



Scenario Planning in an Uncertain World

"There is no reason for any individual to have a computer in his home" —*Ken Olson, President, Chairman, and Founder of Digital Equipment Corporation (DEC), in a talk given to a 1977 World Future Society meeting in Boston.*

"With over 50 foreign cars already on sale here, the Japanese auto industry isn't likely to carve out a big slice of the U.S. market." —*BusinessWeek, August 2, 1968*

"There is practically no chance communications space satellites will be used to provide better telephone, telegraph, television, or radio service inside the United States." —*Tunis Craven, FCC commissioner, 1961*

We have all tried it, and we know how difficult it can be. Attempting to predict the future can be a perilous exercise in a world with constantly evolving technology, consumer tastes, regulatory regimes and geopolitics. Recent events during the Arab Spring and the Ukrainian-Russian standoff in Crimea underscore how quickly crises can emerge, and how difficult it can be to predict even dramatic events in advance. Nonetheless, planning for the future is a core requirement for all businesses' resource-allocation decisions, and requires an accurate framework for predictions in order to guide direction and choices.

So how can executives help reduce and plan for uncertainty in a way that acknowledges their inherent limitations as fortunetellers? The short answer is that the best way to deal with

uncertainty is to embrace it. Scenario planning – a structured method for thinking about the future – was pioneered by Shell Oil Corporation in the 1970s. The tools and techniques used in scenario planning have been revised considerably over the years, but at its core, it has remained unchanged. Scenario planning is the structured process in which decision makers develop a small number of scenarios that describe how the future might unfold and then map decision trees consistent with optimizing shareholder outcomes in each scenario.

At L.E.K. Consulting, we embrace scenario planning for both its process and its outcomes. The process of imagining the future through discreet scenarios forces executives to acknowledge that the recent past is rarely a reliable guide to the future; it minimizes the risk of groupthink by providing a safe setting in which assumptions can be called into doubt; and it sharpens strategic decision-making in general by illuminating the major forces likely to affect an industry in the future. Moreover, when scenario planning is backed with systematic research and analysis, the outcome is usually a set of scenarios that provides a surprisingly informative foundation for executives as they face an uncertain future.

The Five-Step Process

While scenario planning allows corporate leaders to encourage bold, blue-sky thinking, the planning process itself should be clearly structured. We have developed a five-step process for constructing market scenarios.

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Step One: Define what you know and what you don't know. Scenario planning begins by identifying what Shell described as "predetermined outcomes" – the identifiable effects of well-accepted but nascent market and demographic trends such as population size and growth, macro consumer demand, and changing demographics. The ageing of the baby boomer generation is a classic example of a predetermined outcome. Such "knowns" are then contrasted against "unknowns" – the potentially disruptive events that often occur without warning, such as game-changing new technology, changing consumer tastes and values, competitive dynamics, new government regulation, and geopolitical crises.

Step Two: Brainstorm around the possible range of outcomes for what you don't know. The next step in the scenario planning process involves reducing the range of uncertainty around the "unknowns." In this step, it is important to be creative and expansive in order to construct a high-confidence interval around the range of uncertainty. A long lens into the past and a wide lens across industries can be instructive. There is nothing exceptional about the present day or a particular industry that makes a business environment more stable now than at any moment in history; good scenario planners banish all assumptions based on the principle that "this time is different." As the old proverb goes, "History rarely repeats itself, but it often rhymes."

Step Three: Perform market research and analyses to inform the unknowns. Several sources of information can be used to reduce uncertainty; we typically find that primary research with customers and key opinion leaders is the most informative resource. The art of the interview is a crucial underpinning of strong scenario planning. Converting qualitative information gleaned from interviews into quantifiable assumptions is another critical part of this step.

Step Four: Construct a finite set of discrete futures. Considering every possibility for every single unknown variable creates an overwhelming amount of complexity to inform decisions. What's more, we discourage scenarios involving low-probability, extremely high-consequence events (a large asteroid impact,

for example). Rather, we suggest constructing a few discrete scenarios that each describe a future environment and the market assumptions consistent with that outcome. We caution against creating only three scenarios as people will tend to pick the middle option. In our view, four scenarios present a manageable menu that forces planners to resist the temptation to cluster around the present-day reality.

Step Five: Process iteratively to refine strategic thinking and assumptions as more becomes known. As market research and analyses inform potential outcomes, market scenarios can be continually refined to become more tangible and probabilistic. We recommend this be done at least semiannually by the business-development team and shared with senior management. Usually several iterations are required in formulating a discrete set of scenarios suitable for planning purposes.

We typically find that many of the most important and costly decisions can be delayed until more is known without sacrificing the desired strategic outcome in any scenario.

Once discrete market scenarios have been established, executives can then plan out the sequencing of strategic decisions which optimize shareholder value in each scenario. On the face of it, placing bets based on even a structured view of an uncertain future can be a daunting proposition. In this way, scarce resources can be preserved as long as possible in order to direct their deployment in a manner consistent with the actualized scenario.

Identifying appropriate "trigger points" for big decisions is critical. In 2009, for example, after the World Health Organization declared the H1N1 influenza outbreak a pandemic, the declaration triggered many western governments to spend hundreds of millions of dollars to stockpile Tamiflu and other antiviral drugs. The majority of the stockpile went unused when the pandemic proved relatively mild. Better and more coordinated scenario planning and decision making among the governments might have delayed purchases until more was known about the unfolding pandemic and the cost-effectiveness of antivirals on a population basis (or, at the least, it could have helped govern-

ments communicate the rationale behind their decisions to their populations).

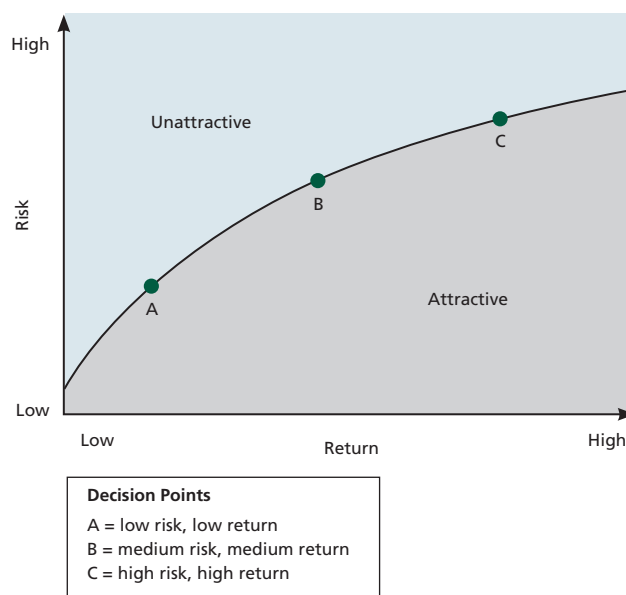
Executives who embed scenarios into their business plans can then identify the overlap in the appropriate strategic choices to implement regardless of which market scenario happens; this allows many strategic decisions to be made with lower risk. This overlap is one of the delightfully counterintuitive benefits of systematic scenario planning; even though there is uncertainty about the future, scenario planning reveals strategic choices that are appropriate under almost any market scenario. A typical example of this type of decision is completing a strategic, synergistic acquisition which often yields tangible economic benefits to a corporation in both upside and downside market scenarios.

When Paths Diverge

In some cases, the appropriate short-term decision will differ depending on which market scenario unfolds. In these cases, management teams should address the following questions:

- **What is our best guess of the probability associated with each scenario?** Obviously the more probable a market scenario, the more willing management should be to take strategic choices to optimize outcomes in that scenario.
- **What are the risk/return trade-offs associated with each course of strategic action?** One framework that is often useful is to place the appropriate strategic choices associated with each market scenario on a risk/return continuum in order to evaluate their relative attractiveness (see Figure 1). Sometimes, this simple framework makes the decision easier. If two scenarios are associated with wildly different risk/return trade-offs, the appropriate strategic direction becomes dependent on the company's appetite for risk.
- **What is the worst case outcome associated with each market scenario (and how can I avoid it)?** If the outcome associated with a worst-case scenario is unacceptable under

Figure 1
Relative Attractiveness Continuum



Source: L.E.K. analysis

any circumstances (e.g., corporate bankruptcy), executives should develop a course of action to prevent this downside at all costs. This is the equivalent of buying insurance as a means to protect against severe consequences in a downside scenario.

- **What is the best case outcome associated with each market scenario?** It is important to ensure that resources or contingency plans are in place to exploit upside scenarios. Planning and investing for upsides is a critical component of achieving long-term value creation.

In summary, L.E.K. is privileged to work with many high-performing companies, and systematic scenario planning is a common thread among them. The frameworks outlined in this article can apply to any organization – large or small, domestic or multinational, manufacturing or service – in virtually any sector of the economy. The most successful companies will be those that continually embrace uncertainty through scenario planning and structure strategic decision making accordingly. The results are the better deployment of scarce resources and the rewards of higher shareholder returns.

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