Scenario planning is largely focused on answering three questions:

What could happen?

What would be the impact

What are the implications?

Scenario planning — Navigating through today's uncertain world

For CMAs, a working knowledge of scenario planning can help apply core management accounting disciplines, such as cost management, profitability analysis, risk management, and performance measurement.

By David A.J. Axson

Imagine you are sitting at your desk: it is September 2007, the Dow Jones is close to 13,900; U.S. unemployment is 4.5 per cent; oil is $45 a barrel; the U.S./Canadian dollar exchange rate is 0.95; and the U.K. economy is growing at a healthy three per cent rate. You are in the middle of developing your organization's plans and budgets for 2008. How likely is that the assumptions in your 2008 plan accurately forecast that one year from now (September 2008) the Dow Jones will be below 9,000; U.S. unemployment will have risen to 6.5 per cent on its way to more than 10 per cent; oil will rise to over $140 per barrel before falling back below $40; the U.S./Canadian dollar exchange rate will rise to more than 1.25; and the U.K. economy will shrink by five per cent? Never mind the impact of terrorist bombs in Mumbai, a collapsing housing market in the U.S. and U.K., a global H1N1 pandemic, and an almost total freeze on credit. An aberration? Unlikely, not with European sovereign debt crisis, massive oil spills in the Gulf of Mexico and riots in Bangkok. Uncertainty, volatility and risk are here to stay. The world has been transformed from a series of loosely connected economies with reasonably predictable flows between them to a complex web of relationships where the global impact of local events is felt almost instantaneously. Managers are realizing that the past is not a good predictor of the future or as Michael Hofmann, the chief risk officer for Koch Industries, says, "First, don't believe your own predictions. Whatever you consider most likely probably will not occur. You have to be ready to question every — and I mean every — significant assumption."

What is scenario planning?

Scenario planning has been used by many organizations as diverse as The Australian Government, Autonation, British Airways, Corning, Disney, General Electric, The U.S. Federal Highways Administration, JDS Uniphase, Mercedes, Royal Dutch Shell, UPS and The World Bank. Scenario planning today is being widely used by many small- and mid-size organizations operating in uncertain or volatile markets.

Two forces are fueling the changes — the rapid and broad global impact of unpredictable one-time events such as the collapse of the Soviet Union, 9/11, or the global credit crisis; the acceleration in the pace at which new trends become material. Be it the switch from analog to digital technologies, the increased interest in environmental sustainability or the emergence of China and India as economic powers.

Scenarios are a way of understanding the forces at work today (e.g., demographics, globalization, technological change, environmental sustainability, biotechnology) that will shape the future. There are four broad types of scenarios:

Social — What are the implications of increasing obesity?

Economic — How will the rapid economic growth of China and India change global markets?

Political — How will the expansion of the European Community change the political power of sovereign governments within the community?

Technological — What will be the impact of increasing adoption of smart phones on desktop and laptop computer usage?

Although there are numerous methodologies for building scenario plans, they all follow the same basic approach. Figure 1 includes the steps needed to build a scenario plan.

Before embarking on a scenario planning exercise, it is essential (a) to be clear about the issue you are seeking to address, and (b) define the appropriate scope and time horizon for the scenarios to be constructed. Answering the following questions will help in determining whether a scenario planning project makes sense and, if it does, then defining the objectives and scope:

- What issues or decisions are we trying to evaluate?
- Is there a high degree of uncertainty about the future environment in which we will face these issues or make decisions?
- What is the time horizon for making decisions and then executing them?

After the organization has agreed on the issue(s) to be studied and defined the scope and time horizon for the project, these should be documented, agreed with senior management, and clearly communicated to all those to be involved in the project. At the end of step one, the project team should (a) develop a project charter that clearly states the objectives, scope, issues to be addressed, and deliverables to be produced, and then (b) secure approval from senior management.

Scenario planning in action

Let's see how scenario planning can work in practice by following the progress of ElectricIQ, a software company that develops smart systems for the managing of electricity use. The company was founded in 2005 and sales have reached £25 million a year, primarily from the installation of electricity management systems in new office buildings in Western Europe. Management believes that ElectricIQ is at an inflection point. With environmental sustainability becoming a hot public policy issue, the company believes it is time to enter the emerging smart grid market for digital environmental management systems. They want to gain insights as to the relative attractiveness/risk of the market.

The company decides to embark upon a scenario planning project to help understand the alternatives to guide R&D, marketing and product development plans. After initial discussions with the management team, the project's objectives are defined as, "Developing a better understanding of the markets for smart grid, the risk profiles of each market and the ease of market access."

The first step for the ElectricIQ team is to identify the likely drivers of the future environment. Through discussions with the management team, customers, investors and external thought leaders from the OECD, General Electric, IBM and Shell the team develops a simple driver model around the issue of the demand for renewable energy sources. Two level one drivers, social opinion and political action, are identified and each level one driver is then mapped to three level two drivers. For social opinion, these are the credibility of climate change data, the technical viability of potential renewable energy sources and the price of such options. For political action they are the availability of government subsidies, the regulatory framework and the role of tax policy in energy use (Figure 2). The team then uses this framework to identify the types of data to be collected. This includes data about economic growth; forecasts of construction activity; likely government actions to encourage adoption of environmental control systems; and the likely players in the market for environmental control systems. Not all the data is quantitative, some of the most interesting inputs are the opinions of experts who specialize in conceptualizing alternative futures. The key is to collect a broad range of data with a view to developing credible scenarios of what the future might look like.

The team then prioritizes the drivers by mapping them against two axes. The first axis is an assessment of each driver's impact on the issue being analyzed and the second looks at the predictability of future trends for each driver (Figure 3). Drivers that are both material and predictable (top right hand circle) will form the basis for all the scenarios that are to be developed. Those that are material, but difficult to predict (top left hand circle) will define the differences between the scenarios. The team isolates those drivers that are most likely to shape future demand.

They then develop four scenarios across two dimensions (Figure 4). The dimensions are public opinion, which describes the level of consumer demand for environmentally friendly solutions

Figure 1: Scenario Planning Work Approach

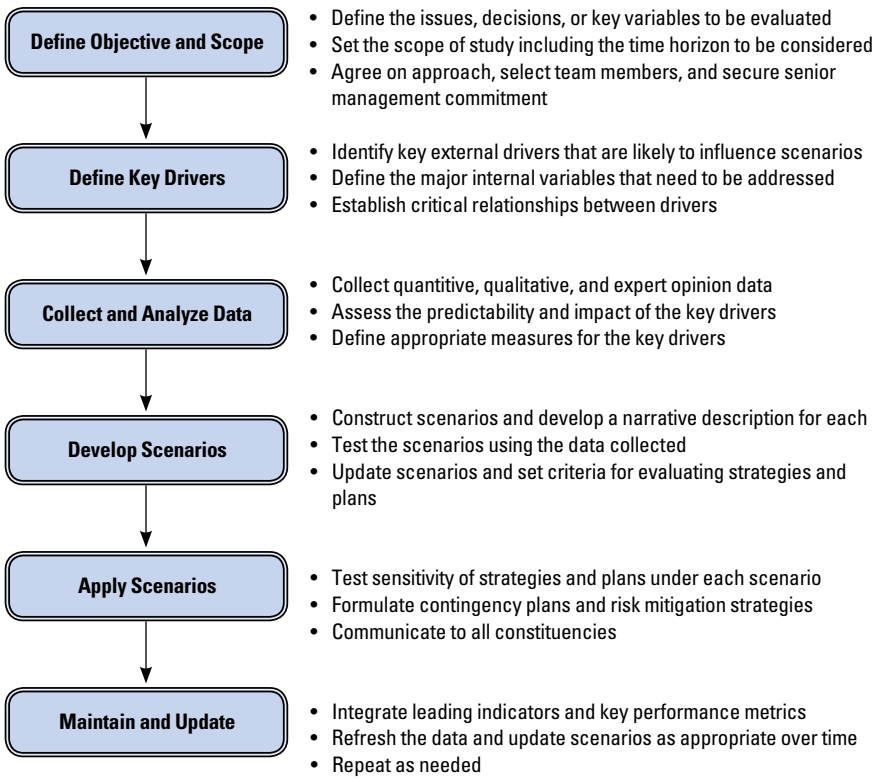
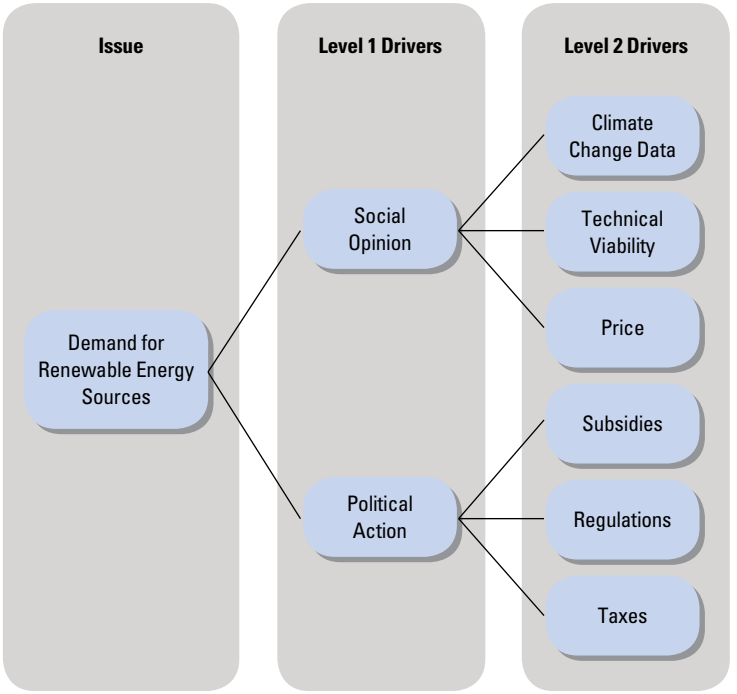


Figure 2: ElectricIQ driver map



and public policy, which describes the extent to which government policy mandates "green" standards.

The team then develops narrative descriptions for each scenario:

- Necessity: "Do it or die" — public opinion swings rapidly to green solutions and dramatically changes customer buying patterns. Products not seen as being green are shunned in the marketplace. Governments mandate adoption of environmentally friendly technologies.
- Market driven: "Better be the best" — Public opinion moves to green and consumers will pay extra for the best products. Adoption is balanced between market innovation and tax-based incentives. Being green is a source of competitive advantage.
- Mandate: "Cost of doing business"— Governments mandate adoption without incentives. Adoption becomes a "cost of doing business." Consumers will not pay more for green solutions unless forced to do so.
- The "S" curve: "Steady as she goes" — Demand follows a traditional cycle of early adopters leading the way at high prices; as the market scales and prices drop, mass market adoption takes-off before flattening out as maturity is reached.

ElectricIQ then uses these scenarios to frame strategies and make decisions affecting key elements of

Figure 3: Evaluation and identification of key drivers

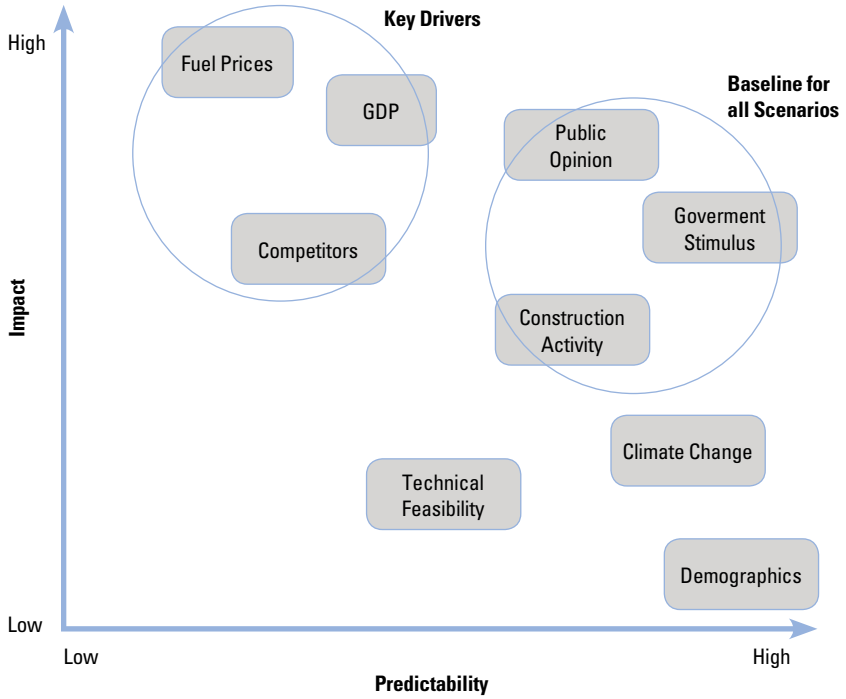
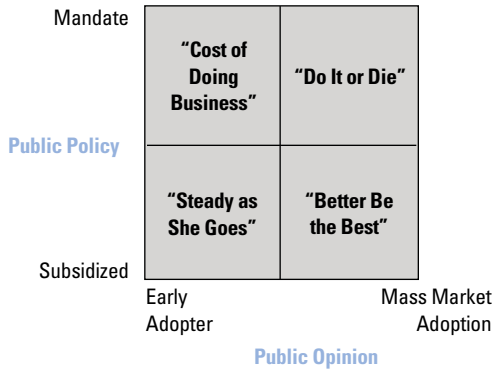


Figure 4: ElectricIQ scenario development



the business (Figure 5).

Using the scenarios, ElectricIQ's finance team recasts budgets under each scenario to assess the financial implications and identify key performance metrics that can provide the organization with an early warning as to which scenario is actually playing out. But the work is not done—scenario planning is not a one-off exercise. For example, what if just six months after the initial scenarios are completed, oil reaches $200 a barrel and the G20 impose strict mandates on CO2 emissions that must be met within five years? ElectricIQ must revisit its plans and may decide to focus on only two of the original four scenarios: "Do it or die" and the "Cost of doing business." After more detailed modeling of these two scenarios, they could decide to focus on delivering solutions that far exceed the mandated minimums while keeping pricing reasonable. Their scenario plans allow them to make fast, confident decisions by giving them a sound basis for evaluating the impact of changing market conditions.

Applied judiciously, scenario planning can provide valuable insights as to how the future may unfold thereby equipping organizations to react with speed, agility and confidence. Finally, remember the words of Benjamin Franklin: "Those who fail to plan, plan to fail." ■

This article is adapted from the MANAGEMENT ACCOUNTING GUIDELINE (MAG)®: *Scenario planning — Plotting a course through an uncertain world,* published in July 2010.

David Axson is an author and consultant. He was a co-founder of The Hackett Group and a former head of corporate planning at Bank of America.

Figure 5: Scenario implications

	Do it or die	Better be the best	Cost of doing business	Steady as she goes
Approach to innovation	The minimum is not enough; must be the best to win	Innovative leadership has real value	Must meet the standards; little advantage in being a leader	Focus on select areas where there is strong demand
Marketing strategies	Either be the safe option (compliant) or the best	Must be a leader	Partner with builders to secure share	Be #1 in select niches
Market goals	Own the high end	Acquire share	Be the preferred supplier	Build share in niches
Financial goals	High margins	Focus on size and scale	Low cost producer	Modest growth over time