STRATEGY PAPER - Strategy Making: What Have We Learned About Forecasting The Future?

To survive in today's tumultuous landscape, firm managers ''make strategy'' by assessing their organization's internal and external environments, questioning assumptions about how the world works and deciding how the firm should operate. The authors refer to this activity as ''forecasting the future'' and, based on the results of their recent study, they provide in this article insights into the major perceived benefits and weaknesses of scenario planning, how managers should use scenario planning to forecast the future, and what they learned from their study.

Firms face uncertain environments characterized by shifting demographics, disruptive technologies, new industries and competitors and other challenges. To survive the tumultuous landscape, firm managers ''make strategy'' by assessing the organization's internal and external environments, questioning assumptions about how the world works and deciding how the firm should operate. We use the phrase ''forecasting the future'' to refer to managers' information gathering, analyzing and planning activities.

Scenario planning is a process-oriented approach to strategy, which takes an unpredictable view of the business world, but acknowledges that some events and trends may be predictable (Schwartz, 1996;Wright, 2000). Based on their information gathering, managers set out to create and analyze several scenarios about the future. Scenario planning helps organizations look into the future and anticipate events and trends, understand risk, provide ideas for entrepreneurial activity by identifying new strategic options, and help managers break out of their established mental models as they become aware of alternate future possibilities.

A scenario is a set of related possibilities that describe one possible future that the strategist cannot control. Typically, a scenario is a rich narrative or story describing a possible outcome. The qualitative nature of a well-developed scenario is based on quantitative information, however often enhances psychological impact (Schwartz, 1996).

History of scenario planning

Scenario planning traces its roots to military history, with examples ranging from Prussian generals strategizing battles in the mid-nineteenth century to joint work by the RAND Corporation and the US Air Force in World War II to anticipate opponents' activities and prepare strategies. After World War II, a number of military practices were adopted in the work place, including the refinement of scenarios. The use of scenario planning is most often associated with Royal Dutch/Shell during the early 1970s. Shell's ''Group Planning'' department, led by Pierre Wack, explored the environment for events that might impact the price of oil. The team identified a number of issues, including the steady exhaustion of US oil reserves and the growing role of the Organization of Petroleum Exporting Countries (OPEC) which might demand higher prices for oil, and developed full scenarios for two cases:

1. steady oil prices; and
2. massive oil crisis triggered by OPEC.

In October 1974, the second scenario was realized, and Shell was the only major oil company able to respond. Shell's adept response enabled the firm to move from seventh to first in profitability in the industry. Shell continues to create scenario plans, revealing its most recent set at the World Economic Forum (Cornelius et al., 2005). Pierre Wack (1985) describes scenario planning as ''a discipline for rediscovering the original entrepreneurial power of creative foresight in contexts of accelerated change, greater complexity and genuine uncertainty.''

Scenario planning process and manager perceptions

A typical scenario planning process involves the following steps, and is depicted in Figure 1:

- scan the external environment to develop a profile of the business environment;
- identify external factors most relevant to scenario development;
- develop three to four discrete scenarios that describe substantially different future states;
- consider the impact of each scenario on current strategy;
- assess the outcome of various strategic choices under each scenario;
- review strategic decisions that are sensitive to alternative scenarios; and
- prepare contingency plans.

The scenario planning process encourages foresight about how strategic decisions may change given different business

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environmental events and trends. As these events unfold, managers review plans that are contingent on alternate future states. The very nature of preparing contingency plans related to scenarios is valuable as it helps to establish the mindset that strategic change is required in relation to unexpected environmental events and trends.

Despite the high profile of scenario planning and its apparent suitability for forecasting, the use of scenario planning has declined over time (Mercer, 1995). Our research (Raspin, 2003) with 394 senior managers found little evidence of formalized scenario planning, even in those industries which would appear to be highly suited, i.e. those with high capital intensity, long lead times for product development requiring significant investment, and high risk.

Our survey of managers identified a number of perceived benefits and weaknesses of scenario planning (see Figure 2).

How managers actually forecast the future: three forecasting modes

Through our research, we discovered that most senior managers shun formal scenario planning, but do spend a lot of time undertaking various forecasting activities. Indeed, most managers identified the need for forecasting as one of their most important managerial roles.

Figure 1 Scenario planning process

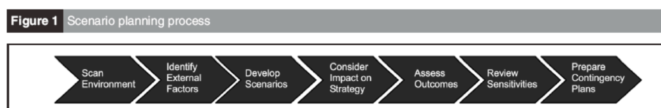


Figure 2 Benefits and weaknesses of scenario planning

Benefits:	*Weaknesses:*
• Challenges expectations • Poses "what if" questions • Clarifies sensitivities to environmental factors • Enables contingency plans to develop • Reinforces need for strategic change in light of unfolding events and trends	• Requires heavy resource investments (manager time and skills, budget) to establish, implement and maintain • Is disconnected from priorities of practicing managers • Can be divorced from real management decisions

We then set out to understand how managers forecast, finding that managers exercise a lot of discretion in how they go about forecasting, and adopt a wide range of approaches, from formal to systematic, and ad hoc to intuitive.

Forecasting differs from scenario planning in the following ways:

- it focuses on a dominant view of the future market and business environment, versus multiple views;
- it relates directly to the achievability of the next one to three years of sales and forecasting;
- it results in one plan, which is based on a dominant set of market assumptions;
- it is more financially oriented versus qualitative descriptive; and
- it is created during an intensive short-term effort.

From our survey, we uncovered two major dimensions of forecasting activities:

1. formality; and
2. breadth.

Some managers adopt a formal and systematic approach to forecasting, deliberately seeking certain types of information using predetermined methods or mediums. Managers undertaking formal processes may execute a structured search according to an explicit ''plan of action.''

In contrast, other managers use less formal, seemingly ad hoc approaches to gathering and processing data that is not explicitly linked to defined purposes or methods. Managers may invest more of their time focusing on internal information about organizational effectiveness, rather than external information sources. These managers argue that informally gathered information is more valuable as it is not yet public information, particularly if sourced from known and trustworthy personal contacts. The second major dimension of distinguishing forecasting activity is breadth, the broadness of gathering strategic information and forecasting. High breadth refers to processing many types of information in order to be able to discern broad trends.

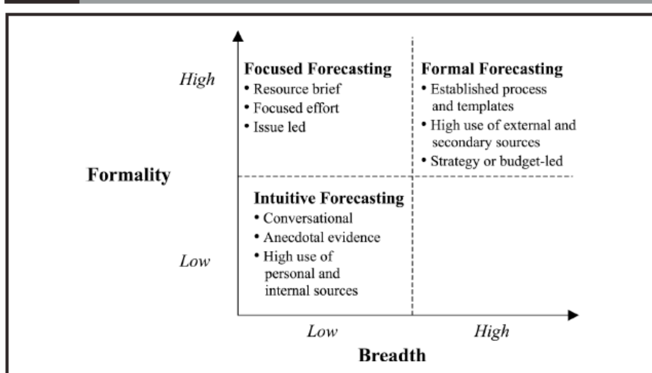
An analysis of the different forecasting activities by two dimensions, formality and breadth, reveals three forecasting modes:

1. mode A: formal forecasting;
2. mode B: focused forecasting; and
3. mode C: intuitive forecasting (see Figure 3).

Mode A: formal forecasting

By virtue of its prescribed nature, formal forecasting tends to source external secondary information, which is necessary to cover a broad range of forecasting information. This mode, which is often embedded as an organizational routine, is likely to be driven by a strategy review triggered by the budget process.

Figure 3 Three forecasting modes



Mode B: focused forecasting

Mode B is similar to mode A in terms of formality of approach. However, focused forecasting is more likely to emerge due to a specific briefing or project basis. Dedicated resources are committed to the terms of the brief, which tend to be issue-led, often in response to a significant current or anticipated business environment event or trend that requires deep analysis for forecasting purposes.

Mode C: intuitive forecasting

Finally, intuitive forecasting describes a process where managers are more likely to pursue and rely on conversational and anecdotal evidence and deliberately use personal sources, both internal and external, in preference to external secondary information.

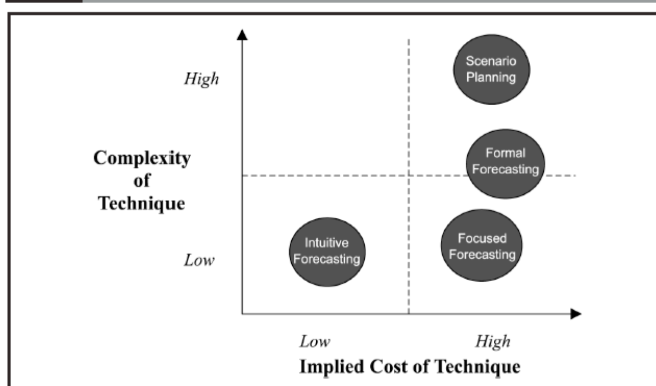
When the three modes are viewed in terms of the complexity and cost of the technique, managers may perceive these modes to be more desirable than formal scenario planning (see Figure 4). Our research produced some interesting insights concerning manager efforts to capture some of the benefits of scenario planning, while utilising less complex and more cost effective forecasting practices.

Lessons from forecasting

We conclude with five key lessons from managers:

- Lesson 1: Examine the validity of current market assumptions used to guide forecasting efforts. Managers must understand and make explicit the current market assumptions underlying the existing strategy or budget, and scrutinize these. Managers should pay particular attention to the validity of these assumptions given new information.
- Lesson 2: Involve key stakeholders in a debate and assessment of market assumptions. Internal staff who are close to customers and those who have up-to-date knowledge of competitors should be directly involved in assessing the market assumptions. Other key stakeholders might include external market experts and commentators, and should be encouraged to debate underlying assumptions about market and key events.
- Lesson 3: Ensure that forecasting process outcomes are updated in strategic plans. While the exercise of information gathering and analyzing may have some merits on its own, without implementation, scenario planning and forecasting activities are futile and isolated from the intended audience.

Figure 4 Scenario planning versus three forecasting modes



- Lesson 4: Establish and regularly review key hypotheses about market events and their performance impacts. By periodically revisiting market events, managers can continually assess the forecasts. While this technique may produce alternative scenarios, the planning process is more reactive and driven by unfolding events.
- Lesson 5: Remember that no scenario or forecasting effort is perfect. Strategy makers use forecasting to enable better decisions about firm futures. No scenario is expected to be entirely accurate. See Figure 5 for a summary of the five lessons.

Conclusion

The true power of scenario planning may not be directly related to forecasting, but rather lies in the value of interpreting the environment. Well-constructed scenarios help managers to develop their ''sense-making'' skills (Weick, 1995) by framing and reframing the business environment.

Unfortunately, very few organizations can afford to provide practicing managers with the time and resources to engage in scenario development, both retrospectively and prospectively. Furthermore, managers may not separate ''scenario planning,'' most commonly described as a ''forecasting tool,'' from

forecasting activity. Managers may be inclined to judge scenario planning by how well the technique supports their forecasting objectives, and also be concerned with the extent to which forecasting modes help or hinder decision-making.

Figure 5 Lessons regarding forecasting the future

- Examine the validity of current market assumptions used to guide forecasting efforts
- Involve key stakeholders in a debate and assessment of market assumptions
- Ensure that forecasting process outcomes are updated in strategic plans
- Establish and regularly review key hypotheses about market events and their performance impacts
- Remember that no scenario or forecasting effort is perfect

The more common view is that scenario planning, which encourages multiple views of the future, confounds decision-making. Most management teams focus forecasting efforts on a ''common view'' upon which they can make decisions ''consistent with that common view.'' A concern expressed by managers is that multiple futures and multiple strategies may reduce clarity and organizational commitment to strategy, leading to a general lack of organizational coherence.

In assessing the appropriateness of alternative forecasting techniques, managers might be expected to consider market dynamism. For example, in situations where markets are very stable, managers may engage in low levels of market exploration and high levels of market exploitation. In contrast, uncertain markets characterized by little market research and ill-defined products or services, may appear to offer more limited benefits from scenario planning activities. In theory, the value of scenario planning is maximized in moderately stable markets with few genuine uncertainties that significantly impact outcomes, and hence suggest an analytical technique that sensibly balances exploration and exploitation. Nonetheless, our research did not uncover greater acceptance and adoption of scenario planning in more certain environmental contexts.

Our representation of alternative forecasting modes and scenario planning is simplified for the purposes of highlighting some key discerning dimensions of formality, breadth, complexity and cost. In practice, there is overlap between scenario planning and alternative forecasting modes. For example, in scenario planning, it is possible to identify ''givens'' i.e. activities that should be undertaken regardless of what future scenarios emerge. Practising managers may argue that ''givens'' are likely to be so obvious that they would emerge through a strategy development process in any case. Therefore, for managers, the additional comfort that scenario planning may provide through rigorously testing strategies against multiple scenarios may not be worth the additional effort.

Our research findings suggest that, in its current form, scenario planning will continue to suffer low adoption. Practicing managers will invest significant time and effort in forecasting and, in the absence of an established and a well-credentialed contingent forecasting methodology, will adopt ''hybrid'' forecasting approaches. We trust that an awareness of the five lessons regarding forecasting the future will help managers to develop more effective approaches to forecasting and will prompt further evolutions and lessons concerning forecasting the future.

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REFERENCES

Cornelius, P., Van de Putte, A. and Romani, M. (2005), ''Three decades of scenario planning in Shell'', California Management Review, Vol. 48 No. 1, pp. 92-109.

Mercer, D. (1995), ''Simpler scenarios'', Management Decision, Vol. 3 No. 4, pp. 32-40.

Raspin, P. (2003), ''Scanning business environments: an investigation into managerial scanning behavior'', PhD thesis, Cranfield School of Management, Cranfield.

Schwartz, P. (1996), The Art of the Long View: Planning for the Future in an Uncertain World, Currency Doubleday, New York, NY.

Wack, P. (1985), ''Scenarios: uncharted waters ahead'', Harvard Business Review, Vol. 63 No. 5, pp. 72-89.

Weick, K.E. (1995), Sensemaking in Organizations, Sage Publications, Thousand Oaks, CA.

Wright, A.D. (2000), ''Scenario planning: a continuous improvement approach to strategy'', Total Quality Management, Vol. 11 Nos 4-6, pp. S433-8.