A PRACTICAL INTRODUCTION TO SCENARIO PLANNING

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CHERMACK SCENARIOS

Scenarios are stories of possible future environments. They involve a variety of dynamics around situations that are challenging for decision makers. Scenarios are not forecasts and the purpose is not to choose a scenario. Scenarios are not strategies. Scenarios provide different contexts in which to consider the risks, benefits and implications of decisions and different ways of managing strategic options.

Scenarios must take the form of exciting stories that present a range of futures. When they address the key concerns of managers and decision makers, scenarios can provoke novel understandings and insights related to complex problems. This means scenarios can shed light on highly uncertain issues and provide direction and deep consideration of implications of any action taken. Well-presented scenarios also make it easy to develop interest throughout the organization and ultimately create a climate of involvement and engagement.

Scenario planning is the process of developing and using a set of scenarios to explore and test decision options. Many scenario planners conclude with the delivery of a set of scenarios. This is not enough. To be truly useful and insightful, scenario planning must answer the questions of "what if", "what could be", and "what's next". This means scenario planning must integrate with strategy.

Strategy describes how an organization will achieve and sustain improved performance in a competitive and constantly changing environment. If scenarios do not describe and suggest action, they have not achieved their goal or potential.

This document introduces and describes the process of scenario planning. Both the development and use of scenarios to generate insights are detailed. First, how to distill a seemingly infinite number of possible futures down to a management number of a few plots is covered. Then, the question of how to develop those plots in interesting and diverse ways is described. The goal is to first represent the variety of challenges an organization or decision maker may face, and second to create and tailor a set of scenarios to provide insights that are useful in navigating a way forward. Finally, some advice about how to get the most from scenario work is offered based on significant experience developing and using scenarios in a variety of organizations.

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PERFORMANCE-BASED SCENARIO PLANNING

The remaining sections of this document provide a summary and overview of performance-based scenario planning. The processes described are useful for integrating scenario building and options testing. In other words, the processes described show how using scenario planning in the context of strategic activities can yield a manageable number of initiatives that enable sustained performance among a variety of uncertain futures.

THE FOCUSING QUESTION

Scenario work must begin with a question, problem or decision. The initial framing that is posed directs the purpose of the scenario project. The first priority is to develop a clear question that will set the tone of the project. It is important to remember that when dealing with complex, strategic puzzles, there is no perfect answer. Therefore, asking the question is not meant to find a single correct answer.

A few sample questions to consider are as follows:

- How can we retain our current value proposition in a high-change environment?
- Should we introduce a completely new product or service?
- How can we more effectively integrate our strengths to enhance the value we provide to our customers and increase our efficiency?
- What are the major technological advances on the horizon that we have not thought about?

DEFINING THE ESTIMATED SCOPE AND TIMEFRAME

The next task is to develop a sense of the scope of the project. This is largely dependent on the defined purpose of the project. Key items to consider are the amount of time and resources the organization is willing to invest in the project, deadlines that may be relevant, and how far into the future the scenarios will reach.

While each project is different, most can be expected to involve interviews and initial data gathering, two to three full day workshops (spaced out over a few weeks) to build the scenarios, and two to three full day workshops (spaced out over a few weeks) to consider the implications of the scenarios. The space between workshops is important for allowing participants to reflect on and absorb the ideas and information they are dealing with. Given these general guidelines, projects can be expected to require five to nine weeks of commitment at a minimum. Small projects with a clear focus may be able to move faster, and of course, large projects involving multiple organizational units over varying locations can take longer. The purpose of this part of the Scenario Project Proposal is simply to estimate how long the project will take, and clarify any deadlines or other critical dates that may pose barriers to the project.

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BUILDING THE SCENARIO TEAM AND DETERMINING ROLES

Getting the right people involved in the scenario project is absolutely critical. Projects must involve the people who will use the scenarios to be effective. The other requirement for effective scenario projects is that they must include a cross-section of the organization. To clarify, each level of the organization should have representation. The team should include a representative from each level of the company as well. During the Project Preparation phase, important stakeholder groups should be identified, individuals with a high degree of organization knowledge should be recruited, internal leaders at all levels of the organization should be identified, and the scenario team can be assembled. The scenario team manages the project. Some suggested roles include a project leader, coordinator and remarkable people.

The project leader is obviously responsible for directing the scenario project. This person is often an external consultant with expertise in the scenario planning system, and should have significant experience in a variety of business processes and change interventions. It is a good practice to partner an internal expert to co-lead the project if an external consultant is the main facilitator. Such a partnership allows the internal leader (and therefore the organization) to gain scenario planning expertise, and can help navigate the project inside the organization.

Team members will participate in all of the workshops, generally be responsible for developing the detailed scenario storylines, and will accomplish much of their work through sub-teams. For example, a sub-team is often assigned to work on each scenario, provide further details, and write the scenario narrative. The team should include someone from each level of the organization, so that the team is ultimately cross-level, and cross-functional.

One individual should be responsible for convening the group, managing schedules, reserving spaces and locations for scenario work, creating internal mechanisms for the scenario team to communicate, and other administrative functions.

Since scenario planning is a system designed to stretch the thinking inside the organization, it should involve people with diverse backgrounds and expertise. Perhaps Pierre Wack's greatest contribution to modern scenario planning is the inclusion of what he called "remarkable people". By this, he simply meant people with a completely different outlook or mental model than those inside the organization working on the issue, and who were known for their ability to think unconventionally. Remarkable people can be musicians, artists, bench scientists, and other people from a wide range of backgrounds to provide alternate perspectives in scenario projects.

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EXTERNAL ANALYSIS

Information gathering is the foundation of the analysis of the external environment. The Scenario Exploration phase involves data gathering both on a general level and on the specific issue under consideration. The goal of information gathering is to learn and to expand the project team's familiarity with the industry and relevant economic and social factors. A secondary goal is to gather information relevant to the specific issue or decision articulated in the project proposal. Everyone has biases, and they show up in scenario planning. A key skill is the ability to be aware of biases and head off confinement in thinking. Thus, another purpose of the Scenario Exploration is to expand the assumptions, beliefs, and possibilities evident in the industry or environment being studied, thereby expanding one's filter.

There are many ways to approach the data gathering stage. Three tools for helping to structure information about the external environment include STEEP forces, DeBono's Thinking hats, and a SWOT (Strengths, Weaknesses, Opportunities and Threats) Analysis.

INTERVIEWS

In scenario planning, the foundation of internal analysis is the interviews. The interviews conducted allow access to the deepest concerns of line workers, managers and executives. Interviewing individuals or groups of people in an organization is a time-consuming and detailed process that requires commitment and skill. Interviews are also a highly critical piece of the scenario planning system as the interviews will reveal opinions, facts, experiences, beliefs, organizational symbols, history and more.

"The Seven Questions" have gained popularity in scenario planning as they are shown to surface the strategic agenda of decision-makers. While there are a few varying interpretations of these seven questions, the general format is as follows:

1. Clairvoyant
2. Good Scenario
3. Bad Scenario
4. Inheritances from the Past
5. Important Decisions Ahead and Priorities
6. Constraints in the System and Changes that need to be made
7. Epitaph

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Specific sample questions that pertain to each of these seven categories are as follows:

1. If you could speak with an [industry] oracle from [year], what three things would you like to know about the [organization]?
2. If the [organization, industry] were to collapse by [year] (a 'bad' scenario), what might have caused the collapse and why?
3. If the [organization, industry] were thriving, growing, and moving in a genuinely positive direction (a 'good' scenario) by the year [year], what would be true of it?
4. (a) What has surprised you (pleasantly or unpleasantly, specifically or generally) about the [organization, industry] in recent years? (b) What have been the memorable "turns" and why?
5. (a) What are the major challenges to be faced by [organization, industry etc...] professionals in the next five years? (b) What are the obstacles to be overcome that keep you awake at night?
6. a. What would hinder the field from moving past these obstacles? b. What forces could constrain the [e.g. organization and industry]?
7. Imagine that your program is in danger of being completely cut. What is your argument for keeping it?

The purpose of the interview stage is to become familiar with the mental models (values, beliefs, assumptions, experiences, hopes and dreams) of a cross-section of the organization. The seven questions are the standard tool for accomplishing this, but in order for these questions to be effective, the establishment of a good relationship with each interviewee is critical. Interviewees should be allowed to add anything else they feel is relevant to the project, and they may want to know more about the scenario planning project as well.

BRAINSTORMING THE MAJOR FORCES : WORKSHOP 1

The brainstorming workshop is simple in concept. The purpose is to capture what participants perceive are the major forces the organization is facing that relate to the problem or issue defined. This workshop usually takes a half-day, to a full day. It is important to get input from all participants, and allow enough time to capture everything that is said. An effective way to structure this workshop is in a meeting room with empty wall space, white boards, or newsprint taped to the walls. Give each participant a pad of sticky notes (or hexagons), ask them to write a single issue on each sticky note and stick it to the wall. Once participants have exhausted their ideas, it is useful to have an open dialogue.

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An important point of the brainstorming exercise is to strive for granularity. That is, each force should be written such that they are all relatively equally big or small forces. It is also important that the forces are written ambiguously so that normative judgment can be added later on. For example, use "scarcity of technology skills", not "technology".

Brainstormed items should be grouped when there is overlap. Duplications should be combined and a cleaner, more efficient scattering of major forces is built. Once completed, these are the forces perceived to be driving the environmental system in which the organization is operating.
These are usually macro issues and a good number to aim for is about 20-25.

RANKING THE FORCES BY RELATIVE IMPACT ON THE ORGANIZATION : WORKSHOP 2

The next step in understanding the major forces is ranking the issues according to their potential impact on the organization's strategic agenda. This ranking occurs horizontally across the working space -- preferably a long empty wall in an open meeting room with newsprint taped to it -- simply ranging from "Low" to "High". The goal is to separate the truly critical factors from the other. This is not to say that the other factors are not important. Rather, the high impact items are those that have the power to fundamentally reshape the business. If these factors are perceived differently, they can provoke significant strategic insights.

This ranking exercise can take several hours to a full day, depending on the number of participants involved. Viewpoints will differ, and conversations that develop around understanding the varying viewpoints are how mental models continue to be shared. This face-to-face dialogue is critical to scenario planning. The knowledge friction -- simply meaning the resolution of multiple viewpoints into a more complete understanding -- is what allows many participants to experience a significant shift in insight. This has been referred to as an "aha" moment, and happens when participants are able see the situation with "new eyes".

RANKING THE FORCES BY RELATIVE UNCERTAINTY -- WORKSHOP 3

The next exercise is focused on ranking the issues by uncertainty. This ranking is done vertically, again according to "Low" and "High" uncertainty. Again, significant disagreement will arise. Conversation, debate, and dialogue are intended to support the extension of participant perceptions. By listening to a variety of perspectives and describing their own, participants build their own mental scaffolding. Once the scaffolding is in place, the group can work toward a shared mental model.

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BUILDING THE SCENARIO LOGICS -- WORKSHOP 4

The next step is aimed at creating the scenario logics. The scenario logics are the general frameworks -- or the plots of the scenarios. Once the participants have ranked the issues by impact on the strategic agenda, and by uncertainty, the ranking space is divided roughly into :

THE 2X2 SCENARIO MATRIX

Scenario logics are built by choosing two critical uncertainties and plotting them in a 2 X 2 matrix. Remember that the critical uncertainties are the items ranked "high" on their potential impact, and "high" on uncertainty. Facilitators should steer the group toward "useful" variables, not "right" variables. By combining two critical uncertainties, the themes of the four scenarios become apparent. Normative judgment is now applied to each critical uncertainty, generally adding a "high" and "low" value to each.

A variety of methods can be used to choose the two critical uncertainties, such as value voting, and poker chips. For example, in value voting, each participant is given 20 one-dollar bills (real or not) and ask them to allot their dollars among the critical uncertainties. As each participant "spends" his or her money, the critical uncertainties are prioritized, and the top two can be chosen for use in the 2X2 matrix. It is worth the time to experiment with a few different 2X2 matrices to get a sense of the different scenario logics that can fall out of this part of the workshop. The goal of this workshop is to develop four scenario logics.

These scenario logics must be plausible, challenging, and relevant. At this point in the project, the scenario logics must meet three criteria as a face validity check. The scenarios must be plausible in that they can potentially draw from data, facts, and present an acceptable view of the future. They must be challenging in that they can assemble events and facts in a way that challenges the current mental models. They must be relevant in that they relate to the key issues that have been expressed during the project, and draw on real concerns of managers in the organization.

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The Number of Scenarios to Use -- Why Four?

There is debate about the number of scenarios that should be developed. One approach is never more that four, and some have suggested the optimal number is one status quo scenario, plus 2 genuine alternatives. The status quo scenario is used to get decision-makers to take the bait. Then two genuine alternatives can be presented that deliver compelling stories of fundamentally different futures.

When two scenarios are used, there is a tendency among novice scenarists to have a "good" scenario, and a "bad" scenario. When using three scenarios, there is a tendency to fall into "best case", "worst case", and "status quo" thinking. Five scenarios is too many for decision-makers to entertain. For years, Royal Dutch / Shell has used two scenarios. The key is to make sure the scenarios are distinctive and memorable.

TITLES

The scenario titles are critical. An example is a set of scenarios using the titles of Beatles songs (A Hard Days Night, Help, Magical Mystery Tour, and Imagine). You can easily see how these titles represent four different perspectives (even stories), having read nothing but the titles. Other examples are a travel theme (Airbus, Concord, Horse & Buggy and Slow Boat to China), a buildings theme (Empire State Building, Petronas Towers, Capitol Building and Pentagon), and a visual theme (Telescope, Eyeglasses, Déjà vu and ESP). Be creative and use intuition in generating titles that are recognizable and convey the essence of each scenario.

Naming scenarios has to do with branding and providing titles that conjure up the concepts of the scenarios will make them memorable. The name provides a sort of mental Velcro for the members of the organization. The chosen names provide an easy way to talk about the different worlds that may confront the organization and its decision-makers. It is therefore appropriate to have the images drawn from a family of images.

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WRITING THE SCENARIO STORIES

Once the scenario logics have been constructed and the basic plots of four scenarios have been defined, each subgroup should ask an individual to write the detailed scenario story. Again, it is extremely important to use the key factors and trends identified in the previous workshops. Using these forces and trends gives the set of scenarios relevance, and ensures that they address the things that are on the minds of managers. While brainstorming the general events of each scenario and plot development is best done in groups, writing the scenario details is best done as an individual activity. Some general strategies for scenario writing include:

- Assign each scenario to an individual.
- Assign each scenario to a pair of authors -- one to write, and one a veteran of the organization.
- Assign each scenario to an individual with access to an experienced scenario writer / editor.
- Assign all scenario writing to one individual (usually a talented writer)

All four are useful strategies, but will depend on the situation, how many people are involved, and the knowledge capital within the group.
As the timeline emerges, the major events that correspond to each scenario become clear, and further details can be filled in. Creative writing skills are an asset in this part of scenario planning, and many organizations seek writing expertise at this stage. I have found it useful to write two versions of the story for each scenario. The first is in the third person, laying out the facts of the scenario. This version helps to get the facts straight, and reveals any holes, or weaknesses in the plot. The second is a narrative, in the first person, and describes the scenario from its horizon year, looking back over what has happened throughout the scenario. Inevitably, the first person narrative is more memorable, and draws on the reader's empathy more immediately.
Five more tips for writing scenarios include:

- Give each story a beginning, middle, and end.
- Some elements should remain constant -- not everything changes.
- Use characters in the scenarios. Inflation levels may be the villain, and policy options may be the hero. Build tension between the characters as the story unfolds. Present dilemmas, solve dilemmas, or provide twists.
- Include dramas and conflicts in the stories.
- Use present verb tenses -- no "might haves or could haves".

Decision-makers must be involved in the scenario writing process. Their involvement indicates the sense of ownership they will have for the scenarios. In other words, if decision-makers don't participate in the scenario writing, they may be detached from the scenarios that are produced. Scenario planning,

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is a participative process in which the decision-makers create scenarios that challenge internal thinking. Thus, making the scenarios relevant is directly related to involving the people who will use them in their development.
Decision testing / option generation / strategy

Most scenario planning texts lack descriptions of what to do with the scenarios once they have been constructed. At best, this part of scenario planning is breezed over without much detailed guidance. Several strategies for applying scenarios and revisiting the original purpose and question are suggested. These strategies include using the scenarios to examine the initial question, test the current theory of the business / business idea, analyze current strategies, and develop strategic resilience and robustness. The toolbox for using scenarios can be quite extensive. There are a variety of methods for facilitating change and communicating the content of the scenario in participatory and creative ways.

WIND TUNNELING

The basic idea for using scenarios is the concept of wind tunneling. Wind tunneling is a concept from aerodynamics research to test airplanes and simulate the environment of free flight. Eventually, wind tunnels were used to test buildings and automobiles and examine a variety of structural properties. The concept is the same with scenarios. Scenarios function as conceptual wind tunnels in which to measure a variety of organizational characteristics.

Many writings use the term "turbulence" to describe today's business environment. Turbulence occurs when there are sudden changes in the environment and the structural properties of objects begin to show their inadequacies. The objects can be airplane wings in aerodynamic wind tunnels, or organizations in conceptual wind tunnels. Either way, turbulence is an environmental characteristic that puts stress on the object in question, be it an airplane or an organization. Usually, pilots change altitude -- they seek a different environment. In scenario planning, decision-makers are forced to think about how to build an organization that can withstand the stresses posed to it or influence the variables to form a favorable environment.

Scenarios create a way to analyze the organization in a variety of conditions. Remember that a basic premise of scenario planning is that the environment changes too rapidly for most strategic planning models to be useful. Scenario planning is built on the assumption that the environment changes constantly. By building uncertainty into the environment as a basic structural feature, scenarios vary the environment in which the organization is operating.

Scenarios represent the different future conditions within which the strategy, business model or other decisions must fit. Wind tunneling is used to test

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decisions for robustness and for exposing opportunities and risks. An important additional benefit of wind tunneling is that the leadership engaged in wind tunneling are continually adjusting their assumptions as they enter the different worlds described in each scenario. As leaders check their decisions or business models in the various scenarios they are often required to adjust their thinking based on evidence of flawed assumptions.

WORKSHOP -- EXAMINE THE INITIAL QUESTION

The first step in putting the scenarios to use is to return to the initial purpose, problem, and question. After all, the priority of the project is to develop a variety of different ways to explore the problem and answer the question. This workshop can be informal and needs only to bring the team and decision-makers back together in a room suitable for brainstorming. Again, whiteboards or newsprint on the walls, room to move around, comfortable chairs, and plenty of paper, pencils and markers will work nicely. The scenario project leader can present all of the scenarios, or if appropriate, individuals who wrote the specific scenarios can present them. The presentations should be short, involve the essence of the stories, and use colorful pictures or presentation slides to describe each scenario. The project leader then facilitates a dialogue relating back to the initial question. The following questions may be useful in starting the conversation:

- What have we learned throughout the scenario construction process that relates to our initial question?
- How would we answer the initial question in each scenario? Are the answers different in each scenario?
- What additional information would we want to know?
- What different ways of solving our strategic dilemma are suggested by entertaining these scenarios?
- What are the clear strategic opportunities that can be seen in each scenario?
- What general actions would we recommend around the initial problem, question, or issue, having considered each of these scenarios and their implications?

The goal of this workshop is to begin a genuine conversation about the potential issues decision-makers may face, and to provide a mechanism to wonder about the future.

Providing a space to think and reflect on strategic issues on its own is a valuable contribution. Depending on the size of the organization, and the reaction to once again thinking strategically, more than one scenario presentation around the initial issue may be necessary.

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WORKSHOP : SCENARIO IMMERSION (VARIATION ON EXAMINING THE INITIAL QUESTION)

A similar approach to considering the scenarios is called "scenario immersion". The process is workshop-based, where participants develop their thoughts about the opportunities and threats as well as possible actions and strategies for each scenario. The facilitator explains that the goal of the workshop is to develop as many ideas as possible about how the organization should proceed, and participants are encouraged to think broadly to capture a wide range of possible actions for decision-makers to take. The process unfolds as each scenario is presented, and participants are asked to assume the role of a decision-maker. Each participant is asked to identify three to five opportunities and three to five threats. Each of these is recorded on a single note card. Participants are then asked to develop a strategy they believe could be effective in that scenario.

Once these exercises are complete, the process moves into a voting round. Each participant is asked to nominate one threat and one opportunity they believe to be critical in that scenario. The idea is to leverage the collective capital of the participants in the room to distill a core set of opportunities and threats. This part of the process is completed for each scenario.

When critical opportunities and threats have been identified, the process turns to strategies. The group is asked to consider all of the strategies that have been brainstormed, and to look for the strategies that appear in more than one scenario. The goal is to identify two or three strategies that can be viable cross all or multiple scenarios. This is perhaps the most useful outcome of any scenario project.

WORKSHOP : TEST THE BUSINESS MODEL

Another effective exercise is to examine the business model in each scenario. Using the same brainstorming space set up described in earlier chapters, the team can take the business model and wind tunnel them through each of the scenarios.

The process of testing the business model in the context provided by each scenario should take about a half day. The scenario team presents a scenario to decision-makers and a dialogue is initiated about how the business model may need to change in order to be viable in a given scenario. Key questions include:

- Do our assumptions about the environment, mission, and core competencies fit, or enable us to take action within the futures presented in each of the scenarios?

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- Do our assumptions about the environment, mission, and core competencies fit each other in each of the scenarios?
- Is our theory of the business known and understood throughout the organization?
- How can we continuously test our theory of the business?
- These questions should be posed for each scenario. These conversations can become quite diverse and reach into unexpected areas.

SUGGESTED WORKSHOP : ANALYZE CURRENT STRATEGIES

Most decision-makers operate under a set of strategic goals whether they have used scenario planning or not. These goals and strategies can be viewed through the "lens" of each scenario to see where they may or may not make sense. In this workshop, participants come together to consider the organization's strategy, current strategic initiatives, risky potential projects, and other organizational goals in the context of each scenario. The purpose of this workshop is to assess current organizational goals and their viability in each scenario. Ultimately, a manageable set of strategies that contribute to the advancement of the organization is sought. Goals and strategies that are found to distract from the core purpose of the organization (the business model) can be considered further, and potentially removed from the strategic agenda. The point is not necessarily to have fewer strategies or goals. Instead, the goal is to learn to see redundancies, or initiatives that are not useful in moving the organization forward.

SUGGESTED WORKSHOP : DEVELOPING "SIGNALS"

Signals are sometimes referred to as "leading indicators" or "signposts". Signals are the events in a given scenario that may indicate its story is beginning to unfold. In other words, they are signals -- things to pay attention to that could indicate the future is beginning to happen as it is described in one of the scenarios. Developing signals is a highly undervalued part of the scenario planning system. It is worth spending time thinking about the things that will indicate major shifts in the external environment. Using the same workshop format in the above example, the team should spend a few hours going over each scenario and identifying the events that can be viewed as triggers of larger change tendencies.

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SUMMARY AND CONCLUSION

This document has sought to provide a practical introduction to scenario planning. The major features of scenario planning have been described with the intention of clarifying how scenario planning works, and what can be expected. For more information and to explore consulting engagement options, please contact me directly at:

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