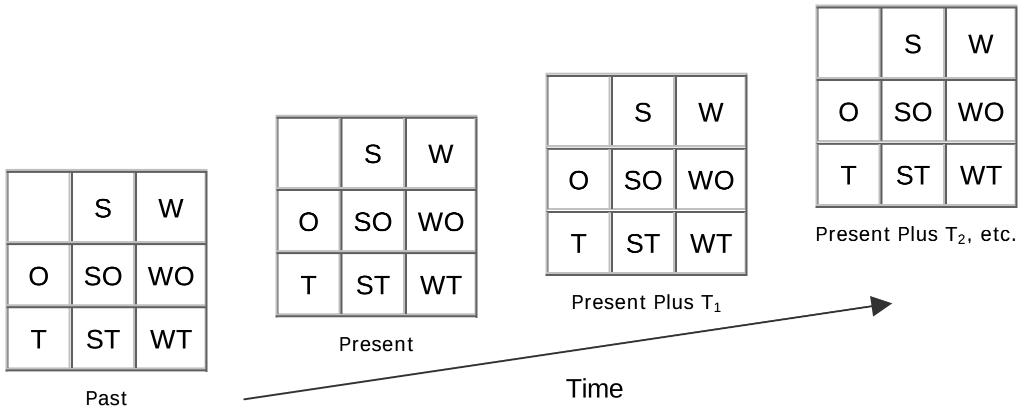

Figure 3. Dynamics of TOWS analysis

Time Dimension and the TOWS Matrix

So far, the factors displayed in the TOWS Matrix pertain to analysis at a particular point in time. External and internal environments are dynamic; some factors change over time while others change very little. Because of the dynamics in the environment, the strategy designer must Prepare several TOWS Matrixes at different points in time, as shown in Figure 3. Thus, one may start with a TOWS analysis of the past, continue with an analysis of the present, and, perhaps most important, focus on different time periods in the future.

Complexity of Interactions of Situational Factors

The conceptual model provides a good framework for identifying relationships, but it can become a complex process when many factors are being identified. The matrix, shown in Figure 4, is an example of one approach to identity combinations of relationships which, in turn, may become the basis for strategic choices. (See Figure 4)

In Figure 4, a '+' indicates a match between the strengths of the company and external opportunities, while an '0' indicates a weak or nonexistent relationship. Analysis of Figure 4 indicates that Strength No. 1 can be matched with several opportunities. Similarly, many strengths can be utilized to exploit Opportunity No 7. Although this figure shows only the relationship between strengths and opportunities, similar tables can be used for analyzing the other three strategy boxes (WO, ST, WT) shown in Figure 2.

A word of caution is in order here. One cannot simply add up the number of pluses (although especially strong relationships could be indicated by two pluses such as '+ + ') in each row and in each column to determine the best match between several strengths and opportunities. Clearly, different relationships may have different weights in terms of their potential, so each should be carefully evaluated. Still, it is suggested that this matrix is a relatively simple way of recognizing promising strategies that use the company's strengths to take advantage of opportunities in the external environment.

Strength / Opportunity	1	2	3	4	5	6	7	8	9	10
1	+	0	+	0	0	+	+	0	0	0
2	+	0	0	+	0	0	0	+	0	0
3	0	0	0	+	0	0	0	0	0	+
4	+	+	+	0	+	+	0	+	+	+
5	+	0	+	0	0	0	+	0	0	0
6	+	0	0	0	+	0	0	0	+	+
7	+	+	0	+	+	0	+	+	+	+
8	0	0	0	0	0	+	0	0	+	0
9	+	0	0	+	0	0	0	+	0	0
10	+	+	0	0	+	0	0	0	0	0

Figure 4. Interaction matrix

Application of the TOWS Matrix to Volkswagen

The foregoing discussion of the conceptual framework for strategic planning can be illustrated by an example. Volkswagen (VW) was chosen because it demonstrates how **a** successful company experienced great difficulties in the early 1970s, but then developed a strategy that resulted in an excellent market position in the late 1970s. The TOWS Matrix shown in Figure 5 will focus on the crucial period from late 1973 to early 1975. The external threats and opportunities pertain mostly to the situation VW faced in the United States, but a similar situation prevailed in Europe at that time.

The External and Internal Environment

In a situational analysis as conceptualized above, one would first list and analyze the threats and opportunities in the external environment and the weaknesses and strengths of the enterprise before developing alternative strategies and tactics. However in this illustration to be concise, the situation and the related actions, shown in Figure 5, are combined.

Strategies and Tactics

Strategies, as discussed earlier, pertain to major courses of action for the achievement of the enterprise mission and comprehensive objectives. Tactics, on the other hand, refer to action plans by which strategies are executed. In practice, and even conceptually, these distinctions are often blurred.

Weaknesses and Threats (WT). A company with great weaknesses often has to resort to a survival strategy. VW could have seriously considered the option of a joint operation with Chrysler or American Motors. Another alternative would have been to withdraw from the American market altogether. Although in difficulties VW did *not* have to resort to a survival strategy because the company still had many strengths. Consequently, a more appropriate strategy was to attempt to overcome the weaknesses and develop them into strengths. In other words, the direction was toward the strength-opportunity position (SO) in the matrix shown as Figure 5. Specifically, the strategy was to reduce the competitive threat by developing a more flexible new product line that would accommodate the needs and desires of the car-buying public.

	Internal Strengths: **1.** Strong R & D and Engineering **2.** Strong Sales and Service Network **3.** Efficient Production/Automation Capabilities	**Internal Weaknesses**: **1.** Heavy Reliance on One Product (Although Several Less Successful Models were Introduced) **2.** Rising Costs in Germany **3.** No Experience With U.S. Labor Unions if Building Plant in the U.S.
External Opportunities: (Also Consider Risks) **1.** Growing Affluent Market Demands More Luxurious Cars with Many Options **2.** Attractive Offers to Build an Assembly Plant in U.S. **3.** Chrysler and American Motors Need Small Engines	**SO**: **1.** Develop and Produce Multiproduct Line with Many Options, in Different Price Classes (Dasher, Scirocco, Rabbit, Audi Line) (O_1 S_1 S_2) **2.** Build Assembly Plant Using R & D, Engineering, and Production/Automation Experience (O_2 S_1 S_3) **3.** Build Engines for Chrysler and AMC (O_3 S_3)	**WO**: **1.** Develop Compatible Models for Different Price Levels (Ranging from Rabbit to Audi Line) (O_1 W_1) **2.** To Cope with Rising Costs in Germany, Build Plant in U.S., Hiring U.S. Managers with Experience in Dealing with U.S. Labor Unions (O_2 W_2 W_3)
External Threats: **1.** Exchange Rate: Devaluation of Dollar in Relation to Deutshe Mark (DM) **2.** Competition from Japanese and U.S. Automakers **3.** Fuel Shortage and Price	**ST**: **1.** Reduce Effect of Exchange Rate by Building a Plant in the U.S. (T_1 T_2 S_1 S_3) **2.** Meet Competition with Advanced Design Technology - e.g. Rabbit (T_2 T_3 S_1 S_2) **3.** Improve Fuel Consumption Through Fuel Injection and Develop Fuel Efficient Diesel Engines (T_3 S_1)	**WT**: **A.** Overcome Weaknesses by Making Them Strengths (Move Toward OS Strategy) **1.** Reduce Threat of Competition by Developing Flexible Product Line (T_2 W_1) **B.** Possible Options *not* Exercised by VW: **1.** Engage in Joint Operation with Chrysler or AMC **2.** Withdraw From U.S. Market

Figure 5. Application of the TOWS matrix to Volkswagen.
This illustrative analysis covers the period from late 1973 to early 1975

Weaknesses and Opportunities (WO). The growing affluence of customers has resulted in 'trading up' to more luxurious cars. Yet, VW had essentially followed a one-model policy which presented a problem when the design of the Beetle became obsolete A new model line had to be introduced to reach a wider spectrum of buyers. In order to minimize the additional costs of a multiproduct line, the building block principle was employed in the design of the new cars. This allowed using the same parts for different models that ranged from the relatively low-priced Rabbit to the higher priced Audi line.

Another weakness at VW was the rising costs in Germany. For example, in 1973 wages and salaries rose 19 per cent over the previous year. Similarly, increased fuel costs made the shipping of cars to the United States more costly. This situation favored setting up an assembly plant in the United States. However, this also created some problems for VW because it had no experience in dealing with American organized labor. To overcome this weakness, VW's tactic was to recruit managers from Detroit who were capable of establishing good union relations.

Strengths and *Threats (ST).* One of the greatest threats to VW was the continuing appreciation of the Deutsche mark against the dollar. For example, between October 1972 to November 1973 the mark appreciated 35 per cent. This meant higher prices for the buyer. The result, of course, was a less competitive posture. Japanese and American automakers obtained an increasingly larger share of the small-car market. To reduce the threats of competition and the effects of the unfavorable exchange rate, VW was forced to build an assembly plant in the United States.

Another strategy for meeting competitive pressures was to build on VW's strengths by developing a car based on advanced-design technology. The result of this effort was the Rabbit, a model with features later adopted by many other car manufacturers.

The oil crisis in 1973-1974 not only caused a fuel shortage, but also price rises, a trend that has continued. To meet this threat, VW used its technological capabilities not only to improve its engines (through the use of fuel injection, for examples), but also to develop the very fuel-efficient Diesel engine. This tactic, which was congruent with its general strategy, helped improve the firm’s market position.

Strengths and Opportunities (SO). In general, successful firms build on their strengths to take advantage of opportunities. VW is no exception. Throughout this discussion VW's strengths in research, development, engineering, and its experience m production technology became evident. These strengths, under the leadership of Rudolf Leiding, enabled the company to develop a product line that met market demands for an economical car (the Rabbit, successor to the Beetle), as well as the tastes for more luxurious cars with many available options (Scirocco and the Audi line).

Eventually the same company's strengths enabled VW to plan and build the assembly facility in New Stanton, Pennsylvania. Thus, YW could benefit from substantial concessions granted by the state government to attract VW which, in turn, provided many employment opportunities.

In another tactical move, VW manufactured and sold small engines to Chrysler and American Motors. These companies urgently needed small engines for installation in their own cars and revenues from these sales improved the financial position of VW.

Application of the TOWS Matrix to Winnebago Industries Inc.

Winnebago, the largest manufacturer of recreational vehicles (RVs) produced a full line of such vehicles, but emphasized traditional motor homes. The company, located in Forest City, Iowa, operated a large, modern and efficient plant.[13]

The External and Internal Environment

The threats and opportunities in the external environment are condensed into the table shown as Figure 6. In the past, the company had prospered by the high demand for RVs. However, serious threats from competitors as well as the gasoline shortage could have a great impact on the firm.

While Winnebago has considerable strengths, heavy reliance on essentially one product makes the company vuh1erable to the external threats.

	Strengths: **1.** Identifiable Corporate Name With a Good Reputation **2.** Good Service and Warranty **3.** Established Dealer Network With Good Dealer Relations **4.** Extensive Research and Development Capabilities **5.** Automated, Economical Plant **6.** Manufacturing of Most Parts for the Motor Home	**Weaknesses**: **1.** Vulnerability Because of Single-product Company **2.** Concentration on Higher Priced Units **3.** Heavy Investment in Toolmaking Raising Costs of Model Changes **4.** One-plant Location **5.** No Preparation for Transition from Family to Corporate Management
Opportunities: **1.** Demand for Smaller RVs **2.** Development of International Market **3.** Demand for Low-cost Modular Housing (FHA Subsidy for Mortgage Loans)	**SO**: **1.** Emphasize Smaller, More Efficient Motor Homes (O_1 S_1 S_2 S_3 S_4 S_5 S_6) **2.** Expand into Foreign Markets (O_2 S_1 S_4) **3.** Diversity into Modular Housing (O_3 S_1 S_4 S_6)	**WO**: **1.** Develop and Produce Smaller RVs(O_1 O_2 W_1 W_2) **2.** Build Smaller Plants in Different Parts of the Country and Abroad (O_1 O_2 W_4)
Threats: **1.** Gasoline Shortage and Higher Prices of Gasoline **2.** Slackening Demand for RVs **3.** "Trade-up" Creates Secondary Market **4.** Increased Competition (GM, Ford, International Harvester, VW, Toyota) **5.** Impending Safety Regulations	**ST**: **1.** Diversify into Farm Equipment, Railroad Cars (T_1 T_2 T_3 S_1 S_3 S_4 S_5) **2.** Consider Diesel Engines for Motor Homes (T_1 S_4) **3.** Make RVs Safer in Anticipation of Safety Regulations (e.g. Visibility, Flame Retardant, Crash Resistant, Brakes) (T_4 T_5 S_6)	**WT**: **1.** Sell the Company (T_1 T_2 T_4 W_1 W_4 W_5)

Figure 6. Application of the TOWS matrix to Winnebago.
This illustration covers the period of the early 1970s.

Strategies and Tactics
Based on the analysis of the situation, several alternative strategies and tactics are available to Winnebago.

Weaknesses and Threats (WT). The factors in the external environment, particularly the gasoline shortage, the high fuel prices, the slackening ill demand for recreational vehicles, as well as the increased competition constitute serious threats to the enterprise. When these threats are seen in relation to the weaknesses, an alternative would be to sell the company. But this strategic choice would probably be unacceptable to the family-dominated management group.

Weaknesses and Opportunities (WO). Customers in the United States and abroad demand smaller RVs. But one of the weaknesses of the firm was the heavy reliance on relatively larger and higher-priced units. Consequently, the development and manufacture of smaller vehicles could take advantage of the demand for small RVs in a market segment neglected in the past by the firm. Furthermore, smaller plants could be built in various parts of the country, thus alleviating the comparatively high transportation costs for the smaller RVs from the factory to the dealers.

Strengths and Threats (ST). To cope with the threats in the external environment the company may use its strengths. Specifically, diversifying into farm equipment and railroad cars, using the firm's capabilities, can alleviate problems caused by the slackening demand for RVs due to the secondary market created by the custom of 'trading up'. Similarly, the use of diesel engines in motor homes can reduce fuel consumption of these vehicles. Impending safety regulations are expected to make more demands on RV manufacturers. Rather than reacting to these regulations, Winnebago can use its extensive research and development capabilities to develop safer vehicles.

Strengths and Opportunities (SO). Winnebago needs to use its strengths to take advantage of the opportunities. The good reputation of the firm, its service network its research and development as well as the manufacturing facilities, can be effectively used to produce smaller RVs. Similarly, most of these strengths facilitate the expansion into the international market. Finally, the firm's capabilities can be used to diversify into modular housing. But the company has little or no knowledge of the housing market and some difficulties can be anticipated.

So far, the focus has been on strategy formulation in two product-oriented businesses, Volkswagen and Winnebago, but does strategic planning also apply to other kinds of organizations?

Who Needs Strategic Planning?

For a long time strategic planning meant making plans in light of the actions or potential actions of an adversary. In feet it is the *military* that has had long experience with strategic planning.

In the business world, strategic planning has been used extensively by *product-oriented* firms. The concern is about the deployment of resources to make the kind of product the customers want at a price they are willing to pay. Companies also have to decide whether they want to be a product leader or follow the lead of innovative competitors.

But to focus only on businesses that snake a distinct product leaves out the important sector of the *service* industry. Examples of service businesses are consulting, law, computer service firms, airlines, banks and theaters. Dan R. E. Thomas drew attention to the fact that strategic management for such enterprises is significantly different from companies that make a physical product.[14]

Clearly, to describe services is abstract and more difficult that1 to show and demonstrate a product. There are two kinds of services: one is equipment-based (e.g. automatic car washes) while the other is people-based (e.g. consulting). A few illustrations of the latter will indicate some in1plicatiotls for strategic planning. It may be extremely difficult to evaluate the quality of services of a consulting firm. Consequently, a client tends to employ the services of large consulting firms with established reputations. Unfortunately, this makes it extremely difficult for a small consulting firm without such an image to enter the market. Another example pertains to pricing in the service industry. Product-oriented firms usually aim to reduce the cost and price of a product to increase their market share. In the service industry, however, a low price is often perceived as and associated with providing poorer quality of professional services.

Does Thomas suggest that strategic management does not apply to the service industry? Certainly not. What is needed, however, is a change in the thinking pattern away from product-oriented management to the application of techniques and language peculiar to service-oriented businesses.

Of all the different kinds of organizations, Western *governments* probably make the least use of strategic planning. For example, little systematic planning was done to prepare for the oil shortage. There is a tendency to respond to problems rather than to anticipate them and prepare contingency plans. Many large businesses now make a situational analysis and establish goals that give the enterprise direction. Why should not the same managerial concept be applied by our government?

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