

"Exercise: Scenario Planning"

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ABSTRACT

Corporations operate in political, economic, and technological environments that can change rapidly. Competitive advantage can be the reward for those that anticipate, plan, and prepare for change. This exercise demonstrates the essence and value of scenario planning and enables students to experience the process of planning in volatile environments. Teams are formed, an organization is selected, and a list of strategy questions is prepared and narrowed to each team's overriding "Big Question." Students brainstorm a range of critical events in the competitive and general environments. Surprise is injected into the exercise by random assignment of trajectories to critical events that combine to serve as the basis for structuring a scenario. Students summarize their scenarios and prepare a strategy to capitalize on the opportunity or minimize the threat. Class presentations and discussions follow.

Keywords: Scenario; Strategy in volatile environments; Forecasting; Planning

"Exercise: Scenario Planning"

Purpose:

- To provide students with the opportunity to experience the challenges of scenario planning
- To understand the process, technique, and value of developing scenarios
- To formulate a robust strategy

Group Size: Any number of groups of four to six members in each

Time Required: 2 hours (plus class discussion and debriefing)

Related Topics: Forecasting; Planning

Exercise Schedule: The following schedule is approximate. Feel free to take a break between steps but please do not leave during actual group discussion and decision-making.

	Unit Time	Total Time
Step 1. Background	15 min	15 min
Step 2. Find the right issue	10 min	25 min
Step 3. Brainstorm critical events	25 min	50 min
Step 4. Discuss trajectories for critical events	15 min	65 min
Step 5. Determine combinations of critical events	15 min	80 min
Step 6. Develop scenarios	25 min	105 min
Step 7. Compare strategies and recommendations	15 min	120 min
Step 8. Class discussion and debriefing	Tbd	tbd

Step 1. Background

“Never make forecasts, especially about the future.” (Samuel Goldwyn)

Corporate failures can be self-inflicted (e.g., from inertia, prior strategic commitments, lack of foresight, etc.). At other times, companies are subject to political and economic conditions that are susceptible to unexpected gyrations. Volatile economic conditions, world terrorism, anthrax scares, financial scandals, Middle East tensions, SARS, and the avian flu are just a few of the events that emphasize the need to plan for the unexpected. In the face of so much uncertainty, too many managers overestimate their ability to control events. How can we develop a strategy today to respond effectively to any of a range of alternative futures that might occur three, ten, even twenty-five years from now?

The future has always been full of surprises. Many of the events, inventions, and developments that we take for granted today seemed unlikely – if not impossible – just a few years ago. (See Appendix A for examples of mis-forecasts.) Uncertainties are a fact of life and it is a mistake to allow them to postpone business decisions. Strategists need a tool that will enable them to prepare for the unknown by thinking broadly about the full range of plausible scenarios as well as constructing robust strategies regardless of how the future unfolds. “Scenario planning” is a powerful instrument that guides and supports the imagination, creativity, and vision necessary for mapping a range of viable strategies for competitive success. Scenario planning is not a vehicle for *predicting* the future; it is a method of *preparing* for the future regardless of what happens. This is done by having groups systematically share data and beliefs about their environmental assumptions, analyze their key business challenges, and create “scenes” that describe combinations of critical events and trends. By sharpening thinking and improving the quality of decision-making, managers are better able to prepare for the unexpected by developing contingency (“What if?”) plans. (See Appendix B for examples of scenarios.) A good scenario has the following characteristics:

- ❑ reasonable to a critical mass of decision-makers;
- ❑ internally consistent;
- ❑ relevant to the topic or issue of interest;
- ❑ recognizable from early and weak signals of change; and
- ❑ challenging as it contains some elements of surprise or novelty in directions where the organization’s vision needs to be stretched.

This exercise attempts to achieve all this in approximately two hours although the full-blown process might normally take a full weekend. The compressed timeframe of this exercise necessitates some simplification of a very complex process. For instance, if you were developing

scenarios and strategies you would bring together experts (e.g., facilitators, consultants, futurists), external stakeholders (e.g., customers, suppliers, financiers), and employees from all organization levels, businesses, regions, and functions. You would provide volumes of information ranging from raw data to comments from opinion leaders. A single step could take all day; each step would end with summations, discussions, questions, and closure before continuing to the next step; and your group membership might constantly rotate. The intent of this exercise is to efficiently experience a different way of thinking about future possibilities and to better understand your strategic options.

When your group is ready, proceed to Step 2.

Step 2. Find the Right Issue

“The answer is:” (*Jeopardy!*’s answer-and-question format that rewards contestants for knowing the correct question)

If your group and the other groups are diverse in that people do not work for one and the same corporation, your instructor will assign all groups to one “focal organization” and provide historical, performance, and competitive data. To help concentrate your energies on *the most critical strategic issues* this focal organization faces, it is important for your group to formulate a compelling scenario question. We refer to this as the “BIG QUESTION (BQ).” As a group, decide on a single overarching strategic issue or question relevant to your organization.

Throughout each step of this exercise, continually associate how conditions might impact the **BQ** – you might even find surprises that, in hindsight, should have been predictable! The following **BQs** are generic examples for developing scenarios:

- Why should we retain our current “value proposition” or “business model”?
- How will our primary rival(s) overcome our current competitive advantages?
- Should we introduce a completely new product or service?
- Can we integrate our various businesses so they contribute more value to our organization?
- When will our overseas investments pay off?
- Which technological change will impact this business?
- What if the U.S. dollar drops (or rises) and does not recover for years?

Stop. Do Not Proceed Until You Meet With Your Group!

Step 3. Brainstorm critical events

“One of the extraordinary things about human events is that the unthinkable becomes thinkable.” (Salman Rushdie, “Rushdie in Hiding” interview in *New York Times*, November 4, 1990)

A firm engages its external environment (competitive or general) through formulating a strategy. A *critical event* is a possible driving force or future development that *potentially* creates a material change in the firm’s financial structure, management and organization, corporate culture, and quality of stakeholder relationships. These are all controllable decisions within the organization in response to its environment. The *competitive environment* involves stakeholders who directly or indirectly affect the process and profitability of making and selling goods and/or services, including the following:

- ❑ *Customers* – focus of products and services
- ❑ *Creditors* – providers of financial leverage including banks, insurance companies, investment bankers, suppliers, preferred stockholders, etc.
- ❑ *Competitors* – companies attempting to satisfy the same customer needs as those addressed by “our” company
- ❑ *Substitute Service/Products* – any in a series of services and/or products, while not a duplicate for “our” product or service, would in fact be a satisfactory replacement.
- ❑ *Suppliers* – provider of good and services including subcontractors
- ❑ *Labor Unions* – significant and important factor to many corporations. To a great extent they control quality and impact productivity, which affects the cost of products and services.
- ❑ *Professional and Trade Associations* – indirectly affect competitive cooperation and are a source of new ideas and innovation.
- ❑ *New Entrants* – potentially new competitors. In a market that is not rapidly expanding these can have a strong negative impact on revenue of companies currently competing within the market.
- ❑ *Other Interest Groups* – organizations such as environmentalists and groups concerned about the moral aspect of company behavior are forces that cannot and should not be ignored.

The ***general environment*** relates to the broader human, political, and economic driving forces and include the following changes:

- ❑ *Demographic* – may include age of the population, general affluence, and family size, etc.
- ❑ *Sociocultural* – values, belief systems, lifestyles.
- ❑ *Political/Legal* – rules and regulations impacting the business
- ❑ *Macroeconomic* – trade balance, inflation, deflation, recession or expansion, interest rates, currency value and exchange rates, etc.
- ❑ *Technological* – development of new possibilities; products and/or services for satisfying consumer demands.

This step involves creative thinking: Ponder Rushdie’s opening comment above as your group brainstorms possible (even seemingly “impossible”) critical events that would impact your **BQ** over the next five years. Everyone is encouraged to imagine what significant and potentially surprising incidents might occur. Think openly and without restraint about any and all possibilities. At this stage, do not worry about the trajectory the event might take, prejudge any suggested event, or worry how it might affect the company. To anticipate the unexpected, consider both usual and unusual data filters. These are the prisms through which public perceptions are altered and actions are stimulated. Examples include the media (e.g., television programs, broadcast and written publications, popular music), high-profile activists, journalists and commentators, influential religious or political leaders, and publications, chat rooms, and blogs. Once you have completed this brainstorming session, list as many critical events as there are team members (in no specific order) in Table 1. *Keep in mind that the purpose is to prepare, not to predict.* Each of the critical events should be described **briefly** using only a few descriptive words.

Table 1: Major critical events that could impact our **BQ**

1.
2.
3.
4.
5.
6.

Stop. Do Not Proceed Until You Meet With Your Group!

Step 4. Discuss trajectories for critical events

“Doubt is not a pleasant condition, but certainty is absurd.” (Francois-Marie Arouet, aka Voltaire, French philosopher, author, humanist, rationalist, and satirist, 1694-1778)

Each member of your group will receive three cards. Each of these three cards indicates a different trajectory that will determine an operating condition: A Beneficial Change (☺), another for the Status Quo/No Change (☞), and one for a Detrimental Change (☹). On the top of each card, write your group’s “BIG QUESTION.” Then, each member of your group selects one critical event from Table 1 (not necessarily the one you personally came up with, but a different one for each member) and writes it on each of the three cards. When done, describe on the *back* of each card what you imagine the operating condition could be *if* the critical event actually takes that particular trajectory. Remember, you are pondering how this critical event will impact the **BQ** should it turn out good, bad, or indifferent. Feel free to share opinions with your group members. When you are done, give your cards to the instructor. (Refer to the Glossary in Appendix C if terminology is unfamiliar.)

Stop. Do Not Proceed Until You Meet With Your Group!

Step 5. Determine combinations of critical events

“May you live in interesting times.” (alleged Chinese proverb¹)

The instructor will shuffle the deck of all cards received from all groups and will randomly distribute *three* filled out cards to every participant. (You will probably *not* get one that you or

¹ According to Stephen E. DeLong, this “ancient proverb” was probably first used by Duncan H. Munro (a pseudonym for Eric Frank Russell) in “U-Turn,” *Astounding Science Fiction* (April 1950): p. 137. See “Get a(n interesting) Life!” <http://hawk.fab2.albany.edu/sidebar/sidebar.htm>

one of your group members developed.) *Keep the critical events facing up.* Then, one group member will begin to form the set of cards for the basis of Scenario #1 by tossing a card into the center; another group member will follow by tossing a card with a *different* critical event into the pile to create a set of *unique* conditions; continue forming the set of cards for the basis of Scenario #1 until all group members have had an opportunity to show one card. If a member cannot display a unique event, that student must pass the turn. (*Note:* There should be at least 3 cards, with the maximum equal to the total number of group members if each can “play” a unique card. In the unlikely event that at end of the round there are still less than 3 cards forming the basis of the scenario, go round again until there are 3 unique cards.)

Examine only the beneficial and detrimental changes in the cards shown for the basis of Scenario #1; do not consider status quo results as they represent random neutral events that will negligibly effect the operating environment. Turn the cards over and use the operating condition written on the back. The combination of these descriptions from your extreme event cards comprises your operating environment and is the basis for Scenario #1. Repeat playing cards for Scenario #2. Stop forming the set of cards for the basis of Scenario #2 when each member has played at least one card and you have at least 3 unique cards.

An advantage of this methodology is that it forces you to think about a dynamic system that changes over time, like visualizing the future through a kaleidoscope of random colors forming unique patterns – precisely what the cards represent. Your group will have developed two “alternative futures” that combine environmental outcomes that could be a *surprise or seem unreasonable*. This step will guide you in thinking coherently and comprehensively about how random events can simultaneously converge, stretching your imagination by considering even highly unlikely combinations that create a possible future.

Stop. Do Not Proceed Until You Meet With Your Group!

Step 6. Develop scenarios

“Chance favors the prepared mind.” (biologist Louis Pasteur)

A scenario is a script-like characterization of a possible future operating environment. In many ways it is similar to describing a scene for a screenplay – a brief but complete explanation of conditions to be confronted. As a group, examine the first set of cards from the prior step and think about how the unique combination of operating conditions (one from each card) creates an operating environment in which the company must compete. Remember, each card will have a critical event and a trajectory; thus one card might represent a beneficial condition while another might represent one that is detrimental. (Ignore any “Status Quo/No Change” cards.) Synthesize these interactions into a narrative description of the future operating environment; *do not simply add sentences or list bullet items for the events*. Although you should try to be concise it is important to explain the scenario clearly and completely. Give this Scenario #1 a descriptive name and write it in Table 2.

Repeat this process for the second set of cards to create Scenario #2. When both scenario descriptions have been completed, write the scenario names and descriptions on the class board or flipchart.

Table 2: Scenarios descriptions

Scenario #1: Name _____
Scenario #2: Name _____

Stop. Do Not Proceed Until You Meet With Your Group!

Step 7. Compare strategies and recommendations

“We realized that the relevant question they can profitably address is not ‘What *will* happen?’ It is ‘what will we do *if* this happens?’” (Arie P. de Geus, long-time Royal Dutch/Shell planner and scenario planning’s most influential originator, quoted in a 1997 speech)

Regardless of what we think the future might hold, we must still act today even if our knowledge is limited to the past and present. To complete this exercise, your group must discuss the implications of your scenarios. Examine what could happen if these scenes become reality, and what that can mean to your company. Consider both the immediate and longer-term consequences to your organization for each of your scenarios. Next, list contingencies you should put in place now to deal with these scenarios. Finally, develop a robust strategy that is resilient and viable regardless of which scenario actually does occur. Consider the following:

- ❑ Given these possible futures, what is your overall assessment of the organization’s strategy? What environmental forces challenge your future? Are there common opportunities and threats, regardless of scenario?
- ❑ Given these possible futures, what is your overall assessment of the organization’s strategy? What environmental forces challenge your future? Are there common opportunities and threats, regardless of scenario?
- ❑ Where is it vulnerable? What major modifications do you recommend to the strategy? Will you be flexible to change this strategy in response to shifting scenarios?
- ❑ How will you know which scenario is actually unfolding? What are the “flash points” or “signposts” (either metrics or events)? Which key indicators must occur for that scene to become reality?
- ❑ When should your mission and vision change in response to environmental shifts?

Summarize your strategy recommendations on the class board or flipchart. When you are done, reconvene with the class to compare and discuss your recommendations (if time permits).

Step 8. Class discussion and debriefing

“If anything can go wrong, it will.” (Murphy’s Law²)

Each group will present its scenarios, strategy recommendations, and opinions about the usefulness of scenario planning to the rest of the class. *Please be prepared to critique the pros and cons of scenario planning based on this experience!*

² According to “Murphy’s Laws Origins” (<http://www.murphys-laws.com/murphy/murphy-true.html>), Capt. Edward A. Murphy was an engineer working on an Air Force Project designed to see how much sudden deceleration a person can stand in a crash. Ironically, he died one dark evening in the U.S. when – after his car ran out of gas – he was hitchhiking to a gas station facing traffic and wearing white but was struck from behind by a British tourist who was driving on the wrong side of the road.

Appendix A³

“The future ain’t what it used to be.” and “It’s déjà vu all over again.” (Yogi Berra, one of the most-quoted sports figures, famous for fracturing the English language in provocative, interesting, and nonsensical ways popularly known as “yogi-isms”)

According to some estimates, about ninety percent of what we historically “knew” to be correct has subsequently been disproved. Obviously it is difficult to accurately predict the future, let alone control it. But uncertainty – not certainty – is the norm for strategic planning. In hindsight, most surprises should have been predictable and sometimes even preventable (including 9/11, Enron, *et al*). Here are some examples of “obvious” statements that should have been challenged – indeed, that is precisely the essence of scenario planning.

- “Drill for oil? You mean drill into the ground to try and find oil? You’re crazy.” (Drillers who Edwin L. Drake tried to enlist to his project to drill for oil in 1859)
- “Louis Pasteur’s theory of germs is ridiculous fiction.” (Pierre Pachtet, Professor of Physiology at Toulouse, 1872)
- “The abdomen, the chest, and the brain will forever be shut from the intrusion of the wise and humane surgeon.” (Sir John Eric Ericksen, British surgeon, appointed Surgeon-Extraordinary to Queen Victoria 1873)
- “This ‘telephone’ has too many shortcomings to be seriously considered as a means of communication. The device is inherently of no value to us.” (Western Union internal memo, 1876)
- “Heavier-than-air flying machines are impossible.” (Lord Kelvin, president, Royal Society, 1895)
- “Everything that can be invented has been invented.” (Charles H. Duell, Commissioner, U.S. Office of Patents, 1899)
- “Airplanes are interesting toys but of no military value.” (Marshall Ferdinand Foch, Professor of Strategy, Ecole Supérieure de Guerre, 1911)
- “Professor Goddard does not know the relation between action and reaction and the need to have something better than a vacuum against which to react. He seems to lack the basic knowledge ladled out daily in high schools.” (1921 New York *Times* editorial about Robert Goddard’s revolutionary rocket work)
- “The wireless music box has no imaginable commercial value. Who would pay for a message sent to nobody in particular?” (David Sarnoff’s associates in response to his urgings for investment in the radio in the 1920s)
- “Who the hell wants to hear actors talk?” (Harry M. Warner, Warner Brothers, 1927)
- “Stocks have reached what looks like a permanently high plateau.” (Irving Fisher, Professor of Economics, Yale University, 1929)
- “I think there is a world market for maybe five computers.” (Thomas Watson, chairman of IBM, 1943)
- “I’m just glad it’ll be Clark Gable who’s falling on his face and not Gary Cooper.” (Gary Cooper on his decision not to take the leading role in *Gone With The Wind*, 1938)
- “Computers in the future may weigh no more than 1.5 tons.” (*Popular Mechanics*, forecasting the relentless march of science, 1949)

³ There are numerous sources for these predictions, many having made the email rounds. For examples, see <http://employees.oneonta.edu/helsertl/TechQuotes.html>; http://www.umass.edu/fambiz/it_just_won't_fly.htm; <http://www.webenglishteacher.com/text/famouslastwords.txt>.

- “I have traveled the length and breadth of this country and talked with the best people, and I can assure you that data processing is a fad that won’t last out the year.” (The editor in charge of business books for Prentice Hall, 1957)
- “We don’t like their sound, and guitar music is on the way out.” (Decca Recording Co. rejecting the Beatles, 1962)
- “But what ... is it good for?” (Engineer at the Advanced Computing Systems Division of IBM, 1968, commenting on the microchip)
- “The concept is interesting and well-formed, but in order to earn better than a ‘C,’ the idea must be feasible.” (A Yale University professor in response to Federal Express Corp. founder Fred Smith’s paper proposing reliable overnight delivery service)
- “A cookie store is a bad idea. Besides, the market research reports say America likes crispy cookies, not soft and chewy cookies like you make.” (Response to Debbi Fields’ idea of starting Mrs. Fields’ Cookies)
- “If I had thought about it, I wouldn’t have done the experiment. The literature was full of examples that said you can’t do this.” (Spencer Silver on the work that led to the unique adhesives for 3-M “Post-It” Notepads)
- “You want to have consistent and uniform muscle development across all of your muscles? It can’t be done. It’s just a fact of life. You just have to accept inconsistent muscle development as an unalterable condition of weight training.” (Response to Arthur Jones, who solved the “unsolvable” problem by inventing Nautilus)
- “There is no reason anyone would want a computer in their home.” (Ken Olson, president, chairman, and founder of Digital Equipment Corp., 1977)
- “640K ought to be enough for anybody.” (Bill Gates, 1981)
- “\$100 million dollars is way too much to pay for Microsoft.” (IBM, 1982)
- “So we went to Atari and said, ‘Hey, we’ve got this amazing thing, even built with some of your parts, and what do you think about funding us? Or, we’ll give it to you. We just want to do it. Pay our salary, we’ll come work for you.’ And they said, ‘No.’ So, then, we went to Hewlett-Packard, and they said, ‘Hey, we don’t need you. You haven’t got through college yet.’” (Apple Computer Inc. founder Steve Jobs on attempts to get Atari and H-P interested in his and Steve Wozniak’s personal computer)

Appendix B

The following are examples of four scenarios.⁴ Notice that each of these scenarios contains a succinct label, a one-paragraph statement, and expected result:

Paralysis Survival: Companies (and/or economies) deal with unknown, unexpected, and unpredictable external events by pulling into a protective shell. Possible economic shocks include nationalizing major global industries (such as oil) and significant disruptions to global material flows. On the political front, terrorist attacks escalate in different parts of the world, reviving isolationism and protectionism as the U.S.-led anti-terrorism coalition falls apart. Companies react by trying to protect existing assets with layoffs, reduced R&D investment and product development, and lower foreign direct investment. Consumers compound the problem by cutting spending dramatically. In short, a long global recession. ***Result:*** *Acceptance of inevitable surprises.*

Slow Growth: An economic malaise results from known and expected external events that while disruptive have only moderate impact. There will be debt and currency problems in key world economies, although a full-blown global recession is avoided. Unemployment will be modestly higher but manageable, but consumer confidence will be low. Politically, the war against terrorism heads toward a stalemate as companies get used to its risks and learn to cope with their losses by making modest investments. ***Result:*** *Passive responses to low expectations.*

Thriving With Chaos: Companies are proactive in exploiting disruptive external events. Corporate and national resolve to succeed in the face of adversity drives modest prosperity as uncertainty is considered a cost of doing business. Companies try to seize business opportunities and make increasing investments in areas that seem to be potentially profitable. In the political arena, the global realignment of the U.S. with Russia and China opens up new market opportunities, but the Islamic and developing nations are shut out of these new alliances. The war against terrorism continues without a clear victory. ***Result:*** *Opportunistic responses to surprises.*

Global Growth: Foreseeable external events enable countries and peoples of the world to recognize their common goals, thereby focusing on economic development and peace as the route to permanent stability. The recession proves short-lived and the business cycle returns to normal. The threat of terrorism fades and the global coalition against terrorism evolves into a coalition for peace and commerce. Investments in new energy technologies reduce the role of oil in Middle Eastern politics. Consumers increase their spending as they feel confident about the future, laying the foundations of a sustained economic recovery. Trade barriers are lowered and the developing economies grow in tandem with the developed ones. ***Result:*** *Aggressive responses to high expectations.*

⁴ *Source:* Based on “Using Scenario Planning as a Weapon Against Uncertainty,” Knowledge@Wharton (November 7, 2001) <http://www.upenn.edu/researchatpenn/article.php?185&bus>.

Appendix C

Glossary of Terms

BIG QUESTION (BQ) – A major strategic query formulated by top management. The BQ pertains to issues that could result in major changes in or to the organization. Errors in addressing BQ issues could be catastrophic to the corporation. The sole purpose for having participants pose the BQ is to stimulate their brainstorming of environmental contingencies. They need not actually answer this question as they develop scenarios; indeed, they might come up with new and surprising questions.

Contingencies – There is no one best decision since outcomes depend on events that will occur in the future. Hence, many situations require allowances to provide for or protect from possible conditions that may (or may not) actually happen.

Critical Events – A material change in a firm's competitive or general environments that can potentially affect the business in some significant way. The impact could be positive or negative. Occasionally, events that at first appear to be "critical" have little or no impact on the organization; these are categorized as "status quo" events.

External Environment – An organization must operate within its general and competitive environments. The *general* environment includes such issues as demographic, socio-cultural, political/legal, technological, economic, and global. The *competitive* environment includes competitors, creditors, customers and clients, general interest groups, new entrants to the market, substitute products, suppliers, trade associations, and unions.

Operating Condition – A single critical event with a defined trajectory.

Operating Environment – A combination of operating conditions.

Robust Strategy – A strategy that is resilient and viable in the face of numerous scenarios.

Scenario – A script-like characterization of a possible future with special emphasis on causal connections, internal consistency, and concreteness.

Strategic Response – A proposal for dealing with a condition within the context of the BIG QUESTION. In other words, with the BQ in mind and a condition defined as a reality, what strategic moves should be made?

Trajectory – The direction of the impact of a critical event on the performance of an organization. It may embody a positive or negative potential, or it may not affect the business at all.

Teaching Note

This exercise has been used multiple times with both European and American MBA students. Every class has been lively and even normally quiet students have become involved with active participation. Feedback has been extremely positive, with students finding the exercise not only intellectually challenging and professionally helpful, but also enjoyable and enriching on multiple levels.

Overview & Background:

Strategic planning has often been criticized for dealing with an uncertain and uncontrollable future, and this criticism resonates loudly during our current turbulent times. This exercise emphasizes that uncertainty – not certainty – is the norm for strategic planning and that planning for the unexpected is not only possible but also necessary for sustainable corporate success. Since business planning for the future given an existing environment requires thinking beyond conventional boundaries (e.g., terrorism, war, the Asian tsunami, Bhopal, bioterrorism, spiking oil prices and oil spills, nuclear proliferation and accidents, etc.), many professionals believe that long-term planning is impractical if not impossible. In this period of such great uncertainty, how can we possibly plan for the unexpected? The answer is scenario planning, which is often used by major consulting firms to manage change (both anticipated and unanticipated) and develop strategic initiatives for their clients. Some suggested conditions for using scenario planning include:

- High uncertainty (relative to one's ability to predict or adjust).
- Too many costly surprises have occurred in the past.
- Insufficient new opportunities are perceived and generated.
- The quality of strategic thinking is low (strategic planning is too myopic).
- The industry has experienced a significant change or is on the verge of it.
- Strong differences of opinion exist, each of which has its merits.
- Competitors use scenario planning.

Royal Dutch Shell, one of the first and leading adopters, defines scenarios as “carefully crafted stories about the future embodying a wide variety of ideas and integrating them in a way that is communicable and useful.” The process involves developing “scenes” about different plausible futures and creating models for learning, anticipating, and preparing for the future. They paint a picture or tell a story of how the future may unfold and reveal what strategic actions should be taken now in order to shield the organization from disaster and continue moving it toward its objectives. Here are some examples⁵:

Revolution: Abrupt discontinuities, either natural or man-made. (*Examples:* earthquake; breakthrough invention.)

Tectonic Change: Structural alterations which produce dramatic flare-ups causing major (but certainly foreseeable) discontinuities. (*Examples:* breakup of China; end of apartheid in South Africa.)

⁵ See Fahey & Randall (eds), *Learning from the Future* (John Wiley & Sons: 1998).

Cycles: Economic and political timing is important but unpredictable. (*Examples:* health care reform; real estate booms; gentrification.)

Infinite Possibility: The seductive idea that continued growth is possible, often enabling sights to be set higher than before. (*Examples:* computer industry in the 1980s; dot-com's in the 1990s; global connectivity via the Internet today.)

The Lone Ranger: An organization or a main character is pitted against the established practices. Often the protagonist sees itself as battling a perceived evil, a corrupt system, or an antediluvian competitor. This "David vs. Goliath" plot frequently matches up a start-up firm against a market leader. (*Examples:* Apple Computer vs. IBM; MCI vs. AT&T; Ted Turner vs. the networks.)

Generations: This plot revolves around the emergence of new cultures – groups with different values and expectations. (*Examples:* Baby Boomers or Generation X; overseas Chinese network.)

Perpetual Transition: Expect change to be continuous and adaptation to be anything but uniform. (*Example:* the Internet enables a vast, ever-evolving marketplace with no regulation, control, or limits.)

Learning Objectives:

An important aspect of strategic thinking is to identify those issues and analyze the forces that drive the organization in its environment. Scenario planning is an important tool for a systematic examination of the interaction of trends and uncertainties within a given business domain. By asking "What if?" questions, scenario analysis can be a useful tool in helping people think creatively and question assumptions about the future. In this way, participants understand the nature and impact of the most uncertain yet important driving forces affecting their organization's future. As a group process, it encourages exchanging knowledge and developing a deeper understanding of central issues important to formulating strategies. The diverging stories together with the process of developing them will increase knowledge of the business environment and widen perception of possible future events. Scenario planning results in a robust strategy, viable regardless of which future actually unfolds.

Synopsis:

This exercise has proven to be both fun and engaging. All students and groups should focus on the same organization. If they are from different organizations, begin this exercise by selecting a publicly-traded corporation and review its history, performance, and competitive environment. (The instructor can either provide this data or assign teams to research the corporation.) Alternatively, you might use a published case as the focal organization.

Students are then asked to create a list of major strategic issues for the corporation. Each team will then select one from their list and this will be a focal point for most of this exercise. It is referred to as the **BIG QUESTION (BQ)**, and its primary purpose is to get participants to develop possible environmental surprises. Once the **BQ** has been agreed on and formulated, students

brainstorm and create a list of critical events that are material changes in a firm's internal, competitive, or general environments. For example, a critical event may be a significant change in interest rates. No value or direction is placed on the critical event at this stage and there should be no mention of whether the critical event will have a positive or negative effect on the business, simply that it will change dramatically. Random chance is then introduced into the exercise by the instructor and it is at this stage that the direction of the critical event is determined. This is referred to as the *trajectory*. There are three possible trajectories: Beneficial Change, Status Quo, and Detrimental Change.

The instructor distributes three preprinted cards (see Appendix at the end of this TN) to each student with these trajectories and students will write the same critical event on these cards along with the three possible trajectories, then state the expected outcome on the back of each card. These cards are turned in to the instructor, who will shuffle them and randomly redistribute to students across all groups to represent the sudden and surprising nature of these environmental shocks. Each group then creates two sets of cards, each set consisting of a random combination of these events that becomes the basis for a scenario description of the future operating environment they will face as a result of the cards they have been dealt. At this point they might change their BIG QUESTION (BQ) as they must deal with unexpected situations, so you should not feel compelled to force them to stick to their original BQ as it has fulfilled its purpose of stimulating environmental surprises. Once they have completed the two scenario descriptions, each group is asked to formulate strategies to capitalize on the opportunities or minimize/nullify the threats that their scenario descriptions indicate they are facing. The entire class can then discuss "robust" strategies and the value of developing scenarios.

Teaching Approach:

Introduction. Business experience is particularly helpful for students who will be engaging in scenario planning. A minimum of two years of business experience is recommended; however, students with less experience can benefit substantially from instructor guidance. You might want to make a short Power Point™ presentation to provide an overview of scenario planning and convey its benefits (contact the authors). The instructor might also want to copy and distribute to students the glossary of terms for this exercise contained at the end of this note. These options depend on student sophistication and the time available.

The Focal Corporation – It is assumed that the students are a diverse group and not working for the same organization. If this is the case, begin the exercise by selecting a publicly-traded corporation (the "case"). Divide students into groups (we suggest limiting the groups to six members each). The instructor can provide historical, performance, and competitive data to the students and everyone will be asked to analyze the information. The instructor can use background videos that cover the corporation to provide an "up close" feel for the organization and its operations (often available from major publishers and public television). A Power Point™ presentation can also highlight the firm's history, performance, publicity, challenges, successes, and problems. (This exercise can work in conjunction with a case study that presents comprehensive corporate information; the lead author can provide one.) Alternatively, if students have a comfortable degree of business experience it may be advisable to charge them with the responsibility of collecting background data on the selected corporation. Internet research will yield a substantial portfolio of valuable information. Once the groups have

completed their research tasks they will share with all other groups their findings. This can be done by handouts or by oral presentations.

The Big Question. The instructor introduces the concept of the “Big Question” (**BQ**).

- **Alternative One** – Students are asked to prepare a list of several major strategy questions that the corporation might have (e.g., “How will rivals overcome our competitive advantage?” “Should we introduce a completely new product or service?” “Should we expand globally?”). Once their list is complete, they are asked to select one as their BIG QUESTION. The **BQ** will then be a focus for many of the remaining steps in the exercise.
- **Alternative Two** – The instructor provides close guidance to all groups in formulating the BIG QUESTION. Since the **BQ** is associated with strategic planning, students with little management experience may benefit by close instructor guidance with regard to prioritizing and valuing these major questions.

Imagination. Students are asked to imagine a range of potential future developments. They begin by brainstorming critical events in the competitive and general environments that could impact the business over the next five years. Students should prepare an extensive list. Next, they are asked to pare their list to as many possible critical events as there are teammates. These must have the potential of significantly impacting the operations and performance of their corporation. The critical events selected will be written on the exercise’s Table 1. [*Important:* This phase is not a process of predicting the event or evaluating its impact; it is simply a matter of listing what *might* happen without regard to what is *likely* to happen or whether the effect on the business will be beneficial or detrimental.]

Trajectories. Since random events are common in business, this exercise integrates an element of chance through a series of trajectory cards. Three trajectories are introduced and associated with critical events: Beneficial Change, Status Quo/No Change, and Detrimental Change.

- Every student in each group will be given three cards with these three trajectories. They are to write their BIG QUESTION on each of the three cards.
- Next, they select one of the critical events from their Table 1 and write the same event on all three cards.
- Finally, they describe on the back of each of the cards how the issue of the BIG QUESTION is likely to be affected by the operating condition that has been created by the combination of the critical event *and* the trajectory. [*Example:* **BQ** – Should we introduce a completely new product? **Critical event** – There is a significant change in interest rates. **Trajectory** – Interest rates decrease, which is considered advantageous to the selected business. (Of course, not all businesses benefit from falling interest rates.) The critical event (changing interest rates) and the trajectory (falling) translate into decreasing the cost of leveraging new equipment and the carrying cost of inventory, thus making it less expensive to develop a new product line.]

Combinations. During this step students give their three cards to the instructor. These will be shuffled and randomly distributed to groups so that each student receives three new cards, probably from three different classmates from three different groups! In the unlikely event that every member in one group has only neutral cards, all class cards can be reshuffled. At this point,

participants need not feel compelled to stick to their original BIG QUESTION as its purpose has been filled.

- Each group is now ready to play their cards. Every member takes a turn to submit a card with a *different* critical event into the “scenario set.” Each card also reflects a trajectory, meaning it is now an actual “operating condition.” The combination of cards (up to the number of students in the group) represents an outline view for a scenario of an operating environment.
- This card collection process should be done twice resulting in two unique operating environments, when time usually runs out. (You should push for more than one scenario so the group can consider competing plausible future states.)

Scenarios. The prior steps have guided students in assembling the building blocks for formal scenarios, and they are now ready to craft them. Examining the first set of cards, students should synthesize and evaluate the unique combination of operating environments (scenario cornerstones). They then write a descriptive narrative for both of the two possible future operating environments in the exercise’s Table 2. These scenarios may or may not be relevant to their original BIG QUESTION.

Strategies and Recommendations. Students are asked to consider each of the scenarios they have created. They are asked to write on flip charts their strategies and recommendations for achieving corporate objectives in the face of these two equally plausible but competing scenarios.

Class Discussion and Debriefing. Students then present their scenarios, strategy recommendations, and opinions to the class. They should be prepared to justify and defend their proposed courses of action. Non-presenting students are asked to critique the ideas presented. This is generally lively and students have indicated that it is an extremely beneficial learning experience.

Alternative Teaching Approaches:

These notes are predicated on our experience with MBAs and EMBA’s, but we realize that other student audiences might benefit from this exercise as well. Hence, we conclude by providing additional consideration in using this exercise.

- For undergraduates, the schedule could be modified to run segments across several class meetings, taking more time to formulate the Big Question, views about future developments, and critical events.
- This approach can be viable for every case that is used in the course as students will have rehearsed the use of BQ, trajectory, scenario, etc, and should be able to apply them each time they consider strategic prospects of any company.
- Run this exercise early in the course so students can follow the outcome of the focal organization throughout the semester, periodically reprising scenarios, strategies, and recommendations.
- Introduce real time unexpected events (such as hurricane Katrina) and rerun the scenarios with these new surprises.

- Link the exercise to a dialogue with an executive in the focal organization, and run the results of the session past this person (via the Internet or teleconference) for reactions.
- To reinforce these thinking practices, repeat the exercise using a very different type of organization (e.g., an NGO or not-for-profit).

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Appendix

Note: Print one page per student on stiff paper and cut into three cards as indicated.

My group's "BIG QUESTION" is:


My assigned critical event from Table 1 is:

 Write your "*OPERATING CONDITION*" on the back for **Beneficial Change** for this event.



My group's "BIG QUESTION" is:


My assigned critical event from Table 1 is:

 Write your "*OPERATING CONDITION*" on the back for **Status Quo** for this event.



My group's "BIG QUESTION" is:

My assigned critical event from Table 1 is:

 Write your "*OPERATING CONDITION*" on the back for **Detrimental Change** for this event.