Teaching Decision Makers to Learn from Scenarios: A Blueprint for Implementation

By Ian Wilson

The insights gained from scenarios will be wasted unless companies effectively integrate them into the decision-making process.

Talking to managers in companies that have invested a lot of time and energy in the scenario process you frequently hear complaints like these:

"OK, so we've got these scenarios. Now what do we do with them?"

"The scenarios tell us more about the future of geo-political relations than they do about the future of our markets. What good is that to us?"

"So, we've developed an elegant set of scenarios, and introduced them into our planning system. But, to be honest, they don't seem to have made much difference to the way we plan and develop strategies."

Do these frustrations sound familiar? They ought to. These and similar expressions of discontent with scenario planning are echoes, ten years later, of the complaints about the ineffectiveness of strategic planning. The symptoms are virtually identical. And the root cause of the failures of strategic planning and scenario planning is the same.

Ian Wilson joined SRI International in 1980 after 25 years with General Electric, primarily in corporate strategic planning. Specializing in scenario planning and development of strategic vision, his consulting assignments have included Shell, Statoil of Norway, and CSR of Austrailia.

Companies experimenting with both these strategic management innovations neglected to develop an effective blueprint for implementation.

The Nature and Scope of the Implementation Problem

However, before we can start to implement, we must understand why implementation is such a chronic problem. Is there a defect in the methodology itself? Is there a failure to link it with the current planning system? Are there institutional barriers to its acceptance? After twenty years of planning I now believe that, just as the immune system in our physical bodies will fight to reject organ transplants, so most planning systems—without preparation—will reject scenario planning.

The reasons for this rejection are largely cultural and psychological. Most large organizations' decision-making culture is strongly biased toward single-point forecasting. Most senior managers believe in the premise, "Tell me what the future will be, then I can make my decision." (Here's a test: Does your senior management believe the future can be expressed in terms of the T-bill rate, the GNP, or a single commodity price five years from now?) Admittedly, there will always be a place for single-point forecasting in developing short-term assumptions. But their interpretation can be enhanced by viewing them against a backdrop of longer term alternative scenarios.

In sharp contrast, scenarios are a process of multiple-point forecasting. This methodology forces everyone involved to view the future and decision making in terms of alternatives. The capacity to do this requires a major culture shift, not only in the organization, but in the outlook of each member of the management team.

Another cultural barrier to scenario implementation stems from how we define managerial competence. Good managers, we often say, know intuitively where they are, where they're going, and how they'll get there. We thus define competence as being tapped into the pipeline of knowledge and data about the present and future. Scenarios, on the other hand, confront us with the need to admit that we do not, and indeed cannot, know the future. To that extent, scenarios force us to acknowledge some degree of "incompetence." Since few corporate cultures reward displays of incompetence, managers usually have a vested interest in not acknowledging what they don't know.

And there are still more cultural barriers and biases that hamper adopting scenarios as part of a firm's management decision-making process. For example, some U.S. companies cultivate a numbers culture, reward autocratic leadership, and promote executives who are reluctant to entertain non-conventional views. However, scenario planning forces management to face the need for drastic corporate culture change in the process of planning, strategy development, and resource allocation. No wonder there is often resistance to putting these lessons into practice

Planning for a Scenario-based Planning Culture

As one way of combating this resistance, SRI International's approach to scenario methodology is decision focused (see box, Decision Focus), an important step in dealing with this cultural problem. But changing the culture of the organization entails concerted and sustained effort in:

- Tailoring the scenarios to specific organizational needs.
- Selecting "targets of opportunity" for applying scenario planning in the world.
- Developing a communications program.
- Emphasizing manager education.
- Fine-tuning and updating scenarios.

Pierre Wack of Royal Dutch/Shell began experimenting with scenarios in the early 1970s, just before the first oil shock. Although he gained management's attention quickly as the logic of oil pricing turned upside down in 1974, action followed more slowly. It took about five to six years before the Committee of Managing Directors felt comfortable with the use of scenarios in their decision making. And even now, the spread of scenario planning into the worldwide network of operating companies has been uneven and incomplete.

Here's how SRI works with organizations to implement scenario planning in a five-step process.

> *"The capacity to prepare, use, and learn from scenarios requires a major culture shift, not only in the organization, but in the outlook of each member of the management team."*

Step 1: Tailoring to Organizational Needs. Scenario planning can succeed only if it meets the criterion of corporate relevance. Pierre Wack has noted that scenarios must reflect management's central concerns. So scenarios must articulate management's disquieting feelings about critical uncertainties, and their perceptions of key issues and decisions they are likely to face. However, the scenarios may be quite different from management's expectations of the future. Scenarios are supposed to challenge conventional thinking. This is perhaps the most potent argument against using "off-the-shelf" scenarios, and in favor of the involvement of senior management in the scenario-development process. At SRI clients frequently ask us to develop our own version of scenarios, but we've always strenuously resisted this approach. Producing cookie-cutter scenarios for a company would be counter-productive. Active participation by management to develop the scenarios is essential. This approach increases the relevance of the scenarios to corporate planning needs, and enhances senior and middle management "ownership" of the final product. The more we involve senior managers—the decision makers, and thus the end users of the scenarios—the better.

Infusing the scenario thought process into the planning system requires careful management. A successful experience resulted from SRI's work with the CEO of a European bank and his direct reports. Because they actually developed the scenarios themselves, they understood them and used them to create working mental models of their business in a variety of future situations.

Multi-divisional companies have a special need for tailored scenarios, since scenarios developed at the corporate level are not likely to be detailed enough to guide the business unit level. Indeed, planning needs will vary from business unit to business unit. But SBU-specific micro scenarios need to be designed to fit under the umbrella of the corporate macro scenarios. These more focused scenarios capture the details of each business unit's markets, competition, technology, and other key environmental variables. In addition, they also enhance SBU managers' understanding of the scenario process, which in turn ensures their commitment.

In 1982, Shell Canada, an operating company of Royal Dutch/Shell, had access to certain group-level scenarios, which gave them the needed international economic and

SHELL CANADA: A CASE STUDY IN TAILORING SCENARIOS

In 1982, Shell Canada tailored Royal Dutch/Shell's group-level scenarios ("Fragile Compromise" and "Restructured Growth") to its own planning needs by adding an axis of "Canadian Political Thrusts" to produce the following matrix:

	Canadian Political Thrusts	
Related International Economic Conditions	**Centralization (country building)**	**Decentralization (province building)**
"Fragile Compromise"	**"Defensive Nationalism"**	**"Provincial Isolationism"**
"Restructured Growth"	**"Focused Growth"**	**"Confederated Provincialism"**

The four resulting scenarios were then further elaborated to cover the varying market and competitive situations of the company's business units.

political setting as well as the global energy picture. However, to be applicable to Shell Canada, these scenarios had to be "Canadianized." For example, a crucial Canadian dimension was the uncertainty about whether they would have to operate under the future policies of rival political leaders—either Pierre Trudeau (centralization) or Joe Clark (decentralization). The differences between the politicians' proposed programs on national energy policy, taxation, foreign investment, and access to Federal lands, to name a few, would create different problems and opportunities for Shell Canada.

The interaction between international forces and Canadian politics produced a matrix of four scenarios (see box). Although these satisfied the planning needs at corporate level, they required further "tailoring" to the needs of the various business units. So these four corporate scenarios were then "fleshed out" with industry and market detail for oil and gas, coal, chemical, and other segments. In the end, there was a three-tier nesting of group, company, and SBU scenarios, each tuned to the specific planning needs of a given level.

Step 2: Selecting Targets of Opportunity. The basic purpose of scenarios is to aid executive decision making. To do that, managers must perceive them as useful. This is a higher standard than most managers imagine. The Royal Dutch/Shell experience has shown that it takes a long time before executives develop the skills to use scenarios universally, instinctively, and imaginatively. To make the transition easier, initially it helps to use scenarios one step at a time, in targeted situations.

An important element in the implementation plan is, therefore, selecting "targets of opportunity" for the use of scenarios. For example, an organization might want to start using scenarios as a test bed for assessing the resilience, risks, and payoff of major investment decisions. There are two obvious advantages to such a target:

- These are precisely the sort of key, long-term decisions that most readily lend themselves to scenario-based evaluation and planning. Successful examples from SRI's files include: determining the pace and timing of opening a new copper mine in Chile; and assessing the long-term payoff and feasibility of a $500 million addition to a firm's paper-manufacturing capacity.
- Since this decision-making process involves both SBU managers (the proposers) and corporate managers (the approvers), it promotes usage at two levels. If a business unit manager knows that corporate executives will use scenarios to evaluate requests for investment funds, that manager —and the SBU management team in general— will be much more likely to use the scenarios to help shape their proposal.

Two other targets for introducing scenarios are corporate assumptions and contingency plans. Virtually every strategic plan contains a set of assumptions about future economic, market, competitive, and other trends. Typically, these premises are the product of single-point forecasting. What better point of entry for scenarios, therefore, than in assessing the strategic significance of trends, uncertainties, and assumptions about the company's future business environment?

Similarly, every strategic plan should consider how the business would deal with contingencies—the divergences from planning assumptions that could batter corporate performance. The scenario process is designed to explore contingencies and their results. As a first step, corporate management could use a contingency scenario to reassess all current strategies and investment decisions. Encouraging this sort of "what if" thinking builds a constituency for full-fledged, scenario-based strategy development.

Whatever targets of opportunity management selects, their decisions should recognize the need for changes in the existing strategic planning system. They should have a clear idea of how to change the culture of the system and the resources and actions needed to implement the changes. Therefore, targets should be considered steps in the overall implementation plan, not a random set of opportunities.

Step 3: Developing a Communications Program. Communications are an essential part of the scenario implementation blueprint. If it is to have any chance of taking root, such a major change must be defined, clarified, and communicated — as to both its nature and its purpose. Finally, it must be suitably tailored to the needs of various internal (and some external) audiences. "Communicability" thus becomes a vital characteristic that must be built into the scenarios. To change the mindset of executives and planners, the champions of the scenario process must first capture and hold their attention. An excellent way to grab the attention of operating managers is to write imaginative scenarios about their markets. The term "scenario" comes from the world of film and theater. The best scenarios resemble convincing movie scripts or plays about the future. To hold management's attention, stories about the future need to be both imaginative and logical. Ideally, the product of the group effort are scenarios that open the corporate mind to new possibilities but are grounded in plausibility and business relevance. Ralph Waldo Emerson described such a process as building rock foundations for castles in the air.

The stories need intriguing titles and captivating storylines. Titles such as "Best Case/Worst Case," "High Growth/Low Growth" simply don't stir the imagination. They tell us little about the true character of the business environment, and virtually nothing about its dynamics. To capture the attention of managers, Royal Dutch/Shell planners called two of its early scenarios "Fragile Compromise" and "Restructured Growth." Shell named its more recent scenarios "Sustainable World" and "Global Mercantilism." Once the titles are explained and elaborated by the story line, they become memorable. Each conveys — in just two words — a complex structure of forces, issues, and business results.

Story lines play an important part in communicating the nature and significance of scenarios by presenting a dynamic rather than static picture of the future. The narrative describes not merely an end-point—such as the global chemical market in 2010—but how it might come to pass. Developing detailed story lines was a key step in the introduction of scenario-based planning into Statoil, Norway's state-owned oil and gas company (see box, Case Study).

If the scenarios are truly to become part of the corporate culture, communications about them have to occur at two levels:

- Communications from senior managers should clearly convey the seriousness of their commitment to this new way of planning. They can start by explaining how they intend to use scenarios in their own decision making. Top management should also be explicit about how they wish others to use them.
- Members of the planning staff should provide step-by-

"DECISION FOCUS": A STEP TOWARD IMPLEMENTATION

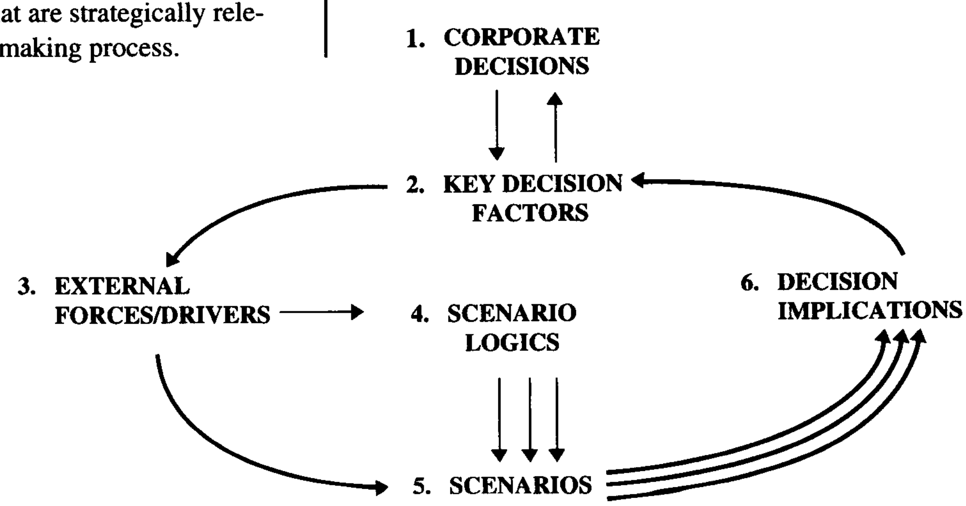
SRI's scenario process has a built-in first step for dealing with the problem of implementation—it's "decision focus." In fact, the entire process is decision focused (see below: Six Steps in Scenario Development). This means that the starting point (Steps 1 and 2) is not the macroenvironment, but rather a clarification of the nature of the strategic decisions the scenarios are designed to address.

This process includes creating a list of the "key decision factors"—the things management would like to know about the future in order to make better decisions. This approach ensures that the resulting scenarios will be sharply focused on the trends, events, and uncertainties that are strategically relevant to the firm's decision-making process.

This decision focus is reinforced at the end of the process (Step 6) when the scenarios are analyzed and interpreted to uncover their implications for the prospective decision to be made. These implications will include the key opportunities and threats most likely to be presented by these alternative futures. They may also identify the strategic issues and options to be considered in making the decisions.

While this approach doesn't offer specific steps for implementing scenario planning in an organization, it does provide a direct and immediate linkage to one specific use for the scenarios.

SIX STEPS IN SCENARIO DEVELOPMENT



step guidelines about how to build scenarios and how to put them to best use.

Step 4: Emphasizing Manager Education. There is much to be said for "learning by doing." Indeed, I have often urged hesitant planners and executives to "just do it." However, I also believe that, to achieve a culture shift of this sort, on-the-job learning must be reinforced by formal education programs.

In the first place, institutionalizing scenario planning normally involves a broad review—and much revision—of the existing planning system. At a minimum:

- Both planners and executives have to be educated about the requirements of the new system.
- Guidelines have to be developed for the use of scenarios.

Some of this education can be covered by manuals and other written materials — but not much. Everything we know about adult education suggests that investing in seminars, group interaction, and hands-on exercises pays off.

When General Electric launched its strategic planning system in 1970-71, it developed an extensive manager-education program to ease the transition to a new system. The program included half-day executive briefings, two-week courses for would-be strategic planners, and two-hour audio-visual presentations for nearly all staff professionals. The results of this effort were impressively positive. Unfortunately, however, they did not experiment with scenario planning until they were already into their first planning cycle—after the education program was designed. As a result, scenarios never became an integral part of the company's educational system or planning culture. After this negative experience I have become an ardent proponent of educating managers before and during scenario planning.

The core of a manager education program can be a one- to two-day seminar on the skills and methodology of scenario development. In such sessions the most valuable lesson to teach managers is the need for, and role of, scenario planning, its applications in strategy development, and the changes in culture and decision-making processes that this new approach requires. The real aim is to integrate the implications of the scenario thought process into other manager-education programs, especially those concerned with management style and organizational culture. Scenario planning will not take root in a company whose education programs foster a culture of hierarchical thinking and "going by the numbers," since this outlook diminishes respect for flexibility and innovative thinking.

Step 5: Fine-tuning and Updating Scenarios. One good indicator of whether or not scenario planning has taken root in a company is the degree of continuity in the scenario development, updating, and revision. Just because scenarios deal with mid- to long-term perspectives doesn't mean they deserve this kind of occasional attention: "Ladies and gentlemen, nine years have passed — we'd better revise our ten-year scenarios!" If management truly uses scenarios to make decisions, they must be continuously fine tuned and updated to maintain their relevance.

The blueprint for implementation should, therefore, show how to set up links to established corporate monitoring and scanning processes. ["Monitoring" can be defined as tracking the course of trends of known importance to provide both guidance for operations and feedback for scenarios. "Scanning" can be defined as an early warning system for uncovering potentially significant new trends and developments that provide valuable input to scenarios, monitoring, and strategic planning.] Monitoring is most useful when it tracks current events at the forks in the road toward the future identified by the scenarios. Scanning, on the other hand, can alert companies to hitherto unanticipated developments—ranging from unexpected research discoveries to subtle cultural, social, or political transformations— that might form the basis for entirely new scenarios. Both monitoring and scanning are necessary to keep the scenario process alive, relevant, and in the forefront of corporate thinking.

There are three obvious procedural devices for keeping the scenario process vigorous and perceptive.

- First, the scenario-building sessions should be scheduled so that their output is ready at the right time to be used in annual planning cycle.
- Second, the more people with different viewpoints become involved in the revision process the better. It's definitely not a good idea to restrict participation to members of the planning department. Instead, seek the ideas and insights of marketers, technologists, public policy analysts — anyone whose field of expertise covers the driving forces of the scenarios. This group stands to benefit directly from the insights and information exchanges of the scenario process.
- Third, it helps to have a provisional schedule for scenario revisions. While annual fine tuning is needed (as is the case with single-point forecasting), we've often found that radical revisions are required every three to four years. The revision schedule depends on the pace and course of events and on the foresight of the original scenarios.

On Planning to Learn

Scenarios deliver both more and less than most people expect. They don't provide the sole and ultimate answer to planners' and decision makers' needs. However, scenarios can lead to the creation of a new, flexible, and effective planning culture.

Nearly twenty years ago, in his seminal book On *Learning to Plan and Planning to Learn,* futurist Donald Michael wrote of the urgent need for "learning to plan and planning to learn." The steps I have mapped out follow the same path that Michael had in mind. The goal is the creation of the "learning organization," that both plans and learns its way into an uncertain future. □