Scenario Planning

Idea In Short

Scenario planning is identifying a specific set of uncertainties, different “realities” of what might happen in the future of your business. It helps participants to consider the "what-ifs" of tomorrow, whether those are desirable or undesirable states. The simple task of imagining a different future can help to challenge the status quo and encourage creative thinking, which ultimately can lead to the development of more thoughtful and resilient plans. Scenarios are developed to enable participants to test out possible decisions, analyze their impacts given the conditions in each scenario, and come to an agreement on a preferred course of action.

In the next decade, survival, success and sustainability will be determined by the businesses' capacity to innovate, the power to mobilize the required resources for action, and the ability to communicate with full transparency. To do this, organizations should build strategic capabilities to navigate rapidly shifting currents from new competitors, ever-evolving regulations and disruptive start-ups. In this environment, scenario planning—a process for identifying and rehearsing strategic options for various possible futures—is a prerequisite for efficient innovation strategy development. Decision-makers are better equipped to identify and understand the spectrum of possibilities for their future when businesses employ scenario planning. With this understanding, they can make intelligent bets. Consequently, they can develop strategic foresight and the foundations towards a future-proof strategy. https://vimeo.com/552383010

Origin

Word War II

The origins of scenario planning in modern America are attributed to military planning methods that were developed during World War II and extended into the Cold War. The Second World War mobilized large numbers of academics into government, researchers to

new areas, and provided the crucible for a number of breakthroughs. Examples that are widely discussed include atomic and nuclear energy, radar, and the computer. Less discussed is the change which the mobilization of energies made on the subsequent developments in the field of corporate planning. The operations conducted during the war helped researchers, military leaders set up complex radar mechanisms, calculate how the fewest boats could patrol the largest stretch of water. Then, after the war, they adopted similar game theory and decision analysis techniques to the business arena.

RAND Corporation

After the war, the RAND Corporation was set up to research new forms of weapons technology. RAND's Hermann Kahn, often cited as the father of scenario planning, pioneered the technique of future now thinking, aiming through the use of detailed analysis plus imagination to be able to produce a report as it might be written by people living in the future. The description scenario was given to these stories by the writer Leo Rosten, who suggested the name based on Hollywood terminology. When Hermann Kahn founded the Hudson Institute in the mid-1960s, he specialized in stories about the future aimed at helping people break past their mental blocks and consider unthinkable futures. He was best known for his idea that the best way to prevent nuclear war was to think through in detail what would happen if the war did occur and publicize the results.

Stanford University

Meanwhile, on the West Coast, Stanford University had set up its own think-tank in 1947, called Stanford Research Institute [SRI], to offer long-range planning for a business incorporating operations research, economics, and political strategy alongside hard science and military consulting. The late 1960s saw a shift in the work done by organizations like SRI for a number of reasons, including a movement in military spending towards the Vietnam War, and increased interest in finding ways to look further into the future to help plan for changes in society, an interest underpinned by the upheavals resulting from the war. Similarly, the Hudson Institute started to seek corporate sponsors, which exposed companies like Shell, Corning, IBM, and General Motors to this style of thinking.

Shell

Ted Newland Era

Scenario planning was popularized by Shell in the early 1970s. Ted Newland of Shell, which was one of the corporate sponsors, started to introduce thinking about the future into Shell. Under the leadership of Newland and Jimmy Davidson, who became Shell's first overall head of planning in 1967, the futures operation began to take shape. Newland started by delivering a "The Year 2000" study report. Then, together with his new colleague Henk Alkema, he began to develop long-term outlooks in the form of alternative futures. The very first oil-price scenarios prepared by this duo were sent to senior executives by mid-1971.

Pierre Wack Era

Around this time Davidson brought in Pierre Wack, who had been the head of planning for Shell Française, to try to secure the attention and interest of Shell's most senior executives. Wack, a former magazine editor with a bent for Eastern philosophy and mysticism, focused on telling plausible stories about how the wider business context of Shell might develop. Together with Newland, he came to define the practice of scenario planning at Shell; each man headed the team at some point during an eventful decade of oil crises and economic turmoil that they and their colleagues had to some extent envisioned ahead of time.

Shell-style scenario planning

Shell-style scenario planning has never really been about predicting the future. Its value lies in how scenarios are embedded in—and provide vital links between—organizational processes such as strategy making, innovation, risk management, public affairs, and leadership development. It has helped break the habit, ingrained in most corporate planning, of assuming that the future will look much like the present. As unthreatening stories, scenarios enable Shell executives to open their minds to previously inconceivable or imperceptible developments.

Longevity of scenario planning

Scenario planning has now been in use at Shell for more than 45 years, spanning times of great triumph and prominence—especially in the 1970s—but also long stretches during which company leaders struggled to see its value. It has come close to being shut down at least three times. However, it has continued to evolve and help shape the company's global thinking about energy and other matters—and, at times, its strategy. For an operation that doesn't contribute directly to the bottom line, and that emphasizes the uncertainty of the

future rather than making bold predictions, this is remarkable.

Importance of scenario planning

Scenario planning is a management tool that is designed to allow organizations to evaluate the efficacy of strategies, tactics, and plans under a range of possible future environments. In short, it is a perfect tool for today's increasingly uncertain and volatile world. Scenario planning has value in any situation where there is significant uncertainty about aspects of the future that could materially change an organization's strategy, plans, or decisions. It is best suited to helping organizations understand how fast-moving and/or complex environments may evolve. Scenario planning enables professionals, and the public, to respond dynamically to an unknown future. It assists them with thinking, in advance, about the many ways the future may unfold and how they can be responsive, resilient, and effective, as the future becomes reality. It sounds simple, and possibly not worth the trouble or specific effort, however, building this set of assumptions is probably the best thing you can ever do to help guide your organization in the long term. For example, Farmers use scenarios to predict whether the harvest will be good or bad, depending on the weather. It helps them forecast their sales but also their future investments. Military institutions use scenario planning in their operations to cope with any unlikely situations, anticipating the consequences of every event. In this case, scenario planning can mean the difference between life and death. Scenario planning might not have such dire consequences in your organization, but if not done, you risk opening the door to increased costs, increased risks, and missed opportunities.

Key aspects of scenario planning

Scenarios are neither forecasts nor predictions for a given point in time; instead, they represent alternative possible futures. They enable urban and rural planners to consider a range of possible consequences the spectrum of possible future conditions. Scenario planning "formalizes the consideration of uncertainty in the planning process." For businesses, scenario planning enables decision-makers to identify ranges of potential outcomes and estimated impacts, evaluate responses and manage for both positive and negative possibilities. From projecting financial earnings and estimating cash flow to developing mitigating actions, scenario planning is more than just a financial planning tool — it's an integrated approach to dealing with uncertainty. Scenario planning can provide a competitive advantage by enabling leaders to react quickly and decisively — because a

situation has been thought through and actions documented, no one has to scramble when in the midst of a crisis. It also gives executives and boards of directors a framework to make non-emergency decisions more effectively by providing insight into plans, budgets, and forecasts and painting a clearer picture of key drivers for business growth and the potential impact of future events. In simple terms, scenario planning provides a structured method for organizations to evaluate alternative views of what may happen in the future as an aid to strategic, operational, and financial planning. 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.

Scenario types

There are four broad types of scenarios:

1. **Political:** For example, how will the expansion of the European Union change the political power of sovereign governments within the community?
2. **Economic:** For example, how will the rapid economic growth of China and India change global markets?
3. **Social:** For example, what are the implications of increasing obesity?
4. **Technological:** For example, what will be the impact of the increasing adoption of smartphones on desktop and laptop computer usage?

Like most other management techniques, scenario planning is not just about the quality of the results that accrue from the exercise. Scenario planning should serve as a powerful educational tool for managers who participate in the process by: Increasing awareness of the impact on uncertainty, and allowing them to envision how their behavior and decision-making will change under different conditions. A technically complete scenario plan is of little value if the learning and implications are not understood, accepted, and embraced by an organization's leadership team. Shell Oil was one of the pioneers in the use of scenario planning—the company publishes its scenarios on its website. Shell's view on the value of scenario planning is:

> Good scenarios are ones that explore the possible, not just the probable—providing a relevant challenge to the conventional wisdom of their users and helping them prepare for the major changes ahead. They will provide a useful context for debate, leading to better policy and strategy, and a shared understanding of, and

commitment to, actions.

Types of Scenario Planning

Quantitative scenarios

These are financial models that allow for the presentation of best- and worst-case versions of the model outputs. These models can be quickly changed by altering a limited number of variables/factors. Quantitative scenarios are also used to develop annual business forecasts. These models assume key variables are known and that relationships among them are fixed.

Operational scenarios

These are one of the most common types of scenario planning an organization will undertake internally. Operational scenarios specifically explore the immediate impact of an event. The scenario then provides short-term strategic implications.

Normative scenarios

These describe a preferred or achievable end state. These scenarios are less objective planning and more geared toward statements of goals. These goals are not necessarily about an organizational vision, but more about how the company would like to operate in the future. Normative scenarios are often combined with other types of scenario planning as they provide a summation of changes and a targeted list of activities.

Strategic management scenarios

These are essentially stories that say little about the company or industry, but more about the environment in which products and services are consumed. These are often the most challenging scenarios for company leaders to put together because they require a broad industry, economic and world view. On the plus side, they give planners freedom to brainstorm decisions and a broad storytelling mandate. In some cases, companies bring in analysts or even so-called futurists.

Building a scenario plan

There are two basic models for organizing a scenario-planning exercise:

1. Expert — A small group completes the scenario-planning process, often led by the strategic planning team possibly supported by external consultants and other subject-matter experts
2. Collaborative — A small core team leads the exercise, but the organization seeks input and participation from a broad cross-section of people from inside and outside the organization

The expert approach has the advantage of usually being quicker and more focused than the collaborative approach but much of the organizational learning and personal development opportunities are sacrificed. The collaborative approach is likely to ensure a more productive process and deliver more widely understood outputs but requires careful planning, disciplined management, and the commitment of time by senior management. Regardless of the approach adopted, the steps needed to build a scenario plan are straightforward. While there are numerous methodologies that have been created for building scenario plans, they all follow the same basic approach.

Scenario planning approach

Define scope, issues, and time horizon	• Define the issues, decisions, or key variables to be evaluated • Set the scope of the study, including the time horizon to be considered • Agree on approach, select team members, and secure senior management commitment
Define key drivers	• Identify key external drivers that are likely to influence scenarios • Define the major internal variables that need to be addressed • Establish critical relationships between drivers
Collect and Analyze Data	• Collect quantitative, qualitative, and expert opinion data • Assess the predictability and impact

	of the key drivers • Define appropriate measures for the key drivers
Develop Scenarios	• Construct scenarios and develop a narrative description for each • Test the scenarios using the data collected • Update scenarios and set criteria for evaluating strategies and plans
Apply Scenarios	• Test sensitivity of strategies and plans under each scenario • Formulate contingency plans and risk mitigation strategies • Communicate to all constituencies
Maintain and Update	• Integrate leading indicators and key performance metrics • Refresh the data and update scenarios as appropriate over time • Repeat as needed

Define Scope, Issues and Time Horizon

Before embarking on a scenario planning exercise, be clear about the issue you are seeking to address and then 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?

For example, an oil company may have a fifteen-year time horizon from initial exploration to full production of a new oil field; a pharmaceutical company may focus on a twenty-year time horizon that matches the patent protection period for newly approved drugs; a fashion retailer may only focus on a six- to a nine-month window, which equates to the next two (spring and fall) selling seasons; and a government-funded agency may look at the next

fiscal year. At the end of Step 1, the project team should:

- Develop a project charter that clearly states the objectives, scope, issues to be addressed, and deliverables to be produced.
- Secure approval from senior management before moving to Step 2

Define Key Drivers

The heart of an effective scenario plan is to identify the right drivers around which to construct the scenarios. In the context of scenario planning, drivers are external factors that could influence the future environment and impact key internal variables. This definition is very broad, so it is important to develop reasonable criteria for identifying drivers that are material to the organization or issues being addressed. Typically, this means identifying those factors that could materially impact capital requirements, profitability, or risk over the time period being considered. Simply listing the drivers is the first step. The second step is to organize them around the specific issues that are being addressed in order to be able to test these relationships in Step 3

External Drivers	• Economic growth • Government policy/regulation • Demographic change • Market size and growth rate • Commodity prices • Consumer spending • Rate of technological innovation • Inflation • Cost of borrowing • Social attitudes
Internal Variables	• Mission, vision, and strategy • Business model • Customer satisfaction • Productivity • Cost structure • Quality • Talent • Time to market • Reputation/Trust

- Access to capital

Collect and analyze data

In traditional planning processes, much of the data collected is of historic nature. After all, in most organizations, the only plentiful source of data is the records of past transactions and activities. As a consequence, the majority of plans and budgets are heavily biased towards the future extrapolation of past trends. This works fairly well when the past is a reasonably good predictor of the future; however, as soon as material uncertainties appear, it becomes dangerous to simply assume that the past describes the future. It is not surprising that usage of scenario planning increased significantly after the Arab Oil Crisis in 1973, Black Monday in 1987, and the dot.com bust in 2000. Similarly, the speed and impact of the global credit crisis in late 2008 have caused many organizations to question the value of trend-based plans.

Develop scenarios

The starting point for many scenario plans is the traditional planning view of the future, which is based on an extrapolation of current trends. In this context, describing how the key drivers are likely to behave in the future, based on how those drivers behaved in the past, leads to the definition of one scenario. This is a perfectly valid approach, and in many cases will turn out to be a reasonable basis for decision-making. Such an approach:

- Served the automotive industry very well for almost 30 years after World War II.
- Correctly explained consumer adoption of a succession of new electronic devices from televisions to DVD players.
- Described the migration from Main Street to the mall

Guidelines for developing scenarios

1. Scenarios should be organized around the key questions or issues defined in Step 1
2. Develop between two and four scenarios. Developing more than four scenarios can be confusing and counterproductive
3. The scenarios should clearly describe the assumptions or preconditions on which they are based
4. Each scenario must present a credible and logical alternative view of the future
5. The scenarios should have a sufficiently distinct material impact on future plans or

decisions

The intent is not to develop the perfect scenario, but to provide a mechanism for testing strategy, plans, decisions, and behaviors under a range of credible future scenarios. Scenarios do not have to be mutually exclusive; however, the differences between each scenario should be clearly documented and understood, and each should represent a different set of challenges across one or more key drivers.

Attributes of complete scenarios

The completed scenario should include:

1. A narrative description that sets out the major elements that describe each scenario
2. A listing of the key drivers will determine whether the scenario prevails
3. The definition of the leading indicators will provide an early warning that a particular scenario is unfolding
4. Quantifiable metrics that allow the organization to test strategies, plans, or decisions for efficacy under each scenario

There are three common approaches for defining scenarios

- Spectrum
- Matrix
- Binary

Spectrum

The spectrum approach isolates one major driver that has a spectrum of credible future states. Organizations using this approach would have developed their baseline plan under one of the scenarios; typically this would be called the "plan scenario." They would then test the sensitivity of their plans under the two alternative scenarios, identify the impact on results, and then develop alternative tactics or contingency plans that would be executed in each case.

Matrix

The second approach is to organize the scenarios around two drivers in the form of a

matrix. The matrix approach isolates two material dimensions that have a high degree of uncertainty associated with them.

Binary

The third option is the binary approach that focuses on creating two scenarios using a simple structure where one scenario is "good" and the other is "bad." This can be effective for simple yes or no decisions where it is possible to define clear criteria for the key drivers that determine whether they can support a decision. However, most situations are not so clear-cut, and the binary approach may provide insufficient choices.

Apply scenarios

The first step after completing the scenario development is to test the sensitivity of strategies, plans, and budgets under different scenarios by asking, "What will be the impact?" Developing an understanding of the validity of different strategies and plans under different scenarios gives management a much clearer understanding of the risk factors and the appropriate risk mitigation and management techniques that may need to be employed. For example, the effects of the global economic downturn during 2008-2009 were not uniform. Many global businesses adjusted their investment priorities and reset their performance expectations as economies in China, Australia and Brazil out-performed those in Western Europe and North America by a wide margin. During their planning process, they develop scenarios around each major region and then develop alternative investment portfolios based on the attractiveness of the regions relative to each other.

Maintain and update

Some organizations treat scenario planning as a one-off exercise or project. There is certainly merit in using scenario planning in this way, particularly as the effort required can be significant. However, in today's increasingly volatile world, the future rarely is predictable, so many organizations are adding scenario planning as a core tool in their management toolbox. Scenario planning does not have to be an annual activity; many organizations tie the development and update of their scenario plans to major events rather than simply the turning of the calendar. Updating scenarios in response to material changes in the internal or external environment serves two purposes: It forces managers to revisit the original scenarios and develop an understanding of what worked and what didn't which

provides valuable input to future iterations. It will help flush out new opportunities and threats that emerged since the time the original scenarios were developed. Updating scenarios can be a simple process of revisiting steps 2, 3, and 4. This entails refreshing the data and subsequently assessing the impact of material changes on current operations and future plans. The most critical element is to avoid assuming that the same relationships between key drivers and results remain the same.

Advantages of scenario planning

- Scenario planning will help executives understand the effects of various plausible events. Finance, operations, and other teams can prepare initial responses.
- There's also an element of knowledge management, by having key personnel take part, the company captures their insights and recommendations.
- If these stakeholders are unavailable during an actual extreme event, the company has documentation to fall back on.

Disadvantages of scenario planning

- Scenario planning is a potentially enormous undertaking.
- It can be a lengthy process to collect data and driving factors; for large enterprises, plans can take months to create.
- And, factors that impact plans can change quickly. That means scenario planning must be a living process, with constant updates as conditions and assumptions evolve.

Case Study - Electrolux

A scenario thinking project developed three scenarios for Europe in relation to global warming, use of toxins, and re-use and reprocessing: with a major strategic change in the commercial cleaning business. A key concern for the Electrolux Group is environmental issues and working with environmental issues is all about dealing with short-term uncertainties and understanding long-term trends. The management team wanted the group staff Environmental Affairs to develop an awareness of those trends and strategies for dealing with environmental issues integrated with the business process throughout the company. Environmental issues needed to form part of the thinking process of the businesses. The scenario process was key in developing a picture of what was happening in

the broader market and business environment that affected the product groups.

The framework

Electrolux surveyed the literature available on scenario planning, internal experience from change programs, and received advice from Graham Galer, former Strategic Planning Manager at Shell, about Shell's experience of using scenario planning. The scenario methodology, called the Environmental Change Programme, ECP, was developed using internal expertise and the services of the academic partner Gothenburg Research Institute, and a management consultancy. Two pilots were run, one with a group from the consumer side and one with a group from the commercial side, commercial cleaning appliances. On the consumer side, the group had already experienced pressure from environmental issues. The first step of the ECP was to undertake a strategic investigation of the business environment with a special focus on environmental issues and demands. The second step was to look at the impact on the current strategy, of the current and possible future conditions. The process and the results broadened its management thinking. However, the key was to integrate the concern and awareness of the environmental issues with the business strategy and to set up action plans. The scenario process worked as an eye-opener. The group 287 Scenario planning - managing for the future started with the product line managers and then rolled it out to other management teams on lower levels.

The Scenarios

The process of building the fact base for the scenarios took around three months. During this period there was an extensive data collection process. Electrolux undertook interviews with suppliers, customers, environmental organizations. Subsequently, a core team of 4 to 5 people from Environmental Affairs developed scenarios. The group then finalized the process through brainstorming based on fact-based presentations. The group then fleshed out the resulting skeleton scenarios with additional information from experts.

Summer time	Focused on Global Warming. Global Warming had become a reality. Strict legislation in place to restrict the use of fossil fuels. Energy prices rising.
Cocktails	Focusing around the use and abuse of toxins, both real and perceived.
Evergreen	Focusing on material use, reuse, and

recycling.

Use of scenarios

Electrolux started the process by introducing scenarios with its businesses through slide presentations. The presentations detailed the driving forces behind environmental problems and customer demands. A set of slides highlighting the most important aspects of each scenario followed these pilot presentations. The entire product line management team and other key managers, totaling about 15 people, participated in these presentations. This group then split into work in three workgroups to explore the different scenarios. Each group considered what they would do if they were working in Electrolux and this scenario turned about to be a reality in 10 years' time. For their assistance, they were provided with five pages explaining each scenario in detail. After presenting their ideas to the other groups, each group considered the strategies that could or should be put in place. The management teams recognized that most of the strategies would be good to implement even if the scenarios did not come true. The actions they had identified made sense in terms of current environmental and business pressures.

The results

There were several impacts of the change in thinking. One was a major strategic change in the commercial cleaning business. As a result, triggered by one of the scenarios, the division became more service-oriented. Electrolux became more aware that there was value in its products even beyond the economic use for the customers. Suppliers could reuse the materials or parts of the products. The idea was then to sell the customer service and not a product. This is similar to the successful scheme that Rank Xerox developed. Xerox rents copiers with full service and guaranteed operations. It charges fees based on the number of copies made instead of only selling a copier machine. The scenario process at Electrolux is ongoing. Today, it puts less effort into data collection and more effort into rolling scenarios out to businesses. Currently, around 25% of product lines have use this technique. Electrolux aims to pass it on to all its product lines.

Summary

Scenario planning is not a silver bullet — no management tool is. Like any management tool,

there are risks associated with implementing and using scenario planning. Successful scenario plans demand careful planning and clear communication. Scenario planning, as a concept, provides a structured method for the professional accountant in business to evaluate alternative views of what may happen in the future as an aid to strategic, operational, and financial planning. It represents a cohesive set of assumptions that describes a view of the future that is then used to develop a forecast or to test a strategy, plan, or strategy. Such future foresight ultimately represents an operating philosophy that governs the mindset, decisions, and actions of an entire organization. All organizations have an opportunity to leverage such a philosophy in their organizations to mitigate some of the uncertainty, volatility, and unpredictability they face and in turn, derive unprecedented and ongoing value. Scenario planning has applications in all sectors (i.e., private, public, not-for-profit, and government) and at all levels of the organization and across all departments. Professional accountants in business by their very nature can leverage their know-how and expertise in guiding organizations towards implementing such a unique customer-centric and competitive strategy. The ability of scenario planning to drive alignment and focus across an organization demonstrates how powerful a tool (or program) it can be (if implemented correctly).