

Bristol Partners Inc.

***A New Approach to
Business Strategy***

January, 2006

Introduction and Overview

The basic dimensions of corporate strategy are timeless: it always encompasses the search for profitable competitive advantages across time and space. However, in recent years the challenges facing most business leaders have grown more difficult and daunting. Technology has created many new sources of competitive advantage, reduced the profitability of others, expanded the relevant geographic scope for many businesses, speeded up the pace of change, and in many cases made its effects non-linear. Unfortunately, in this increasingly complex and uncertain environment, many traditional approaches to business strategy have proved inadequate.

At Bristol Partners, Inc., we have thought long and hard about this problem, analyzed the latest research in many relevant fields, and developed a new framework for thinking about business strategy and organization. This paper describes our new approach, and its potential benefits for our clients.

To briefly summarize what follows, we conceive of strategy as a set of three hypotheses (i.e., theories), about the future state of the competitive environment, about how a firm should act in it, and about how it should adapt its approach over time. With respect to the environment, we recognize that in a complex adaptive system, accurate prediction of the future is impossible. However, we believe that through a variety of techniques it is still possible to develop a useful, if "coarse grained" view of the range of competitive conditions a firm may confront.

The way a firm should act encompasses the ends it should pursue (i.e., goals, or what must be accomplished, and why that is important), the ways to do this (i.e., the concepts that will be applied to accomplish the goals), the means to use (i.e., decisions about people, money and technology), and the risks involved (a

A New View of Strategy

function of both our uncertainties about the future, and imbalances between the ends, ways, and means).

A firm's hypotheses about its future competitive environment and the way it should act in it form a conceptual model that it should use to make estimates (predictions) about its expected future results. Recognizing that its understanding of the behavior of complex systems can never be complete, a management team must also accept that future conditions and results will probably deviate from its initial predictions. At some point, sufficient deviations may accumulate that the team will conclude that one or more of its initial strategic hypotheses have been falsified, and that new hypotheses and actions are needed.

We believe that in complex and uncertain environments, a key source of competitive advantage is the ability to perform this "theory testing" or "situation assessment cycle" faster than other firms. The key elements of this cycle include not only the ability to test and potentially falsify existing strategic hypotheses, but also to generate a sufficient variety of alternatives, to select between them, and to retain and reinforce the new innovations that prove successful. A firm's ability to perform this cycle faster and better than its competitors critically depends on the design of its organization, including the structure of its business units, the distribution of decision authority, the performance measures and incentives it uses, the goals it sets, and the way it uses information technology. Indeed, when it comes to competitive success, it is fair to say that our new approach shows that many of the distinctions between "strategy" and "organization" are wholly artificial.

The last element in our new view of strategy is the recognition that managerial cognition plays a critical role in firm success. While most of us grew up in an age of relative information scarcity, we now live in an age of information abundance. More and more strategic decisions have to be made under conditions of time

A New View of Strategy

pressure, uncertainty, and information overload. As such, learning to avoid many of the thinking traps to which we are prone under these circumstances is also critical to a team's ability to perform the situation assessment cycle faster than its competitors.

The remainder of this paper will elaborate on these points, and show how Bristol Partners Inc. can help clients to successfully apply them to improve their performance.

A Theory of the Future Competitive Environment

Explicitly or implicitly, every theory about how to act is premised on another theory about the likely conditions one is likely to encounter. In the business context, such a theory typically encompasses future conditions affecting customers, competitors, and factor markets (e.g., technology), and sometimes economic, political, and regulatory conditions. At minimum, a theory of the environment includes three elements: the variables that are important, the relationships between these variables, and their likely future values. Ideally, a theory of the environment also includes a fourth element, which expresses our confidence (or, alternatively, our uncertainty) about each of the first three elements.

This framework is a powerful aid to reducing information overload. It makes clear that the value of a new piece of information depends on two factors. The first is the extent to which it increases your understanding of the variables that are important in a given situation, how they are related to each other, and their likely future values. The second is the extent to which a new piece of information increases or decreases your confidence in your understanding of a situation. For example, this could include information that narrowed the range of possible

A New View of Strategy

future values for a key variable, or that came from a more reliable source than you had previously used.

A theory of the environment is constructed on multiple levels of abstraction. The least abstract level is what is actually happening in the environment -- the changes that are underway in customer preferences, competitor offerings, technological developments, and the like. While some people in an organization will have direct access to different aspects of this "ground truth", the majority will only have access to indirect information about them. Just as important, the bits of information on which people focus their attention, and the meaning they attach to them will both be affected by the pre-existing mental models they are using. These models will naturally differ between people, based on their previous experience, training and education, corporate traditions and the like.

However, to be effective, an organization's theory of action requires, to some extent, a shared mental model (theory) of the competitive environment. Given that the construction of such a theory is often a highly politicized process (involving consideration of people's personal and group interests), it can easily lead to a distorted result. In our experience, there are two ways to avoid this. The first is a threat to a firm's survival. While these "concentrate the mind wonderfully", they are best avoided. A better approach is to institutionalize challenges to a leadership team's thinking, in a way that is not politically destructive.

Over time, many different techniques have been used to develop shared theories of the future competitive environment. Throughout history, the most common technique has been to assume that the future would closely resemble the present. In many situations, this works quite well. For example, a pot of cold water sitting on a stove will remain relatively stable (apart from evaporation) for a long period of time -- as long as the heat isn't turned up. Unfortunately, history is

A New View of Strategy

also filled with destabilizing discontinuities -- from time to time, the heat sharply rises, and the nature of the environment dramatically changes. This has led to the search for methodologies that can help anticipate future discontinuities. Since computing power became relatively cheap, various forms of quantitative analysis have been used for this purpose. However, they have tended to suffer from two key limitations. First, it is often the case that at least some members of a leadership team will disagree with the set of variables, relationships, and parameter values assumed by the model's developer. Second, when the developer shows that a "backtest" of the model accurately replicates historical data, the objection is typically (and accurately) raised that this still does not -- and, indeed, cannot -- prove that the model's assumptions will remain valid in the future.

Unfortunately, citing "expert opinion" as the source of the model's assumptions is not a valid defense. History is filled with experts who made mistaken forecasts about the future, as the 9/11 and Iraq WMD review commissions have recently reminded us. Indeed, cognitive psychologists have suggested that the very nature of expertise may make experts more prone to underestimating the probability of future discontinuity. One finding is that experts are distinguished from novices by their superior ability to quickly identify important data about a problem, and to aggregate more of it into a limited number of "chunks". This latter ability is critical, since all human beings, both expert and novice, have limited cognitive processing capacity due to short term memory constraints. For example, it has been found that our thinking performance falls off sharply when we try to simultaneously use more than four discreet chunks of information. It has also been found that in complicated competitive situations, only four percent of the population can think at least three steps ahead. Experts' superior ability to aggregate information, and their richer store of memories enable them to more quickly recognize and react to familiar patterns and situations -- but not to unfamiliar ones.

A New View of Strategy

Those same stored memories also affect the information to which experts allocate their limited attention, and the weight they give to it. Just like the rest of us, experts often pay more attention, and give more weight to information that confirms their existing views than to information that falsifies them. Technically, this is called the "confirmation bias." It gives rise to overconfidence, which sometimes causes experts to miss potential discontinuities in situations that are truly novel, and at variance with their existing mental models. It also accounts for the old saying that it takes twice as much information to change an opinion that it does to form it in the first place.

The development of the scenario planning technique for assessing the future environment was a response to the limitations of quantitative analysis based on experts' assumptions about the future. The great strength of the scenario approach is that it forces managers to acknowledge the range of underlying models and future scenarios that are possible, as well as the critical uncertainties and assumptions that drive their expectations. In many cases, the scenario technique also leads to a heightened focus on "warning indicators" that enable better situation assessment and adaptation. However, the scenario approach suffers from two weaknesses. The first is the risk that members of a leadership team will discount the implications of the scenarios because their favorite one isn't included. In point of fact, in a complex, uncertain system, many more scenarios are possible than the four that typically result from a scenario analysis project.

The second weakness of the scenario approach is the "so what?" response it sometimes provokes in managers. In order to be meaningful, future scenarios must be explicitly related to decisions that must be made in the near term. More often than not, this requires quantification of the potential results of those

A New View of Strategy

decisions under different scenarios. Unfortunately, this gets us right back to disagreements about the structure of the underlying quantitative model!

Yet another new technique to deal with this problem has recently been developed by the RAND Corporation. Called "computer assisted reasoning", it is essentially a simulation model that takes into account not only parameter uncertainty, but also structural uncertainty about the key variables and relationships driving change in the competitive environment. For example, five members of a management team may have different mental models that they use to project the future competitive environment, and the impact of choosing different decision options. Computer assisted reasoning essentially incorporates everyone's mental models into a single simulation, to produce a full range of possible future scenarios, rather than just the four that result from typical scenario exercises. A second advantage of computer assisted reasoning is that it produces more quantitative output than typical scenario exercises, which makes enables better assessment of the possible results of near-term decision options.

Regardless of the technique used to develop a hypothesis about future competitive conditions, it is critically important that a leadership team use its theory of the competitive environment to deduce predictions that can later be tested against actual observations. This should generate a heightened organizational sensitivity to "discordant data" that is not consistent with the current theory of the environment. In turn, this helps to avoid damaging delays in an organization's response to environmental changes.

In sum, an effective theory of the environment achieves three important objectives: it provides the premises for a theory of action, it helps people to manage information overload, and it adds to an organization's stock of

A New View of Strategy

knowledge, both explicit (data, conclusions, reports, etc.) and tacit (shared mental models and new relationships, etc.).

A Theory of Action

Having developed a theory of the future competitive environment, the next step is a theory of action. This theory includes four key elements: the ends the organization should pursue (i.e., goals, or what must be accomplished, and why that is important), the ways to do this (i.e., the concepts that will be applied to accomplish the goals), the means to use (i.e., decisions about people, money and technology), and the risks involved (a function of both our uncertainties about the future, and imbalances between the ends, ways, and means).

Deciding the ends to pursue is critical, because organizations usually don't change their strategy until their performance starts getting worse at an accelerating rate relative to their most important goals. The most common ends companies pursue are survival and shareholder value creation. However, the latter raises many questions. First, people often overlook the fact that shareholder returns are an after-the-fact result of many possible actions. For example, the classic trade-off is achieving them via cost cutting or revenue growth. In turn, these imply the pursuit of other non-financial technological and customer objectives whose achievement is the true driver of the financial result.

Equally as important, managerial action is not the only driver of shareholder value creation. Financial economics has moved beyond the simple model of rational, equally well-informed investors and continuously liquid and efficient markets. For example, the total shareholder return to an investor over any period is equal to the cash received via dividends or stock repurchases, plus the change in stock price. However, the latter reflects not only changes in fundamental factors (e.g., an increase in expected cash flow growth or a fall in the discount

A New View of Strategy

rate), but also changes in the actions of other investors. Today, it is widely recognized that investors do not have unlimited cognitive processing power (e.g., they may make mistakes because of limited attention or working memory), they may be biased (e.g., due to the thinking shortcuts -- heuristics -- that they use), and they are probably not equally well-informed. In addition, (at least in the short term) there often exist significant obstacles to arbitraging away the mistakes made by some investors. This leads to departures from market efficiency, and less than fully accurate stock prices.

All of these considerations have led to a new view of financial markets as a complex adaptive system of interacting, boundedly rational investors. While attracted to equilibrium and efficiency, this system rarely attains it, and instead regularly experiences periods of over and undervaluation. As a result, shareholder value metrics provide, at best, an imperfect guide to a company's success.

This suggests that two other corporate goals may be preferable. The first is an internally focused metric that is conceptually closely linked to fundamental drivers of shareholder value creation, but with less exposure to the vagaries of investor behavior. This is variously known as economic profit, economic value added, or cash flow return on investment. While this goal represents an improvement over shareholder value on its own, it still suffers from the need to derive the firm's cost of capital using data obtained from a possibly inefficient financial market.

The second alternative goal begins with the recognition that in speaking about the ends to pursue we are, in essence, defining a constrained optimization problem. Given the aforementioned problems with shareholder value, this approach focuses on maximizing value delivered to the firm's customers, subject to the constraint that at least minimally acceptable levels of value are also delivered to its shareholders, employees and suppliers (i.e., the providers of the

A New View of Strategy

resources needed to produce and deliver superior customer value). While this approach is somewhat at odds with conventional wisdom, it has the advantage of focusing more attention the real driver of long-term firm survival, which history suggests is more often the consistent delivery of superior customer value (with at least minimally acceptable levels of shareholder return) than the delivery of superior shareholder returns (with at least minimally acceptable levels of customer value).

Regardless of the goals chosen, great care must be taken in communicating them to the organization. The challenge in a complex, fast changing environment is to provide an organization with ends that are specific enough to be useful (i.e., to guiding planning trade-offs that must be made at lower levels of the organization), without being so detailed and deterministic that they unnecessarily constrain the organization's ability to quickly adapt to changing conditions in the competitive environment. It is for this reason that, in the military, great time is spent formulating the so-called "commanders intent" as a key part of any operational order. This clearly conveys the commander's desired end state, why it is important, the time by which it is to be attained, and the major objectives that must be accomplished along the way.

If choosing these ends to pursue is difficult, deciding on the way to achieve them in the face of competition is even more challenging. Perhaps the most important reason for this is that economic theory has such a muddled view of competition. Broadly speaking, economists' views fall into three camps. The largest is known as "neo-classical economics." It assumes that equilibrium between supply and demand is the normal state of affairs in most markets, with every firm earning just its cost of capital. This school sees "competition" as the way prices adjust to exogenous (i.e., from outside the system) shocks to supply and demand, as the system returns to equilibrium. Unfortunately, while mathematically elegant, the neo-classical view assumes away a lot of factors that are very important in the

A New View of Strategy

real world, including differences in corporate capabilities, consumer tastes, and access to information, not to mention transaction costs, innovation, and market power. In short, the neo-classical view fails to see that competition is inherent to the system itself, and not simply a result of outside shocks. For these reasons, the "insights" provided by the neo-classical school often seem to have little relevance to the real world in which managers operate.

The second set of economic views about competition is known as the "Harvard School" or "industrial organization economics." While it shares the neo-classical goal of an equilibrium state in which all firms just earn their cost of capital, the Harvard School takes a broader view of competition, and focuses on "defects" in market structure that prevent "pure" competitive equilibrium from being achieved (with the result that some firms earn returns above their costs of capital). The Harvard School's focus is on how to identify and remove these defects, or "barriers" to pure competition. Besides the fact that this goal is the antithesis of the one sought by most managers, the Harvard School also suffers from a failure to realize that it is not just competitive barriers that lead to returns above a firm's cost of capital. Other factors, such as the uneven distribution across firms of hard to imitate organizational capabilities, can produce the same result. Nevertheless, as we shall see, the Harvard School has had a powerful effect on the development of business strategy as an academic discipline.

Far less popular than the neo-classical and Harvard views of competition have been those of Joseph Schumpeter and Friedrich von Hayek, who together are sometimes collectively referred to as the "Austrian School." Refreshingly, this school believes that disequilibrium (and returns above firms' costs of capital) is the normal state of affairs in an economy, because competition is driven by the constant search for higher profits by imperfectly informed organizations. In Schumpeter's formulation, competition results from the interaction between firms which seek new profits either through developing new ideas (i.e., innovating) or

A New View of Strategy

copying the ideas of others (i.e., imitating). The former initially creates new sources of profit, which the latter then dissipates. This process is never ending, and gives rise to waves of "creative destruction" in the economy. Hayek's views are quite similar. He saw learning as the central driver of the competitive process, which never reaches equilibrium because of continuous changes in consumer needs, technology, and the actions of different companies. In this system, imperfectly informed entrepreneurs constantly seek to discover and exploit new profit opportunities, which are then copied by others, triggering another round of the cycle.

From the Harvard and Austrian schools of economics, three different schools of business strategy have developed. They have different perspectives on the right way for a firm to achieve competitive advantage and create value for its shareholders.

The "Positioning School" (less formally known as "the Michael Porter School") has its roots in the Harvard School's view of competition. However, rather than seeking ways to eliminate barriers to competition, it focuses on how to create them, to enable a firm to earn returns above its cost of capital. These barriers are most famously characterized by Porter's "five forces": limiting the power of suppliers, customers, and substitutes, while deterring new entrants and "signaling" (i.e., the legal version of "colluding") to limit actions by competitors that would weaken an industry's structure and profitability.

To Porter's enduring credit, this formulation has proven to be quite useful to managers. However, the logic of the Positioning School also suffers from some serious shortcomings. First, it assumes the existence of supremely rational managers with near-perfect information who carefully analyze multiple options before selecting the most profitable industry positioning for their company. Second, it assumes that over time, changing from one positioning strategy to

A New View of Strategy

another is easy. Third, it assumes that a company can always obtain the specialized resources it needs to profitably implement its industry positioning strategy. Finally, it implicitly assumes that managers continuously and confidently repeat this analysis and positioning process as the environment changes. All of these assumptions are unrealistic.

In contrast to the product market focus of Positioning School, the Resource Based School sees the source of superior shareholder returns in a manager's ability to combine tradable factor inputs (e.g., labor and technology) into complex capabilities (e.g., "core competences" or "core capabilities") that are both valuable and difficult for competitors to imitate. However, this school's shortcomings are very similar to those that beset the Positioning School. It assumes the existence of rational, well-informed managers who can identify well in advance the complex capabilities their company will need in the future, and somehow acquire the necessary factor resources at a price below the value they are expected to produce. It also assumes that product market opportunities will be available to convert these distinctive capabilities into revenues and profits, and that it will be easy to capitalize on them. Finally, the Resource Based School assumes that managers will continuously and confidently update their views and adapt their organization's capabilities as the environment changes. Again, these assumptions are unrealistic.

The third approach to strategy is grounded in the Austrian School of economics. In contrast to the other two strategy schools, the primary focus of this one is dynamics -- how the evolutionary processes of variation, selection and retention produce changes in firms and industries over time. The Evolutionary School's key assertions (derived from the familiar "power curve" that describes the distribution of companies' according to their age or their relative size) are that firms find change, even when it is necessary for their survival, exceptionally hard, and that few are successful at it. Successful adaptation to a changing competitive

A New View of Strategy

environment is assumed to be difficult because the institutionalization of previously successful adaptations leaves people unable to remember their original logic, and thus resist altering them. As more and more of these so-called "organizational routines" build up over time, change becomes geometrically more difficult.

The Evolutionary School also has significant weaknesses. First, it lacks a clear conception of what constitutes a firm's strategy, and seems to imply that it is effectively the sum of its routines. Second, while its theory of why firms fail is clearly developed, it is less clear about why some firms are able to successfully adapt, survive, and prosper over long periods of time.

Recent business strategy writing has seen a gradual confluence of these three strategy schools. For example, in a nod toward the Austrians, Michael Porter's work now includes discussion of what he has termed "activity systems", or how a set of integrated implementation decisions can create a barrier to strategy imitation because they are too hard for competitors to perfectly understand and to accurately replicate.

In another example, some members of the Resource Based School have acknowledged the importance of product market positioning to their ability to profitably exploit the opportunities created by their distinctive capabilities. Other Resource Based writers have come closer to the Austrian School in their understanding of capability dynamics. For example, in "The Economics of Strategic Opportunity", Denrell, Fang, and Winter note that "any explanation for superior profitability must account for why the resources supporting such profitability could have been acquired for a price below their profit generating capacity." In their explanation, resources are divided into "commodity inputs" (e.g., labor, capital, materials, land, etc.) that are regularly traded and priced in factor markets, and "complex combinations" of these inputs that result in difficult

A New View of Strategy

to imitate capabilities (also known as "core competencies"). Because of their different histories, firms will differ in the complex capabilities that they already possess (e.g., because their intentional and emergent strategies were different, they made different mistakes, and/or they had different luck). At any point in time, the current price of commodity inputs will reflect their value in existing uses -- combined into existing complex capabilities to serve existing product market needs. However, firms' perceptions of potential product market opportunities will differ because of the different complex capabilities they possess. In looking for additional ways to generate value from these capabilities (perhaps in combination with some new ones), they may identify new product market opportunities before other firms, and therefore be able to acquire the required commodity inputs at less than their potential value in the newly recognized use.

However, even taking these improvements into account, the views of the three major strategy schools still leave major gaps in our understanding, not only of the causes of past superior performance, but also of how to attain it in the future. At Bristol Partners, these shortcomings caused us to search for a new approach.

Complexity theory (also known as complex adaptive systems theory) has its roots in physics and biology. In economics, its closest analog is the Austrian School. Complexity theory's central insight is that the interactions between individual agents (whose behavior is often based on a small number of relatively simple rules) can give rise to complex "emergent" behavior that is difficult or impossible to forecast in advance. In such systems, cause and effect are typically non-linear, and widely separated in time and space. Moreover, complex systems in which agents can adapt their behavior after observing its results (e.g., like an organization, market, or economy) are often in a state of disequilibrium, caused by the random arrival of information shocks (e.g., the uneven learning rates noted by Hayek) and the uncertainty this creates in the minds of agents whose cognitive capacity is not unlimited. However, agents continue to try to identify

A New View of Strategy

and profitably exploit disequilibrium's consequences (e.g. Schumpeter's entrepreneurs) and in so doing keep moving the system back towards an equilibrium state, more accurate share prices, and lower returns on capital.

Complexity theory raises an absolutely fundamental challenge: what is the meaning of strategy in a world where accurate prediction is often difficult, if not impossible over anything longer than very short time horizons? Leading-edge thinking from the world of investment management provides some valuable insights into this question. Consider the situation faced by an equity portfolio manager, whose goal is to deliver total returns that are greater than the market average. To do this, he or she must be able to forecast future share returns with a degree of accuracy that is better than random luck. The forecasting challenge he faces is non-trivial, to say the least. The process generating equity returns includes three different elements. The first is returns that reflect the stock's relative exposure to various systematic risk factors, and the premiums one earns for accepting exposure to these risks.

The second factor in the returns generating process is exposure to risks that are unique to the company in question. And the third element is the future perceptions and actions of other investors. To forecast the systematic element of share returns, the portfolio manager would logically try to construct a superior model that makes use of publicly available information. To forecast company-specific returns, the portfolio manager would logically seek out superior private (but legal!) information not available to most other investors. And to forecast the behavior of other investors, our portfolio manager might use a mix of model-based methods (e.g., trading volume and price momentum) and superior information (e.g., that a large institution is selling a stock). Given all these challenges, you can see why consistently successful active investment managers are so rare.

A New View of Strategy

Now consider the equity market as a whole, with portfolio managers who compete for client assets via their performance versus each other and versus the market average (e.g., versus an index fund). In this environment, competition between portfolio managers is essentially a test of the relative accuracy of their hypotheses about the processes driving returns. Inevitably, some managers will be successful (due to skill or luck), and the high returns they generate will cause other portfolio managers to try to copy them. This process tends to produce periods of relatively widespread forecasting success, as a growing number of managers uses similar models and/or information sources to forecast returns. However, it is equally inevitable that these periods don't last forever. First, changes in the economy (e.g., a reduction in international trade barriers, or technical innovation) sometimes undermine the assumptions that underlie the models used to forecast returns. Second, as more and more investors employ similar models or sources of information, the returns they produce tend to decline, because the price of stocks they identify as attractive are quickly bid up. In other words, the market begins to move back towards equilibrium. As returns decline, the widely used model and/or information source appears not to work as well as it did in the past, and investors abandon it for a variety of new ones. This once again changes the underlying market dynamics, and moves the system away from equilibrium.

Do these observations imply that successful active investment management is impossible? Not necessarily. As we have seen, the market will naturally tend to generate some periods during which accurate forecasts of the future are relatively easier and others when they are relatively more difficult. During the former, some active managers will deliver higher returns than the market index, apparently "proving" the case for active investment management. However, the market's constantly evolving dynamics make it increasingly difficult for an active manager to make this case over a longer period of time. Indeed, the data are

A New View of Strategy

consistent with this hypothesis -- very, very few active managers deliver higher returns than the market index over ten or twenty year periods.

While this suggests that (absent superior foresight about different active managers' long-term abilities) most investors are better off putting their money into index funds, this does not absolve them from having to make some very important investment decisions. For example, they still have to decide how to define different asset classes (i.e., different types of systematic risk), how much to invest in them, when to rebalance their portfolios, and how to divide their holdings between taxable and tax-advantaged accounts. How should investors make these decisions, given the limitations of their ability to make long-term return forecasts? Ideally, they should choose the alternative that appears to be the most robust. That is, they should choose a combination of decisions that seems to have the highest probability of achieving their long-term goals under a wide range of possible future asset class return scenarios.

These findings from the world of investing have important implications for corporate management. Few people experienced in the latter would deny that accurately forecasting future economic conditions, customer preferences, and competitor offerings is an extraordinarily difficult task, particularly as the time horizon lengthens. And fewer still would deny that even when you get it right (i.e., profitably deliver a new offering on the basis of an accurate forecast), the superior returns generated tend to be competed away over time. This experience-based conclusion was analytically confirmed in a recent paper by Professor William Nordhaus of Yale University ("Schumpeterian Profits in the American Economy: Theory and Measurement"). He found that between 1948 and 2001, only a very small percentage of the total return from corporate innovation (i.e., from successful prediction) was captured by producers; because of intense competition, most of these gains were quickly passed on to customers. In essence, this supports the Austrians' view of the economy.

A New View of Strategy

A glance at the turnover from decade to decade in the membership of the Fortune 500 or similar lists of leading companies shows how difficult it is for companies to maintain the level of performance they need to survive over long periods of time. Nevertheless, like our portfolio manager, a corporate manager cannot avoid having to make some very important decisions, to ensure that his or her firm's strategy and organization are robust, and will maximize the probability of achieving its goals under a wide range of possible future scenarios.

Can complexity theory provide any insights into what these decisions are, and how best to make them? Indeed it can. But first, we need to briefly review a few important concepts.

One of the best frameworks for understanding complexity theory is known as the "NKCS landscape model." To briefly summarize its business version (see www.bristolpartners.com for other papers we've written on this subject), a strategy can be thought of as comprising a certain number ("N") of decisions. The firm performance generated by these decisions (known as the strategy's "fitness") will depend not only on each individual decision, but also on the extent and manner in which these decisions affect each other. In the model, "K" reflects the degree of interrelationship between the N decisions, and ranges in value from zero to N-1. For example, assume that a strategy can be described using ten different decisions. If K equals zero, the ten decisions have independent impacts on the company's overall performance. On the other hand, if K equals nine, then the impact of each decision on the company's performance depends not only on itself, but in some way on the decisions that are made in the other nine areas. (Obviously, we can make this more realistic by having some decisions highly interrelated, and some quite independent in their performance impact. But for now, we'll stick with the simpler example).

A New View of Strategy

For a given value of "K", different combinations of values for the "N" strategy variables give rise to different levels of firm performance. In landscape theory, this is known as "fitness." From a business perspective, we might consider relative fitness equal to comparative customer satisfaction and shareholder returns. The term "landscape" refers to a metaphor that describes these differing levels of firm performance as mountain peaks of differing heights. When the interrelationship between decisions is low (that is, the value of "K" is low relative to a given number of decisions "N"), the landscape is relatively smooth, with only one or a few peaks. On this type of landscape, it is relatively easy to spot the high peaks (that is, the strategies that yield the highest fitness), and to implement them through continuous improvement efforts. The primary challenge in such an environment can best be described as the race to top of the peak one has chosen to climb, before "selection pressures" in the environment (e.g., a hostile takeover) eliminate you from the game.

On the other hand, as "K" increases, the landscape grows more rugged and simply climbing the fitness peak you are on (by continuously improving your relative efficiency) does not guarantee that your organization will end up on one of the highest ones. and finding the highest peak becomes exponentially more difficult. It becomes necessary to explore other regions of the landscape, to develop insight about where higher peaks may be located, and the changes that would be required to reach them.

However, in most cases, systematic exploration of all strategy alternatives is computationally impossible (technically, it is an "NP Hard" combinatorial optimization problem). In such environments, the search process must depend on rules of thumb (also known as "heuristics"), such as those provided by the Positioning and Resource Based Schools, as well as managers' experience and intuition. These environments regularly confront leaders with a difficult decision: Should we undertake a major change in strategy -- that is, change a lot of "N"s all at once -- in an attempt to reach a higher peak? Uncertainty inevitably surrounds

A New View of Strategy

this decision, and involves both the perception of the new peak ("is it really that high?"), conclusions about what must be changed to reach it ("do we really need to outsource component manufacturing?"), and confidence in the firm's ability to successfully implement the necessary changes. Beyond a certain point, analysis cannot reduce these uncertainties; fallible managerial judgment will always be required.

Through their choice of strategy variables (e.g., the number decision variables they consider, and the extent to which they are allowed to affect each other), an organization's leaders effectively control the ruggedness of the landscape they perceive. At one extreme, there is always a temptation to pursue a simple strategy that generates only a few peaks and a clear focus on operational improvement to climb one of them. However, this carries with it the risk that competitors, who consider a larger number of strategy variables, and more complicated relationships between them, will perceive and reach much higher peaks. If selection pressure is low, these two approaches can co-exist; when it rises, firms on lower peaks are the first to be taken over or forced into bankruptcy.

On the other hand, high NK strategies also have weaknesses. While they are difficult for competitors to imitate, they are also hard to change. In a stable environment, this isn't an issue. However, if the pace of environmental change increases, a high NK strategy's lack of adaptability can make the firm more vulnerable to selection pressures. In these circumstances, a low NK strategy is preferable, because it can adapt faster.

To sum up, high NK strategies are clearly preferable in slow changing environments with high selection pressure. Similarly, low NK strategies are preferred in fast changing environments with low selection pressure. But what about the other two possibilities? As previously noted, both high and low NK

A New View of Strategy

strategies may successfully coexist in slow changing environment with low selection pressure. But what about fast changing environments with high selection pressure? In truth, there is no right answer to this question. Some have suggested a hybrid approach, that initially uses a low NK strategy to quickly search for an attractive region, and then gradually shifts to a higher NK strategy to maximize fitness within it. Other research suggests that a firm will maximize its potential adaptability and competitive advantage over time when its NK configuration is slightly less complex than the average for its competitors.

So far, so good. However, we have only described the "complexity" side of the problem faced by managers today. We haven't fully addressed the challenge posed by rapid change in the firm's environment. That brings us to the "CS" part of the NKCS model. A company does not exist in isolation. Rather, it is connected in different ways with many other players in its environment, including customers, suppliers, and competitors. The actions of all these players collectively determine the nature of their competitive environment and the rate at which it changes. In such an interconnected system (or "business ecology"), a change in one player's NK configuration will change the shape of the fitness landscape faced by the players to which it is connected. In this sense, the strategies of all the players on all these interconnected landscape are said to "co-evolve" with each other.

More formally, the "CS" term refers to the number of other players ("S") to which an organization is connected, and the average number of connections ("C") between the organization and each of these other players. From the strategy perspective, the dynamics of NKCS models provide some very interesting insights. For example, the balance between "NK" (internal complexity) and "CS" (external complexity) is critical. When NK is greater than CS, the organization tends to lose fitness because of excessive stability (indeed, the whole "re-engineering" movement can be seen as an attempt to improve fitness by

A New View of Strategy

reducing "K"). Symptoms of this include a lack of innovation and a preoccupation with formal goals and organizational structures.

On the other hand, when CS is greater than NK, a firm risks losing fitness from overly impulsive, expensive and chaotic change. Symptoms of this state include a feeling that an organization is always "putting out fires" and reacting to the decisions and actions of others. Too many things are going on, and people feel the organization feels like it is out of control and coming apart.

Experiments have found that optimum organizational fitness and adaptability (that is, the most "robust" strategy) result when NK roughly equals CS. Most managers intuitively understand this: they know that organizational performance suffers when one responds too slowly or too impulsively to changes in the firm's environment. Signs that an organization is operating in this maximally adaptive region include a focus on qualitative agendas in addition to quantitative goals, the emergence of proactive innovations, and the existence of social networks that cut across formal organizational boundaries.

Over time, there seems to be a natural evolution toward strategies that have relatively high NK and CS. The logic here is as follows: high NK strategies are hard for competitors to imitate, but they also make adaptation very difficult. This risk can be limited by having a high CS, which tends to slow the rate of change in the competitive environment, and hence the need for adaptation. Over long periods of time, a high NKCS strategy can work quite well. That being said, the history of evolution is also filled with examples of what is termed "punctuated equilibrium" (e.g., the "disruptive innovations" identified by Clayton Christiansen) in which the average fitness of players in high NKCS ecosystems was dramatically reduced when a new, unconnected player entered the game (e.g, new competitors from China with dramatically lower cost structures).

A New View of Strategy

This leads to another key point: as was the case for NK alone, a firm's NKCS balance compared to those of its competitors is also important. Studies have found that a firm maximizes its relative fitness over time when it maintains levels of NK and CS that are not only relatively balanced, but also somewhat below those of its competitors. The reason for this is clear: doing so enables an organization to confront a somewhat less challenging landscape search problem, and thus leads to faster adaptation to change, without too much of a potential reduction in fitness.

To summarize, various strategy schools offer managers a wide range of ways, or conceptual approaches, they can use to achieve their organization's desired end state. However, these ways are useless if they are not explicitly related to the means (resources) that are available to implement them. Two considerations need to be kept in mind.

First, not all resource allocation decisions are equally important. They vary not only in their cost and degree of reversibility, but also in their impact on other decisions. Decisions that are difficult to reverse and/or have a strong impact on other decisions are more "strategic" than those that fail the meet these two tests. These are the decisions that should receive the most senior management attention.

Second, decisions vary in the extent to which their associated risk can be managed. Broadly speaking, there are four possible responses to a risky decision. First, one can wait to make it. As shown by real options theory, the more uncertain the decision outcome, the more valuable the option to wait before making it. Unfortunately, waiting is not always possible. In this case, the next best option is to hedge the possible adverse outcomes of the decision. Where this is either not possible or prohibitively expensive, the third option is to attempt to shape the environment to raise the probability of a favorable decision

A New View of Strategy

outcome. The worst situation is one in which none of these three options is available, and one must decide immediately in the face of considerable uncertainty. To be sure, the use of different methodologies for assessing the future competitive environment can make this somewhat easier to do (e.g., scenario analysis or computer assisted reasoning). However, even when these tools are used, an irreducible level of uncertainty will always remain, and fallible human judgment will still be required.

As in the case of an organization's theory of the future environment, it is also important that its theory of how to act produce concrete predictions of expected future results. This approach (also known as "assumption based planning") enables the theory of action to be tested, and, if necessary, falsified and replaced by a new one. The organizational challenges of implementing this approach are substantial, not because it is conceptually difficult, but because in many cases too much political and reputational capital is invested in the prevailing strategy. An organization's ability to react quickly to unforeseen changes (which are inevitable in a complex adaptive system) fundamentally depends on a mindset that recognizes the necessarily incomplete and temporary nature of all strategy theories. In other words, the ability to gain a dynamic competitive advantage through faster situation assessment and adaptation critically depends on the ability to see the falsification of a prevailing theory as a natural part of organizational life, rather than as a crisis signaling the time for heads to roll. Unfortunately, this is anything but easy for many organizations.

A Theory of Implementation and Adaptation

As we have repeatedly noted, in complex, uncertain, and constantly changing environments, a key source of competitive advantage is an organization's ability to adapt faster and better than its competitors. There are many factors that contribute to this ability. One of them is a mindset that views the firm's current strategy and views about the future environment as theories to be tested (and potentially falsified) rather than dogma that is questioned only at one's peril. Contingency planning is also important, but this is necessarily limited to those uncertainties that can be foreseen ahead of time.

In addition to contingency planning, conscious exploration of alternative strategies (at both the conceptual level, and via small experiments) also plays a key role in an organization's ability to adapt. Managers are always confronted by the choice between allocating scarce resources to improve organizational fitness by climbing up the peak they are on (e.g., varying a few Ns), or by searching in regions of the landscape that are further away (i.e., varying many Ns, K, and/or CS). This latter approach may include both the search for substantial innovations and attempts to accurately discern and imitate the strategies of more successful competitors. Both of these involve substantial changes in a firm's NKCS configuration. While operational improvement (i.e., climbing further up the fitness peak you are currently on) will result in some improvement, there is no guarantee this will protect you from rising selection pressures in your environment.

In addition to expected changes, a complex adaptive system will also give rise to many unexpected ones. A firm's ability to successfully adapt to them, and hopefully to gain competitive advantage in the process, is ultimately a function of its organizational configuration. In this regard, the academic distinction between "strategy" and "organization" is wholly artificial.

A New View of Strategy

More specifically, the design of a firm's organization affects the operation of the fundamental elements of its adaptive process: the generation of variations (i.e., innovations), the selection of the most promising ones, and the retention of those that prove successful over time.

Contingency planning and conscious exploration are two examples of relatively planned variation. However, innovation also happens spontaneously at all levels of the organization. The extent to which this occurs is a function of four variables. The first is the felt pressure for change, or, in complex adaptive system terms, the level of "adaptive tension" in the organization. This is a function of both competitive performance and deliberate managerial activity. For example, poor performance relative to competitors (or to a firm's cost of capital) will increase adaptive tension. But internal actions taken by management can also have the same effect (e.g., Jack Welch's dictum that General Electric would be number one or number two in a business or would exit).

The second factor driving variation is how the organization is divided into separate units (technically, its "decomposition"). Dividing an organization into smaller business units reduces its effective level of "K", and speeds up its search process by making it a parallel one. However, small business units by themselves are no guarantee of successful adaptation. For example, it is easy to see how, if managers' incentives relate only to their own business units' performance, they could constantly implement changes that work at cross-purposes, and prevent any increase in the organization's overall level of fitness.

This brings us to the third and fourth variables influencing variation: how decision authority is distributed within the organizational hierarchy, and the nature of managers' incentives. For example, the problem described above could be corrected in at least two ways. One would be to require that business unit managers recommend their proposed changes to a higher-level manager, who

A New View of Strategy

uses the potential impact on the organization's overall fitness to decide which of them to implement. The alternative would be to compensate the business unit managers not on their respective business units' performance, but rather on the performance of the firm as a whole. Both approaches would force the smaller units to coordinate their respective innovation efforts to maximize the organization's overall fitness.

Beyond issues of organizational structure and incentives, the criteria that are used to choose between different innovation proposals are also very important. In many firms, these criteria are predominantly financial. However, the latest developments from the world of investment management suggest that the Net Present Value methodology (even in its enhanced form with real option values taken into account) may provide a false sense of accuracy, due to its dependence on inputs from a financial market that may be operating well away from equilibrium. In a complex adaptive system, it is often better to have a diversified portfolio of small initiatives and selectively reinforcing the most successful over time rather than spending too much time trying to pick the "right one" in advance. Again, the key here is assumption based planning -- selection and reinforcement of different initiatives should be triggered not just by financial metrics, but by how well actual outcomes align with those that were expected.

Organizational decisions also lie at the heart of retention, or the process by which successful innovations are embedded into a firm's operations. This is usually accomplished in two ways. The first is changes in the "hardwiring" of an organization, including its processes, people, metrics, incentives, and systems. On the positive side, these usually make it possible to more efficiently exploit successful innovations. Unfortunately, if the reason for making these changes is lost to organizational memory, over time they can turn into unquestioned routines that make a firm more vulnerable to future changes in its competitive environment.

A New View of Strategy

The second way that successful innovations are retained is via change in the organization's stock of knowledge, in both its explicit and tacit forms. It is in this area that “knowledge management” systems have great potential, because they not only capture and store new knowledge, but also make a firm’s accumulated knowledge easier to access and recombine to produce further innovations.

As in the case of an organization's theory of its future environment and its competitive strategy, it is also critical that its theory of adaptation produces predictions about its likely future results. There is no quantitative way to do this. Rather, the key is to watch for actions and conditions that indicate the state in which the organization is performing. Does it appear excessively stable, with few innovations and a high level of focus on quantitative goals and the formal organizational structure? Does it appear chaotic, dominated by firefighting triggered by rapid-fire external changes, with too many initiatives and growing organizational discord? Or does it feel like the firm is on top of its game, with new networks forming around pro-active initiatives undertaken to achieve emerging agendas? In sum, experienced managers know these conditions when they see them. Our new approach to strategy helps them to better understand their root causes, and their connection to superior performance.

Managerial Cognition is Also Critical

The second part of our new approach grows out of the recognition that the development and continuous testing of strategy takes place in an environment where managers' cognitive resources are limited, uncertainty abounds (even in the presence of information overload), and time pressure is sometimes intense. To maximize performance, ways must be found to deal with these issues.

A New View of Strategy

For the answers to these challenges, we turned to cognitive psychology, and its application to pilot training and what the military calls "situational awareness." As noted above, a strategy includes a theory of the environment, and a conceptual model of how to achieve certain goals within it. Over time, managers obtain information (both actively and passively), use it to understand the situation they face, project how it may unfold in the near future, compare that to their conceptual (i.e., mental) strategy model, and decide whether or not to make any adjustments to it (to the ends, ways, means, or risk of the current strategy, and/or to their information collection efforts). This situation assessment cycle operates in parallel with the execution of tasks to implement the strategy. Managers' mental models (i.e., theories) of their environment and strategy are central to the fast and effective functioning of this cycle. They guide the information that is sought and attended to, its interpretation, and the projection and assessment of future courses of action.

In addition to its accuracy, the speed at which an organization performs the situation assessment cycle is critical. If it performs the cycle slower than its environment is changing, entropy (disorder) inside the organization will gradually increase, leading to reduced fitness and ultimately to failure. If an organization can perform the situation assessment cycle faster than its competitors, it will reduce its relative entropy and compound its competitive advantages over time.

Unfortunately, there are many traps in performing the situation assessment cycle. To name but a few, an individual's mental model may be seriously flawed, and/or the models used by team members may be very different. Mental shortcuts ("heuristics") used in the cycle may lead to biases and bad decisions. Examples of these include the confirmation bias (looking for and/or attaching more weight to information which confirms rather than contradicts current views); over and under-reaction to new information; overoptimistic "best estimates" about the future value of a variable, and/or overconfidence about its possible range.

A New View of Strategy

Information overload can also create problems (e.g. paralysis by analysis, or heightened perceptions of ambiguity or uncertainty that trigger excessive risk aversion). So too can time pressure, especially when managers are trying to apply "classical" decision tools when there is not adequate time to use them.

In addition to these individual traps, there is another layer of problems particular to the operation of groups. Briefly stated, the key issue here is that, in the process of sharing their respective theories, members of a group do not always fully reveal the private information they possess. This can happen for both social reasons (e.g., concern about the potential damage to one's reputation as a "good team player" if one reveals private information that clashes with the views of the majority, or the group's high status members), and for cognitive ones. A good example of the latter is when, after learning a colleague's conclusion, a group member decides not to disclose her private information because she assumes that the colleague's conclusion was based on superior private information. This deprives the group of additional information that could improve its collective mental model, and enable it to more accurately gauge the uncertainty it faces. All of these factors can cause groups to become overconfident about the decisions they make.

In light of all these considerations, we have concluded that strengthening managers' and teams' cognitive skills is just as important as broadening their strategic concepts. There are a number of ways to do this. One approach is classroom training that makes managers aware of the importance of the situational assessment cycle, and the individual and group thinking traps that can block its smooth functioning. Another is using simulation exercises ("war games") to develop the ability to function as a team under time pressure in an information rich, rather than information scarce environment. Too much management theory assumes the former, and has been made obsolete by the introduction of the internet, and almost constant information overload.

A New View of Strategy

Within "live" management processes, there are also steps one can take to improve a team's ability to perform the situational assessment cycle. The integration of explicit devil's advocacy into the process is often recommended as an antidote to group-think and premature closure of a deliberative process. However, it has some significant drawbacks. First, if everyone involved in the process is a member of the same organization, it may well be the case that the confirmation bias has deprived them of the information needed to make a truly effective alternative case. Another drawback is the uncertain emotional outcome of the devil's advocacy process. When it goes wrong, it can easily lead to polarization and higher overconfidence in the decision supported by the majority. On balance, genuine dissent usually has a more powerful and constructive effect on a group than a forced devil's advocacy process.

These shortcomings have led to a search for alternative means of ensuring decision quality. One that is gaining popularity in government agencies is the "Red Team" approach. While this has many variants, let's briefly look at three of the most common. The first is explicitly adversarial, and uses an outside "Red Team" to challenge a conclusion reached by an inside "Blue Team". For example, a Red Team could be asked to develop a case that a key competitor will launch a new product earlier than the Blue Team concluded.

Another approach is less adversarial, and asks the Red Team to independently reach its own conclusion about an issue. For example, the Red Team could be asked to develop a strategy for a different scenario than the "most likely" one assumed by the Blue Team. The third approach is often called a "day after" exercise. It seeks to use hindsight to develop foresight. For example, a Red Team could be asked to assume that it is five years from now, and the company's current strategy has delivered only half of its expected results. They would be asked to develop a credible story that explains how this happened,

A New View of Strategy

including the key warning signs that were missed, critical decisions that contributed to the poor outcome, and what could have been done differently.

Regardless of the approach that is used, developing a management team's ability to execute the situational assessment cycle faster and better than competitors is a critical source of competitive advantage in a complex and fast changing environment.

Practical Implications for the Use of Consultants

Bristol Partners' new view of strategy also helps to clarify how clients can make the most effective use of external consultants.

Given the dangers posed by the confirmation bias, overconfidence and group-think, clients should ideally hire consultants to challenge, not simply to confirm the assumptions upon which an organization's current strategy is based. This doesn't always make for warm and fuzzy consulting relationships; however, it does result more useful deliverables and better long-run client performance.

For example, outside consultants can function as a Red Team, and used to develop an alternative theory of the future environment a firm will face. Consultants can also be used to help clients apply new techniques like computer assisted reasoning, that enable management teams to integrate their respective mental models, and test their implications for different courses of action.

When it comes to developing a firm's theory of action, the standard case for including external consultants has weakened in recent years. Managers have become much more familiar with the basic insights of the Positioning and Resource Based Schools, and well-practiced in applying them to develop their organizations' strategy under the most likely future scenario. Again, we believe

A New View of Strategy

that consultants can play a much more valuable role by guiding "Red Teams" in the development of contingent strategies under scenarios that differ from the one assumed in the current business plan, and assessing their implications for near-term decisions. In particular, we have found that forcing management team's to think in advance about how they would act under the "most dangerous scenario" can deliver substantial competitive benefits if that scenario (or one like it) comes to pass. At the end of this document, we have included a checklist that we use in this type of project.

In light of our conclusion that, in an uncertain and complex adaptive system, the distinctions between strategy and organization are largely artificial, we believe it still makes sense to use consultants to assist with the development of a firm's theory of implementation and adaptation. These activities include helping to balance internal and external complexity and manage the level of adaptive tension, as well as the design of the innovation-selection-retention process (and management of the portfolio of initiatives it produces). Equally as important, consultants can help to strengthen managerial cognition and develop superior client capacity to execute the situation assessment/adaptation cycle.

Bristol Partners' Offerings

Bristol Partners Inc. is a management consulting firm that helps clients apply the concepts discussed in this paper to improve their firm's performance. Bristol Partners was founded in 1994 by people with substantial previous experience in industry, consulting (at the MAC Group) and investment banking around the world. Having been line managers ourselves, we place great emphasis on delivering highly practical, cost effective consulting projects that help our clients substantially increase the value of their firms over a three to five year period. For this same reason, we work with only one company per industry, and usually tie a portion of our compensation to our client's medium-term results.

A New View of Strategy

The services we provide our clients are based on our new view of strategy. We help clients to develop their theories of the environment, action, and adaptation. In the first two areas, rather than simply validating the results already produced by a lot of smart people in their own organizations, we believe that clients are better advised to spend their money on having us challenge their conventional wisdom using one or more of the techniques we have described in this paper. When it comes to implementation, we work with clients to align organizational factors with their theory of adaptation, and to strengthen managerial cognition.

One of our most innovative and cost-effective offerings is a two-week project that takes a cross-functional team of managers and provides them both an overview of, and practice applying new strategy tools. It is an application of the "Red Teaming" approach increasingly used by defense and intelligence organizations around the world. The first week includes training modules covering traditional and new strategy, performing the situation assessment cycle, formulating and choosing between different hypotheses, managing information overload, and different approaches to quantitative modeling. In the second week, the team uses these concepts to develop a "coarse grained" contingency plan for their organization under a scenario that includes a different outcome for one or more critical assumptions that underlie their company's current strategy (client senior management usually provides this alternative scenario). A key output is the implications of the alternative scenario for key near term-decisions facing the client firm. Deliberately having the team complete this exercise over a very short period provides a realistic experience of decision making under uncertainty, information overload and time pressure.

This short project provides multiple benefits to the client organization. These include training and assessment for the people assigned to the project team, a preliminary contingency plan should the alternate scenario occur, and deeper insight into the nature of the strategic decisions facing the firm. By including one

A New View of Strategy

or more of these two-week projects as part of its regular training cycle, an organization systematically improves its ability to create competitive advantage by adapting to changing circumstances faster than its competitors.

If you would like to further discuss the concepts we have described, or their potential application to your business problems, please contact us at either busdev@bristolpartners.com, or on (USA) 401-453-4380.

What is Your Company's Strategy?

What is your theory about how your competitive environment will evolve?

1. What are the most important variables driving the future evolution of your competitive environment (e.g., market size, customer needs, technology, competitors, regulation, etc.)?
2. How are they related to each other?
3. What will be their future values?
4. How confident are you in these estimates? Which variables are most uncertain?
5. What is the most likely scenario for how your competitive environment will evolve (this is most likely the one assumed in your current business plan)?
6. What is the most dangerous scenario?
7. To understand which scenario is developing, what are the most important pieces of information you need to collect?

What is your theory about how to successfully compete in this environment?

1. Which markets and customers will you target?
2. What will you offer them?

A New View of Strategy

3. How will you reach them?
4. Why will they choose your offering over those from competitors?
5. How will you create value for your shareholders?
6. What makes your offering hard for competitors to copy?
7. Would any of these choices be different under the most dangerous scenario?

What is your theory of implementation and adaptation?

1. What are the most important decisions implied by your strategy, in terms of their potential impact on other decisions, resource requirements, and degree of irreversibility?
2. What are the implications of your strategy for process design, decision authority/structure, skills/staffing, information systems, critical behaviors, performance metrics, and compensation?
3. What are the implications for corporate finance and investor relations?
4. What corporate development priorities and criteria does your strategy imply?
5. What are the most important risks to your strategy, and how will you manage them (e.g., delay a decision, buy a hedge, try to shape the environment, or make a bet)?
6. What are the most impotent indicators you will use to compare actual conditions to your mental model of how your strategy should work?

7. What will trigger a reconsideration or adaptation of your strategy?

How well does your strategy align with findings from complexity theory?

1. How fast is the pace of change in your competitive environment?
2. How strong are the selection pressures in your environment?
3. How complex are your competitors' strategies?
4. How complex is your strategy?
5. What is your current NKCS balance?
6. How high is the level of adaptive tension in your organization today?
7. Do you have organizational routines that are holding back your performance?