

Strategic Management and Licensing

Concepts for making 'future-oriented' decisions in high-technology businesses

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I shall provide a general framework for a concept which encompasses all "future-oriented" business decisions. (Licensing is, of course, one such decision.) The concept is that of "strategic management," a process by which business strategies are developed and monitored on an ongoing basis, either for an existing business or during development of a new business. In essence, this is an overview of the strategic management process or, as it is more often called, strategic planning.

Definitions may be useful. "Strategic management" will be defined as the process by which a corporation manages the successful development and implementation of strategic actions for individual business segments and for the corporation as a whole.

STRATEGIC DECISIONS

What is a strategic decision? A strategic decision has significant long-term impact on the well-being of a business. The term implies a time frame and a level of importance for the decision. Obviously, there are many long-term decisions which are not significant, and conversely there are many significant decisions which do not have long-term implications. However, the term "strategic" must imply both.

It also implies decisions which are made at a relatively high level of the organization. For example, a minor product modification decision in a small area of business for a major corporation would not be viewed as a strategic decision. Yet a decision to modify a major product line in that same company would be viewed as a strategic decision. Thus, only the decisions which carry the interest of senior management are considered the strategic ones.

Such decisions may influence the product offering (e.g. when to modify products, add products, or delete products). They may affect the approach to serving the market (e.g. high-service level versus low-service level, and varying geographic emphases). Or they may influence the character of an organization's posture vis-a-vis its major competitors (e.g., should we defend our product against an attempted competitive entry

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into our market through pricing action or through higher service levels?). Thus, the strategic decision can have an impact on the product line itself, the marketing effort, the competitive environment — or any combination of these.

Strategic decisions tend to grow out of an interplay between three types of activities. First, there is *strategic planning* which can be characterized as an effort to formalize the strategic decision-making process. This effort begins with gathering data, analyzing information, and documenting thoughts and judgments at various levels of an organization. Finally, a formalized strategic plan is developed for the business or a segment of the business.

The second activity, which provides the underpinning for all good strategic decisions, is the process of *strategic thinking*. Strategic thinking is the synthesis of insights resulting from an evaluation of environmental or competitive situations. These insights, in turn, lead the thinkers to creatively develop opportunities for changing the direction of an existing business. Good strategic thinking is not necessarily accomplished by means of formalized strategic planning. However, a formalized strategic planning process might stimulate strategic thinking. Even so, strategic thinking must exist beyond the formal planning process. In fact, if every manager or individual in a responsible position in a corporation is not continually attempting to sharpen his or her strategic thinking capability, it is unlikely that any formalized planning process will have the impact it is intended to within a corporation.

There is a third way in which strategic decisions arise. That is through *opportunistic action*. This refers to a situation in which one responds either to an opportunity or to a threat which presents itself outside the normal planning process. For example, many acquisition opportunities are not anticipated. A suggestion to acquire a license for a process or product would also present an opportunity to make a strategic decision outside the context of the ongoing planning process.

STRATEGIC PLANNING

Let's discuss strategic planning. What exactly is it, and what are some of the techniques that can be employed to stimulate the creation of strategic actions which will be successful? First, strategic planning really exists at four levels in an organization. The first is the *product-market level*, which can be characterized as the level that defines the interface between a company and its market. It is the level that the customer sees. It is the level with which the product

manager, marketing manager, general sales manager, and/or division manager of an organization would be primarily concerned.

Strategic decisions at the product-market level deal with such issues as market segmentation, assessing the basic attractiveness and trends within a market, and assessing the competitive strength (as well as competitive reactions) in each of those market segments. The process involves thinking through alternatives and the risks associated with those alternatives, and then establishing a product-market program that serves the appropriate segments of the market so as to succeed against competitors. Thus, the types of decisions that are made at the product-market strategy level are those related to pricing, product modification or additions, or changes in the service levels or distribution approach to the market.

The next level of strategic planning can be characterized as *functional planning*. This level relates to those functions within the business which are needed to support product-market strategies. For example, an integrated distribution plan tied to the product-market strategies of a business is a functional strategy. Any plan to alter or to restructure the distribution network of a company is a strategic decision which should be linked to the product-market strategy of that company. It should support and be closely linked to what the company is trying to accomplish in the marketplace.

There is a third level of strategic planning which deals with *resource allocation*. It is commonly referred to as "portfolio analysis" or "portfolio strategy." In financial terms, this level refers to the capital allocation process on a business-by-business basis. The planning process at this level involves evaluating the product-market and functional strategies of various elements of a business in an attempt to assess which parts of a corporation will be more or less attractive or viable than others. In this way, corporate resources can be appropriately allocated to various elements of the business.

Finally, there is *corporate strategy*, which deals with overall corporate objectives, assessment of the environment, corporate policies, and financial structure. (As a footnote, it is useful to think about strategic planning at these various levels, because in dealing with a particular business situation, more than one and, in some cases, all of them come into play.)

DEVELOPING A STRATEGIC MANAGEMENT CAPABILITY

Strategic management is a process (rather than a set of techniques) for making and implementing strategic decisions. It attempts to tie the formalized planning process (described above) together with the opportunistic actions that are developed in the normal course of doing business. It tries to take into account the "management style" of the organization and the human resources that are available. And, very importantly, it provides a mechanism for monitoring and evaluating the results of strategic decisions. The decision itself may be one that makes or breaks the success of a company, but the ability to manage the process in a multilevel corporate environment can be equally

important in terms of the success of the decision.

A corporation's planning capability tends to evolve over a long period of time and in four distinct phases. These phases might require a period of 10 to 20 years to evolve, from the first to the last. It really depends on the environment in which a company competes, as well as the level of emphasis and senior management commitment to moving from one phase to another. Typically, the first phase is characterized by *financial planning*. Companies at this elementary stage plan and operate on the basis of annual budgets and departmental budgets. Thus, this phase of planning represents little more than a financial-control system, and therefore neglects adequate consideration of such factors as future market conditions or competitive action. In fact, there are very few large organizations in the United States today that are still operating at this level of planning.

The second phase is called *forecast-based planning*, which typically involves multiyear budgets. It still has a departmental focus. The major distinction here is that it tends to extrapolate, or forecast, not just what the sales and the profit dollars might be, but what the market trends and the competitive situation might encompass over, say, a 3- to 5-year period. Then an attempt is made to draw conclusions about what the company ought to do today in order to prepare for that future environment. Forecast-based planning still has largely an internal and financial focus. It is likely that a large number of companies (in fact a significant number of Fortune 500 companies) in the United States today are still at the forecast-based planning level of capability.

The third phase involves *issue-oriented strategic planning*. This is the level at which successful companies (and most strategically-run companies) are operating today. The major focus is in evaluating and making decisions around specific competitive or environmental issues which face various aspects of the business. This level tries to focus on the three or four critical issues facing the company (or each business within the company) which will really be important to the success or failure of that company. Most management time — and also most staff planning time — is spent evaluating specific issues that have been identified, and trying to judge the kind of decision which might be made in each area.

Competitors

The issue-oriented planning company places very heavy focus on evaluating competitors. General Electric is a good example of a company that is at this level of planning. For the last 5-10 years, GE has given a great deal of attention to strategic and competitive assessments surrounding substantive issues facing each of the business units in the corporation. This emphasis extends from the CEO down to the functional managers in each of the many divisions, and carries over into the formal planning meetings. For example, rather than going over "the numbers," a senior executive is likely to drill a junior executive on his understanding of a competitor. According to the philosophy of issue-oriented planning, he has to be up-to-date and knowledgeable on what the competitors are doing in

the marketplace, and he has to have considered very carefully what the response should be.

The fourth planning phase is that of *strategic management* itself. It goes beyond the issue-oriented level of planning in that it implies a widespread existence of strategic thinking within the organization. It actually transcends the planning process. It implies that the entire management organization is in fact doing strategic planning all the time. It is a day-to-day activity. Management gives as much attention to strategic issues as to daily operating issues. Every line manager is not only concerned with what he is doing now, but is also concerned with the impact five years from now of what he is doing today. Both are important. But the longer term aspect is, in many cases, of greater importance.

PORTFOLIO APPROACH TO PLANNING

There are various schools of thought and various techniques which have been developed, but the *portfolio approach* boils down to evaluating a business (or product line within a business) along two sides of a matrix.

The first side shows the attractiveness of the market in which this business or product line exists. The other side shows a company's relative competitive strength in that market. Market attractiveness is often measured by quantifiable factors such as market size, growth, the level of profitability in the market, the structure of competition, and the customer structure (e.g. is the market heavily concentrated with a few customers or does it exhibit relatively wide distribution?). The competitive position is typically measured in terms of a company's relative market share and profitability (e.g. does the company have lower costs than the competitor?). A company may not have lower costs, but it may achieve higher profits by commanding a premium price. The quality of the company's product line and the quality of its marketing service efforts must also be assessed relative to the principle competitors.

Each of these two sides of the "strategic matrix" — the market attractiveness and the competitive strength — is then evaluated on a scale of, say, from high to low. The point at which the business or product line plots on the matrix reveals something about what the strategy should be for that business or product.

The extreme cases are the obvious ones. If a company is in a very attractive market, and has a very strong competitive position, that would imply an "invest-grow strategy." In this case, the company would either protect its position or continue to invest heavily to make its position even stronger in that market.

On the other hand, if a business happens to be in a very unattractive market and in addition has a very weak or tenuous competitive position, the strategic implication would be to divest that business altogether. Of course, anything in between requires a certain amount of selectivity.

It is my view that this process has been overemphasized in terms of its usefulness in strategic decision making. The difficulty with this process is

twofold. First, it tends to encourage static thinking, "cookbook thinking" if you will. It tends to discourage thinking about how to change the market or how to change one's competitive position within the market. Second, the process itself does not provide sufficient detail for determining what really ought to be done.

Example

Let's say we have just evaluated a consumer calculator division: it is an attractive market, and we have a very strong competitive position. It is, therefore, an "invest-grow business." But what does that really mean? What should the company go out and do? It really has not helped management go beyond the very initial phase of positioning the business relative to all other businesses in the corporation. The process does, however, offer some useful benefits from a top-management perspective. For one thing, it forces development of a common data base for all the businesses in a large corporation, and this has definite value. For another, it forces people to ask questions about the market, about the competition, about the products, and how they are positioned relative to competitors. So, considering the evaluation in the strategic plan for each of these businesses, top management can start to develop a common language and start to draw some comparisons.

This kind of evaluation also makes it painfully obvious when market or competitive knowledge is lacking. Because there is a "cookbook" formula, certain factors have to be evaluated in pursuing this kind of planning exercise. These factors cannot be ignored, and therefore the process is a good monitoring device for top management in ensuring that all of the proper things have at least been thought about and that some position has been taken on them in evaluating strategic decisions.

Finally, the portfolio approach prevents consideration of obviously inappropriate strategies. As incredible as it sounds, it is not uncommon for a major capital request (for adding capacity or revamping the facility) to be made for a business in which there is no justification for such an investment. The return on investment is low already, and the capital being requested has virtually no chance of changing that situation, although the capital appropriation may indicate that it would. Having a broad strategic framework in understanding where the market is, where it is going, and what the competitive position is, tends to eliminate 10% of the inappropriate strategic decisions requested in a large corporation.

FOUR TECHNIQUES OUTLINED

Let's turn to specific techniques for thinking about strategic decisions. Dozens of tools have been developed throughout industry for helping to force decisions and find opportunities. Four in particular have been used with success by industrial and high-technology companies to help make strategic decisions and to monitor or control the success of products or market decisions as they evolve.

Game Board Approach

The first is called the "game-board" approach to strategy. It forces management to think of its business as a game in assessing competitive strategy. It really is a way for top management to ask itself how it wants to position its product line or market approach vis-a-vis the market and the competitors in that market for each of the four possible situations.

First, management can choose to "compete head-on in the same game." What that implies is that the company and its competitor are offering the same product to the same market with the same basic approach to serving that market. An example would be two electronic calculator manufacturers who have essentially the same product line, market focus and distribution approach (e.g. both have a broad line, low-end business, and educational-oriented consumer calculator line, distributed through large department stores). This approach obviously offers a minimum level of differentiation between the two competitors, and typically results in competition on the basis of price (which normally has to be lower than it would otherwise be), and service (which normally has to be higher than it would otherwise be). Unfortunately, what tends to happen in the "compete head-on in the same game" situation is that each competitor continues to work harder and harder while making less and less money. Thus, this is usually the least desirable competitive situation.

The next position on the game board is called the "avoid-competition-in-the-same-game" strategy. This approach involves establishing some kind of a product or market niche, and follows classical marketing theory. In fact, it is this position within the strategic matrix that most companies desire to be as they try to differentiate themselves in order to find a niche either with a product or with a market position. An example would be Hewlett Packard's (HP) position in the handheld calculator market. Very early on HP established itself as the high-quality, high-price, sophisticated, professional-use calculator, distributed through very narrow specialized distribution channels (first through mail-order and ultimately through high-quality retail stores).

To be positioned in this area of the game board requires some distinguishing competitive advantage. A company has to have either superior technical knowledge in some area, a strong market image, or a "free" channel of distribution (i.e. if a distribution channel were already established for another product line, the new line could "piggyback" on it with virtually no added cost to entering that market). Otherwise, the differentiated position cannot be maintained. These types of differences tend to be the basis on which a niche strategy or an "avoid competition in the same game" strategy is based.

Crap Shoot

The third position on the board is called the "crap shoot." It is a situation in which two companies compete head-on in a new game. The best example of this right now is Sony and others who are competing in the video cassette market. It is a new game, a new market, and a new product. There are two, three, or four

players in the market and they are all playing it the same way but it is a new game for all of them. What really is required here are new ideas, new products, and early decisions on what the product is and how heavily the company should invest geographically or in channels of distribution. It is this kind of market situation in which the licensing profession is probably most frequently involved, because it typically deals with new technology.

The last (and possibly the best) position on the board is the "avoid-competition-in-a-new-game" situation. It involves participating in a new market without facing head-on competition. Obviously, if a company introduces a product, it is in that situation perforce until somebody follows. If the company has a patent that protects its interests, it is then in the position of deciding whether to remain there or whether to create competition by licensing out and creating a second source. In the industrial situation, for instance, it might actually be necessary to create a second source.

This was true in the early stages of the semiconductor memory market about 5-8 years ago, when certain companies were selling their technology to competitors in order to create more than one source for the product in the marketplace. They did this in order to give the product credibility, and also to ensure that the customer could go to more than one source for the product.

If successful, the "avoid competition in a new game" strategy can lead to the highest profit levels and usually ensures the most secure long-term position. Thus, if a company has developed a technology, or has the opportunity to launch a new product, management should begin to think about how this fits into the strategic framework.

R&D Gap Analysis

A second technique in technically-oriented companies involves trying to match the R&D activities with the desired product-market strategy of that business. This is called *R&D gap analysis*. It involves justifying or explaining every R&D project in light of some ultimate opportunity that fits within the product-market strategy of the business. It is a way of profiling the R&D portfolio, and lining it up with the business strategy so as to meld the marketing side with the technical side of the organization, and explaining how to support that program in the marketplace.

What often happens is that a number of "interesting products" having no clear fit with the company's strategy or objectives may surface from this kind of exercise. As a result of their having no fit, they may be eliminated from the R&D activity, or they may be deferred. They also might be sold off or licensed, or in some other way taken advantage of without being considered for a new business venture which might not be appropriate. Conversely, when no clear progress is made toward a product or process that is needed, a company may decide to either accelerate its program, create a new one, or go out and buy technology to fill the gap in the company's technical portfolio. This is a simple concept, but one that is surprisingly powerful when properly and objectively applied.

It should be noted that the licensing activity could come into play here too, either in terms of selling off or acquiring know-how. Again, it grows out of and is the

product of a strategic decision.

Managing New Product Introduction

The third technique is one that involves *managing the development and market introduction of a new product*. This technique is also simple in concept, but difficult to apply. It incorporates trying to simultaneously manage the market uncertainty and the technical uncertainties surrounding a product, while that product is being developed. Obviously, the further in time one is from the market, the higher the market risk. Similarly, the further away one is from having a full-scale production model, the higher the technical risk.

This process basically tries to ensure that neither the market risk nor the technical risk is out of balance with the other. It is actually a financial control technique, and tries to keep the cash expenditures on a product-development program from getting too far ahead of what is known about the market. It is easy to imagine situations in which a product is developed too quickly, i.e. where the technology is ahead of the market. It could be an unwanted product, with the result that "it is a great gadget but there is no market of it." conversely, if a product is developed before enough is known about the technology, the technical risk has not been managed properly.

The solution is to try to manage these two risk factors simultaneously as the move is made toward commercialization of a product. The technique is one of making subjective judgments about the probabilities relating to the level of market risk and the level of technical risk.

Strategic Opportunity Scanning

The last technique is one which is called *strategic opportunity scanning*, or SOS. It simply means that there is a conscious, formalized effort to scan the environment for strategic opportunities. It implies that a company will not just sit still and run its business until something happens to which it must react. In other words, top management must force itself to look for strategic opportunities in the marketplace.

There are, of course, corporations that have elaborate and expensive systems for SOS involving dozens of staff analysts which creates piles of papers and reports. In technology-based companies, the process can often be better focused. Patent applications can be scanned routinely. Business acquisition activity can be monitored selectively to highlight acquisition of technically-based businesses by other technically-based businesses. These activities tell management something about what is going on in the marketplace. For example if a major competitor acquires a small company in what seems to be an unrelated field, and the company is too small to really be a major business

acquisition, the logical question is: What is the technology the competitor is trying to acquire? Is there something that they are thinking of doing with the acquired knowledge in some other product area?

This kind of scanning can force management to identify opportunities or threats in the marketplace long before they would otherwise become visible. Experience has shown that the best people to tackle strategic opportunity scanning are the senior line managers of a corporation. It is the line executive who knows a strategic opportunity when he sees one. Staff people cannot really be expected to perform this function. Therefore, it has to fall on the experienced person who has been running the business, and who really knows the product and the market.

HOW LICENSING FITS IN

Obviously, there are several areas in which licensing can be used, both in the formal and in the opportunistic planning process. Licensing clearly provides an opportunity for carrying out product-market development or product introduction programs. In other words, acquiring a license should really be viewed as a strategic implementation vehicle (e.g. filling a gap in a predefined technical portfolio which, in turn, is aimed at achieving a particular product-market program or strategic program in the marketplace). Or it could be viewed as a response to an unplanned opportunity which offers itself to a corporation and which, upon reflection, fits into the corporation's overall plans and objectives.

Conversely, granting a license can constitute a deliberate strategy to participate in outlying markets. For example, if a company does not want to invest directly in the Australian market, perhaps there is someone there who can be licensed by the company. Licensing might also provide an opportunity to gain from a technology a business has, but with which it is in no position to compete. For example, a company may have some technology that computer manufacturers could use, but it does not necessarily want to enter the computer business. How can the company gain from its know-how? The answer might be some sort of licensing arrangement. Licensing can be used to create a second source in the marketplace, or it could be a way of gaining revenue from an area of knowledge that simply does not constitute a good business for the company itself.

Thus, licensing and nonlicensing options should always be considered within the context of the business strategy being evaluated. Consideration of a license (buy or sell) should always involve evaluation of market and competitive factors, as well as the "fit" with corporate goals and objectives. And that, after all, is what strategic planning is all about.