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# SCENARIO PLANNING IN ORGANIZATIONS

HOW TO CREATE, USE, AND  
ASSESS SCENARIOS

An Excerpt From

*Scenario Planning in Organizations:  
How to Create, Use, and Assess Scenarios*

by Thomas J. Chermack  
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# Preface

THE FUTURE OFTEN ACTS like a drunken monkey stung by a bee—it is confused and disturbing, and its behavior is completely unpredictable. Organization leaders are struggling with an uncertain and fast-changing environment. Many are frustrated by the promise of tools for managing the future that come up short. A variety of terms has been used to describe the environment, such as *whitewater*, *the rapids*, *VUCA* (volatile, uncertain, complex, and ambiguous), and *turbulent*. These terms all emphasize that business decision making is an activity that has reached high levels of frustration and confusion. Signs point to increasing complexity and uncertainty. This means choosing among options will become even more challenging, and carving a path into the future will require more diligent use of better tools.

Traditional approaches to business planning have had their day. Linear approaches to strategic planning worked in the 1950s and 1960s because the environment was relatively stable. Linear approaches only lead to disappointment in today's environment because they cannot account for uncertainty—they assume that the environment of tomorrow will be the same as today's. Scenario planning is a revolutionary alternative to traditional strategic planning because it recognizes the unpredictable nature of the future. Early scenario planners helped organization leaders see that the future was not going to consist of historic trends, projected forward. Instead, recognizing their problematic assumptions of a stable environment, decision makers found a way to think about alternatives in scenario planning. Scenario planning makes uncertainty a part of the plan. Many companies have been able to avoid major strategic losses due to the alternative way of thinking found in scenario planning.

The most valuable advantage of creating and using scenarios is the recognition that uncertainty is a basic feature of organizational environments. By accepting the reality of uncertainty—and making it a part of how planning happens—decision makers can widen the scope of what is assumed

to be true about what the future might hold. A more open view of what is possible allows decision makers to be more prepared and adjust with minimal delay and disruption. An expanded view of the terrain is developed by changing perceptions among key people in organizations. A primary outcome of scenario planning is to shift perceptions. Scenario planning is a tool for helping decision makers re-perceive the potential future in alternative ways. Having these alternative ways of seeing helps decision makers avoid surprises and prepare for a variety of plausible futures.

Over the last thirty years, scenario planning has been used in a variety of contexts and organizations (Ogilvy, 1995, 2002; Ogilvy & Schwartz, 2000). For example, scenarios have been employed with great success in anticipating the oil shocks in the 1970s, potential outcomes of Hurricane Katrina, the events of September 11, 2001, and developing responses to bridge collapses and other emergencies. Certainly, each of these events had numerous management issues, and some were more effectively directed than others. In each case, scenarios were developed that told stories quite similar to how reality unfolded (D'arcy, O'Hanlon, Orszag, Shapiro, & Steinberg, 2006; Hoffman, 2002; Lynch, 2005). Although there are many anecdotes of scenario use, few have rigorously studied scenario planning, and the process has been modified and changed as needed. As a result, scenario planning means different things to different people, and the reported approaches are incomplete.

The purpose of this book is to provide a complete approach to scenario planning that includes key pieces missing from existing literature. These missing pieces are the theoretical foundations of scenario planning, a detailed guide to using scenarios once they have been developed, and a structure for assessing the impact of scenario projects. The theoretical foundations of scenario planning are important for understanding how scenario planning works. Such an understanding is critical for anyone serious about using scenario planning to steer an organization into the future. Precisely how to use scenarios is not well covered in the literature, either. This book provides detailed suggestions for putting scenarios into practice and using them to support organizational change. Finally, not a single text on the topic deals with how to assess the impact of scenario projects. This book provides a clear, concise guide to assessing the benefits of scenario planning in organizations. These three contributions make a complete scenario planning system that is the focus of this book.

## AUDIENCES

This book is for thoughtful people trying to move their organizations forward—leaders, managers, decision makers, practitioners, consultants, and executives. This book provides the tools for facilitating scenario planning in organizations and is therefore a guide. This book is also a text for university courses focused on organization and business planning. Although this suggestion may indicate two separate audiences, I argue that they are one and the same. Students in business planning courses are usually also managers, decision makers, practitioners, consultants, or executives. Again, these are people struggling to move their organizations forward amid a great deal of chaos and uncertainty.

## STRUCTURE OF THE BOOK

This book features three parts: (1) Foundations of Scenario Planning, (2) Phases of the Performance-Based Scenario System, and (3) Leading Scenario Projects.

Part One is focused on the foundations of scenario planning. These chapters review scenario planning, its history, development, and influential figures. Performance-based scenario planning—the contribution of this book—is described and explained. Chapter 1 describes the development and evolution of scenario planning. Key definitions, outcomes, and major approaches are reviewed. Chapter 2 is a synthesis of the theoretical foundations of scenario planning, and is a comprehensive review of the major content disciplines that inform the practice of scenario planning. Chapter 3 situates scenario planning in the organization system, and Chapter 4 presents a case study. Part One provides a sense of the context in which scenario planning was developed as a strategic tool, as well as an understanding of the position of scenario planning inside organizations.

Part Two presents the phases of the scenario system. These are Chapters 5 through 9, covering the major phases of scenario planning: (1) project preparation, (2) scenario exploration, (3) scenario development, (4) scenario implementation, and (5) project assessment. These are the chapters that become a guide for using the scenario system. Detailed examples are provided, and the core case study that is presented in Chapter 4 is expanded further in each subsequent chapter. The examples illustrate key outcomes of each phase.

Part Three presents tips for managing and leading scenario projects. Chapter 10 describes several pitfalls in scenario planning and how they can be avoided or overcome. Chapter 11 summarizes some cutting-edge neurology research and how it relates to cognitive activity and human perceptions in the scenario process. Finally, Chapter 12 offers suggestions for getting started on your own scenario projects, followed by a summary of the book.

## MY OWN FASCINATION WITH SCENARIO PLANNING

What continues to fascinate me about scenario planning is its potential application to almost any context, problem, issue, or situation, and its evolving nature. There are many nuances throughout the facilitation of scenario projects. As a result, there are always opportunities for improving scenario planning and finding ways to increase its effectiveness. For timely examples, Noah Raford is studying how to maintain dialogue over electronic media such as Twitter, Facebook, and other Web 2.0 technologies in scenario planning (see <http://news.noahraford.com/?p=129>). Others are working on how scenario planning is used in nonprofit organizations, communities, and nations. As the world's problems evolve in their complexity, there is only increasing utility for scenario planning.

Scenario planning is a decision-making tool that can be used to explore and understand a variety of issues in a variety of organizations and issues. For example, scenarios can be used to consider the future of global climate change, global water supply, natural resources, as well as business and community decisions (such as in the Mont Fleur scenarios that explored the end of apartheid in South Africa). These are all issues that involve complex dynamics including diverse sets of stakeholders and varying knowledge bases, and they are likely to require interdisciplinary collaboration to address. Any situation in which a group of people is trying to work out how to create aligned movement toward a common goal can consider scenario planning a potentially useful tool.

Human perceptions in scenario planning are another fascinating topic for me. As I continue to witness strategic insights among participants in scenario projects, I wonder why some participants have them and some don't. What are the characteristics of individuals that lend them to thinking deeply about problems? What are the characteristics of scenarios that help



people open up their thinking? These questions pose challenges to what is known about scenario planning and how to maximize its impact. Neuroscience research is getting close to helping us understand how the brain learns and what happens physiologically during these strategic insights, but there is still a long way to go.

A lot about scenario planning remains unknown. Each scenario project I work on reveals more about how to do it better next time. This book introduces scenario planning and its foundations, explains how to do it, and describes how to tell whether it produces benefits. This is a book for people who want to improve the way their organizations prepare for the future. Readers are encouraged to access the latest research on scenarios from my website ([www.thomaschermack.com](http://www.thomaschermack.com)) and to e-mail me reports of their experiences. I have also recently established the Scenario Planning Institute at Colorado State University, and readers who want to get more involved can engage at [www.scenarioplanning.colostate.edu](http://www.scenarioplanning.colostate.edu).

Finally, scenario planning is a lot of fun! Scenario planning is a blend of creative and analytical activities. There's nothing like arranging complex variables into stories that make sense, are rigorously researched, and can move an audience. Seeing the moment when new understanding comes together for a participant is exciting and rewarding. Indeed, helping people think in new and interesting ways has immediate impact that can be applied in a variety of situations. Wack (1984) may have put it best when he wrote, "In our times of rapid change and discontinuity, crises of perception—the inability to see a novel reality emerging by being locked inside obsolete assumptions—have become the main cause of strategic failures" (p. 95). Scenario planning is a way to avoid such crises of perception by learning how to see the environment differently and perhaps a little more completely.

## ACKNOWLEDGMENTS

Some people say that writing a book is an inherently personal endeavor. Mine has been a humbling experience. This book is the result of thousands of interactions, conversations, scholarly debates, e-mails, and other exchanges with a variety of people over the last ten years. So, while it has been a personal experience, I could not have written this book by myself.

Richard A. Swanson's name should appear as the second author of this book. I offered it to him, but he would not accept it. He read, critiqued,

edited, moved, improved, shifted, guided, and reviewed every word on these pages. His contributions made the final product much more useful than it would have been without his generosity. Thanks are not enough to cover my appreciation for his direction and guidance, but it is all I can do in this preface. Thank you, Dick.

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# FOUNDATIONS OF SCENARIO PLANNING

## CHAPTERS

- 1** Introduction to Performance-Based Scenario Planning
- 2** Theoretical Foundations of Scenario Planning
- 3** The Performance-Based Scenario System
- 4** Scenario Case Study

IF WE LOOK BACK over the history of planning in organizations, we can see a fundamental illusion that is beginning to come to light. The illusion is that planning can function like a machine, that the steps of organizational planning need only be carried out. The basis of that illusion is an assumption that things more or less stay the same. Today, our rhetoric would indicate we have realized our erroneous assumption, but actions indicate otherwise. The world is changing faster than ever, yet many planners and decision makers behave in opposition to what they know is true about the world—they seek the answer, as if there is only one correct answer and their job is to find it.

A key premise of this book is that things are ever-changing. Planning therefore needs to take a different approach, one that assumes tomorrow's world will be fundamentally different from today's. Scenario planning explores a variety of outcomes, a variety of potential answers, and uses them to create awareness and readiness. The hardest part of scenario planning is

recognizing our desperate clinging to a single answer and consciously shifting toward an open future of vast potential—both positive and negative. This book asks its readers to take a journey. To interact with their environment. To ask difficult questions that lead to more difficult questions. To become comfortable with ambiguity.

Part One consists of Chapters 1 through 4. These chapters provide a working knowledge of scenario planning.

Chapter 1, “Introduction to Performance-Based Scenario Planning,” establishes the nature of the business environment, describes why traditional approaches to strategy are no longer effective, and lays out the development of scenario planning as a major evolution in planning under uncertain conditions. This is an extensive chapter that provides a comprehensive background of the need for scenario planning, and the critical breakdowns of existing approaches to scenario planning. Unlike existing approaches, performance-based scenario planning provokes conversations about expectations, delivers a variety of options for putting scenarios to use, and makes assessment a required part of the project.

Chapter 2, “Theoretical Foundations of Performance-Based Scenario Planning,” presents the major disciplines that form the theoretical basis for scenario planning. This chapter examines the connections between scenario planning and learning theory, mental model theory, decision-making theory, and performance improvement theory, among others. This chapter is a comprehensive treatment of the knowledge required for effective scenario planning. While not required for immediate application, this chapter reveals many nuances about what scenario planning is and how it works.

Chapter 3, “The Performance-Based Scenario System,” situates scenario planning within the organization. Drawing on system theory concepts, this chapter generally outlines the position of scenario planning as a subsystem in organizations. This chapter also presents the performance-based scenario system, which is the focus of Part Two.

Finally, Chapter 4, the “Scenario Case Study,” presents a short description of a real organization (disguised for the purposes of confidentiality). The case illustrates the phases of the performance-based scenario system described throughout Part Two.

# Introduction to Performance-Based Scenario Planning

**T**his book describes a method for including the realities of uncertainty in the planning process. Uncertainty and ambiguity are basic structural features of today's business environment. They can best be managed by including them in planning activities as standard features that must be considered in any significant decision.

This book focuses on avoiding crises of perception. Scenario planning is a tool for surfacing assumptions so that changes can be made in how decision makers see the environment. It is also a tool for changing and improving the quality of people's perceptions. Uncertainty is not a new problem, but the degree of uncertainty and the effects of unanticipated outcomes are unprecedented. Learning how to see a situation—complete with its uncertainties—is an important ability in today's world.

This chapter presents some of the challenges posed by today's fast-changing environment. A tool for dealing with those challenges has traditionally been strategic planning. Basic approaches to strategic planning are described; however, the rate and depth of change have increased over time to the point that those methods are no longer useful. Scenario planning emerged as an effective solution in the 1970s, and the ensuing history of scenario planning is discussed here. This chapter also describes a variety of major approaches to scenario planning, including their shortcomings. The fundamental problem with existing approaches to scenario planning is that they are not performance based. Evidence of this critical oversight is presented by reviewing the definitions and outcomes of scenario planning as

they are described by major scenario planning authors. The outcomes they promote are generally vague and unclear. Finally, this chapter introduces performance-based scenario planning—which is the contribution of this book.

## DILEMMAS

Some authors prefer to use the term *dilemma* instead of *problem* because the term *problem* can imply that there is a single solution (Cascio, 2009; Johansen, 2008). Most often, strategic decision making involves ambiguity and a realization that numerous solutions are possible. Each usually comes with its own caveats and difficult elements that must be considered. Hampden-Turner (1990) saw dilemmas as a dialectic and used the description “horns of the dilemma” to describe this way of observing specific dynamics in the environment. This way of describing complex dynamics takes a first step into looking for underlying systemic structure.

This book focuses on *complex problems or dilemmas with unknown solutions*. Therefore, its intent is to develop the understanding and expertise required to explore difficult, ambiguous problems and consider a variety of solutions in a wildly unpredictable and turbulent environment. Because there are no clear answers to questions of strategy and uncertainty, decision makers are compelled to do the best they can. These types of problems are the most complex, most ambiguous, and often the most deeply rooted. Experienced scenario planning practitioners have demonstrated their capacity to detect blind spots, avoid surprises, and increase the capacity to adjust when needed. Most important, modern-day dilemmas take place in an environment the likes of which we have never seen before.

## THE ENVIRONMENT

Organizations operate in environmental contexts. These contexts include and are shaped by social, technological, economic, environmental, and political forces. The external environment has received much attention in literature from a variety of disciplines. Emery and Trist published a seminal work on the importance of the external environment in 1965. They suggested a four-step typology of the “causal texture” of the external environment:

Step 1—a placid, randomized environment

Step 2—a placid, clustered environment

Step 3—a disturbed, reactive environment

Step 4—a turbulent field

Few would disagree that most contemporary organizations are heavily steeped in turbulent fields. *Turbulent fields* are worlds in which dynamic processes create significant variance. These turbulent fields embody a serious rise in uncertainty, and the consequences of actions therein become increasingly unpredictable (Emery & Trist, 1965). These four different types of environments have existed over time, but today we are dealing with turbulent fields beyond the original conceptualization.

Reminding readers of Emery and Trist's classification, Ramirez, Selsky, and van der Heijden (2008) use the ideas of turbulence and complexity to frame their edited book *Business Planning for Turbulent Times*. They make their case that turbulence and environmental complexity are undeniable features of the business environment by citing research showing significant increases in published material focused on turbulence and uncertainty. It could be argued that these descriptors are more relevant today than they were in 1965.

Another description of the external environment uses the terms *volatility*, *uncertainty*, *complexity*, and *ambiguity* for the acronym VUCA (Johansen, 2007). VUCA originated at the U.S. Army War College, which has since become known as VUCA University. Indeed, the elements of volatility, uncertainty, complexity and ambiguity are undeniably present in the operating environment of any organization—the only question is the degree to which each element may be in play.

These external environment elements have equal and opposite forces that must be understood and emphasized. For example, to overcome volatility, one must use *vision*; to address uncertainty, one must develop *understanding*; complexity yields to *clarity*; and ambiguity can be addressed with *agility*. Each of these solutions is based on an open-ended, continuous learning orientation (Johansen, 2007).

The general societal environment and organizations within it continue to evolve to new heights of complexity, turbulence, volatility, uncertainty, and ambiguity. The rate of change is not likely to slow, and most decision makers are simply trying to keep up. Timelines for strategic thinking are short. Organizations operating on a minimum of resources will find that eventually something must be given up. For many, the time to think strategically is sacrificed. Logically, this reaction is just the opposite of what is

required if decision makers are to have any chance at navigating a chaotic environment that is challenging them.

## A BRIEF EVOLUTION OF STRATEGIC PLANNING

Military planning has long concentrated on strategy principles dating back to early Chinese philosophers such as Sun Tzu and Japanese philosophers such as Miyamoto Musashi, as well as ancient scholars like Niccolò Machiavelli. These early opinions about battle positioning have heavily influenced modern thinking about strategy (Cleary, 1988; Greene, 1998). Through several world and national wars, the notion of planning for strategic warfare positioning has evolved dramatically (Frentzell, Bryson, & Crosby, 2000). While the history of military planning is extensive and has evolved in many ways completely on its own, military strategy has borrowed and contributed concepts from and to corporate planning over the years (Frentzel et al., 2000).

Alfred Sloan advanced corporate planning practices at General Motors in the 1930s. The concept of planning as a central organizational activity was further advanced by Igor Ansoff and Alfred Chandler. These strategy thinkers spent their time in the 1950s and 1960s trying to convince managers that their companies needed strategies. During this period, frequent links and parallels were drawn with military strategy and the events of the era. Economic forecasting was the key tool in the strategist's arsenal of weapons for blasting a path to the desired future. This approach to planning continued through the 1960s and generally involved three phases—namely, defining the desired future, creating the plan (or steps to achieve the desired future), and then implementing the plan (Micklethwait & Woolridge, 1996). These phases also denoted the initial division between strategy formation and implementation, with the formation being a process reserved for senior executives and the CEO, and implementation being the job of managers. Strategic planning became increasingly complex over the next decade with the introduction of several levels of planning. A notable contribution of this time period was the Boston Consulting Group's Growth Share Matrix. The matrix was intended to indicate a general strategy to executives and managers based on templates of opportunities and strategies in any industry.

In response to the demands of World War II, planning became a top priority for most industries. The military also heightened its connection to



the research coming out of the RAND Corporation that was headed by Herman Kahn (Kahn & Weiner, 1967; Ringland, 1998). The developments in Kahn's "future-now thinking" quickly translated into military efforts to predict the future (Kahn & Weiner, 1967), and military planning groups added physicists and mathematicians specializing in modeling (Ringland, 1998). Although much of the planning strategies used by the military were classified, it seems clear that the thinking going on in Stanford Research Institute's Futures Group, and that of Herman Kahn himself at the Hudson Institute, provoked what became more widely known as simulations, or events that positioned participants in hypothetical situations.

Later, Forrester's (1961) work at the Massachusetts Institute of Technology also contributed greatly to the development of simulations, and his expertise was sought for military operations on several occasions. One of the applications of Forrester's systems dynamics modeling was to uncover counter-intuitive possibilities in the future. The essence of the Forrester systems dynamics models is to develop the underlying causal relationships that drive a specific dynamic. Through a process of identifying and modeling the size of stocks and the strength of flows, complex dynamics could be captured. These models also enabled an evidence-based argument about how specific dynamics might unfold in the future.

Military groups began using simulations to allow individuals to experience situations without the implications of their actions in those situations translating into reality (Frentzel et al., 2000). The emphasis on war games, the advent of computer modeling, and other technology produced by the military and industry in the 1950s and 1960s have led to elaborate training strategies involving virtual reality and devices such as flight simulators. Military planning has incorporated some of the early scenario planning concepts, but the core point of differentiation has been a lasting focus on prediction in military planning (Frentzel et al., 2000).

Michael Porter's work on business strategy took a cue from some of the military planning concepts and applied them to business organizations. His work concentrated on the idea that there can be both unique solutions to strategic problems and general solutions that may be examined for relevance to any strategic situation (Porter, 1985). Porter's work then shifted to the idea of competitive advantage and that, indeed, generic paths for achieving competitive advantage are freely available to any corporation and its planning analysts (Porter, 1985). Porter also stressed the idea that organizations

should think of themselves as value chains of separate activities. Planning took a serious turn to focus on analysis until Japanese companies were performing as anomalies in Porter's planning framework. Lengthy, formal, and involved approaches to planning came under tough scrutiny by overseas business leaders; eventually, even the Harvard Business School explored more simplified approaches to strategy.

The shift in thinking toward simplicity had an effect on most organizations. Many corporations riddled themselves of their planning departments as the concept of reengineering took center stage in the 1990s. Strategy consulting firms like McKinsey and the Boston Consulting Group shifted their expertise to reengineering to capture the rising demand. Planning practices in the 1990s and early 2000s became hybrids of everything from formalized annual retreats that attempted to re-create the days of planning, to simple strategies that could be communicated and rolled out to employees on business cards.

In light of the negative and devastating effects of many reengineering efforts, some companies have attempted to revive practices of strategic thinking in their organizations, and some companies have managed to hold onto their formal planning processes. The 1990s also brought about a concentration on developing strategic vision. Jim Collins, in his best-selling book *Good to Great* (2001), demonstrated how vision-led organizations are sustainably more profitable than others. He combined this point with a leadership theory called Level Five leadership that he described as a combination of fierce resolve and humility. This approach was thought to be the solution—somewhere between the bureaucratic formalized planning that was deemed a failure in the past and a strategy written on a cocktail napkin.

## PHILOSOPHICAL VIEWS ON STRATEGY

There are three overarching paradigms of strategy (van der Heijden, 1997, 2005b). These philosophies are critical to understanding the context in which planning takes place. Although it is tempting to “choose” one of these philosophies with which one finds alignment, it is important to realize that all three of these views are valid. To place scenario planning in context, we must consider the backgrounds of each of these views: rationalist, evolutionary, and processual.

## THE RATIONALIST SCHOOL

The rationalist school features a tacit and underlying assumption that there is indeed one best solution. The job of the strategist becomes one of producing that one best solution or the closest possible thing to it. Classic rationalists include Igor Ansoff, Alfred Chandler, Frederick Taylor, and Alfred Sloan (Micklethwait & Woolridge, 1996). The rationalist approach to strategy dictates that an elite few of the organization's top managers convene, approximately once each year, and formulate a strategic plan. Mintzberg (1990) lists other assumptions underlying the rationalist school:

- Predictability; no interference from outside
- Clear intentions
- Implementation follows formulation
- Full understanding throughout the organization
- The belief that reasonable people will do reasonable things

The majority of practitioners and available literature on strategy is of the rationalist perspective (van der Heijden, 1997, 2005b). Although it is becoming clear that this view is limited, and as the belief in one correct solution wanes, the rationalist perspective is still alive and well, and fully embedded in many organizational planning cycles.

## THE EVOLUTIONARY SCHOOL

With an emphasis on the complex nature of organizational behavior, the evolutionary school suggests that a winning strategy can only be articulated in retrospect (Mintzberg, 1990). Followers of this theory believe that systems can develop a memory of successful previous strategies. In this case, strategy is thought to be a “process of random experimentation and filtering out of the unsuccessful” (van der Heijden, 1997, p. 24). Organizations with strong cultures and identities often have trouble seriously thinking about alternative futures because the company brand is so influential.

The issue with this perspective is that it is of little value when considering alternative futures. This view can sometimes reduce organization members to characters of chance, influenced by random circumstances.

## THE PROCESSUAL SCHOOL

The processual school asserts that although it is not possible to deliver optimal strategies through rational thinking alone, organization members can

instill and create processes within organizations that make it a more adaptive, whole system, capable of learning from its mistakes (van der Heijden, 1997, 2000). Incorporating change management concepts to influence processes, the processual school supports that successful evolutionary behavior can be analyzed and used to create alternative futures. Van der Heijden (1997, 2000) offers the following examples of metaphors for explaining the three strategic schools:

- The rationalistic paradigm suggests a machine metaphor for the organization.
- The evolutionary school suggests an ecology.
- The processual school suggests a living organism.

Because van der Heijden views scenarios as a tool for organizational learning, he advocates the integration of these three strategic perspectives. “Organizational learning represents a way in which we can integrate these three perspectives, all three playing a key role in describing reality, and therefore demanding consideration” (van der Heijden, 1997, p. 49). It is widely accepted that effective scenario building incorporates all three of these perspectives (Georgantzas & Acar, 1995; Ringland, 1998; Schwartz, 1991).

## HISTORY OF SCENARIO PLANNING

Scenario planning is a participative approach to strategy that features diverse thinking and conversation. Diverse thinking and conversation are used to shift how the external environment is perceived (Selin, 2007; Wack, 1984, 1985a, 1985b). The intended outcomes of scenario planning include individual and team learning, integrated decision making, understanding of how the organization can achieve its goals amid chaos, and increased dialogue among organization members (Chermack 2004, 2005). These outcomes collectively prepare individuals and organizations for a variety of alternative futures. When used effectively, scenario planning functions as an organizational “radar,” scanning the environment for signals of potential discontinuities.

Scenario planning first emerged for application to businesses in a company set up for researching new forms of weapons technology in the RAND Corporation. Kahn (1967) of RAND pioneered a technique he titled “future-now thinking.” The intent of this approach was to combine detailed

analyses with imagination and produce reports as though people might write them in the future. Kahn adopted the name “scenario” when Hollywood determined the original term outdated and switched to the label “screenplay.” In the mid-1960s, Kahn founded the Hudson Institute, which specialized in writing stories about the future to help people consider the “unthinkable.” He gained the most notoriety around the idea that the best way to prevent nuclear war was to examine the possible consequences of nuclear war and widely publish the results (Kahn & Weiner, 1967).

Around the same time, the Stanford Research Institute (SRI) began offering long-range planning for businesses that considered political, economic, and research forces as primary drivers of business development. The work of organizations such as the SRI began shifting toward planning for massive societal changes (Ringland, 1998). When military spending increased to support the Vietnam War, an interest began to grow in finding ways to look into the future and plan for changes in society. These changing views were largely a result of the societal shifts of the time.

The Hudson Institute also began to seek corporate sponsors, which exposed companies such as Shell, Corning, IBM, and General Motors to this line of thinking. Kahn and Weiner (1967) then published *The Year 2000*, “which clearly demonstrates how one man’s thinking was driving a trend in corporate planning” (Ringland, 1998, p. 13). Ted Newland of Shell, one of the early corporate sponsors of scenario planning, encouraged Shell to start thinking about the future.

The SRI “futures group” was using a variety of methods in 1968–1969 to create scenarios for the U.S. education system reaching to the year 2000. Five scenarios were created; one entitled “Status Quo Extended” was selected as the official future (*official future* is a generic term to denote a desired future that has been “selected” by senior management). This scenario suggested that issues such as population growth, ecological destruction, and dissent would resolve themselves. The other scenarios were given little attention once the official future was selected. The official future reached the sponsors, staff at the U.S. Office of Education, at a time when President Richard Nixon’s administration was in full swing in 1969. The selected scenario was quickly deemed impossible because it was in no way compatible with the values that Nixon was advocating then (Ringland, 1998). The official future provided little insight into major issues of the time, and it failed to do more than present a report of present trends playing out into

the future as they were expected to. The SRI went on to do work for the Environmental Protection Agency, with Willis Harman, Peter Schwartz, Thomas Mandel, and Richard Carlson constructing the scenarios.

Earlier, Jay Forrester (1981) of MIT was using similar concepts to describe supply-and-demand chains. The use of scenario concepts in his project was specifically aimed at stirring up public debate rather than solving a dilemma or issue. In other words, he used scenarios as tools for entertaining multiple sides of an issue and exploring the various viewpoints. The results were published by Meadows, Meadows, and Randers in 1992.

Scenario planning at Shell was well on its way. Ted Newland suggested in 1967 that thinking six years ahead was not allowing enough lead time to effectively consider future forces in their industry (Wack, 1985a). Shell began planning for 2000. Newland was joined by Pierre Wack, Napier Collyns, and others. When the Yom Kippur War broke out in 1973 and oil prices rose sixfold, Shell was prepared. The ability to act quickly has been credited as the primary reason behind the company's lead in the oil industry over the years.

Shell's success with the scenario planning process encouraged numerous other organizations to begin thinking about the future in this different way. Because the oil shock was so devastating to views of a stable future, by the late 1970s the majority of the Fortune 100 corporations had adopted scenario planning in one form or another (Linneman & Klein, 1979, 1983; Ringland, 1998).

The success of scenario use was short-lived. Caused by the major recession and corporate staffing reductions of the 1980s, scenario use was on the decline. It is also speculated that planners oversimplified the use of scenarios, confusing the nature of storytelling with forecasting (Godet & Roubelat, 1996; Ringland, 1998; Sharpe, 2007; Wright, van der Heijden, Burt, Bradfield, & Cairns, 2008). According to Kleiner (1996, 2008), the time had come for managers to realize that they did not have the answers to the future. Porter (1985) led a "back to the basics" approach suggesting that corporations use external forces as a platform for planning. In this time of evaluating how planning happens, many consulting firms began developing scenario planning methodologies. Huss and Honton (1987) described three approaches of the time: (1) intuitive logics, introduced by Pierre Wack; (2) trend-impact analysis, the favorite of the Futures Group; and (3) cross-impact analysis, implemented by Battelle. Royal Dutch/Shell continued

to have success with scenario planning through two more oil incidents in the 1980s, and slowly, corporations cautiously began to reintegrate the application of scenarios in planning situations. Scenario planning has been adopted at a national level in some cases, and its methods have been successful in bringing diverse groups of people together (Kahane, 1992; van der Merwe, 1994). For example, scenarios were used to explore the potential transformation of South Africa at the end of apartheid (Kahane, 1992). Scenarios have also been used as tools for community building and dialogue (van der Merwe, 1994).

## **PUBLICATION ACTIVITY IN FUTURES AND SCENARIO PLANNING**

As the world has become more uncertain, the need and therefore the popularity of scenario planning have increased. Scenario planning has seen considerable growth as a topic of publication in academic journals since the mid-1990s (Ramirez et al., 2008). In addition, scenario planning as a specific strategic management tool has also seen a rise in use, according to Bain & Company's annual Management Tools Survey (Ramirez et al., 2008).

## **DEFINITIONS OF SCENARIO PLANNING**

Scenario planning is still a relatively young discipline, and many variations have been developed. The diversity of thought concerning scenario planning is an asset in that it has brought about a variety of interpretations about what scenario planning is. However, the use of a variety of methods mandates close and careful study to determine what is effective and what is not. Variety can also be found in the available definitions and stated outcomes of scenario planning. Figure 1.1 provides a list of definitions in the scenario planning literature.

## **OUTCOMES OF SCENARIO PLANNING**

Many of the definitions examined here do not explicitly state the outcome variables of scenario planning, which indicates that some authors may be unclear about the aims of their definitions. This also suggests that scenario planning professionals are just beginning to consider the importance of

FIGURE 1.1 Scenario Planning Definitions and Outcome Variables

Author	Date	Definition	Dependent Variables
Porter	1985	"An internally consistent view of what the future might turn out to be—not a forecast, but one possible future outcome" (p. 63)	A view of one possible future outcome
Schwartz	1991	"A tool for ordering one's perceptions about alternative future environments in which one's decisions might be played out" (p. 45)	Ordered perceptions about alternative future decision-making environments
Simpson	1992	"The process of constructing alternate futures of a business' external environment" (p. 10)	Constructed alternate futures
Bloom and Menefee	1994	"A description of a possible or probable future" (p. 223)	A described possible or probable future
Collyns	1994	"An imaginative leap into the future" (p. 275)	An imagined future
Thomas	1994	"Scenario planning is inherently a learning process that challenges the comfortable conventional wisdoms of the organization by focusing attention on how the future may be different from the present" (p. 6)	Challenged comfortable conventional wisdoms about the future
Schoemaker	1995	"A disciplined methodology for imagining possible futures in which organizational decisions may be played out" (p. 25)	Imagined possible decision-making futures
Van der Heijden	1997	(1) External scenarios are "internally consistent and challenging descriptions of possible futures"; (2) an internal scenario is "a causal line of argument, linking an action option with a goal," or "one path through a person's cognitive map" (p. 5)	Descriptions of possible futures; explicit cognitive maps
De Geus	1997	"Tools for foresight-discussions and documents whose purpose is not a prediction or a plan, but a change in the mind-set of the people who use them" (p. 46)	Changed mind-sets
Ringland	1998	"That part of strategic planning which relates to the tools and technologies for managing the uncertainties of the future" (p. 83)	Managed future uncertainties
Bawden	1998	"Scenario planning is one of a number of foresighting techniques used in the strategic development of organizations, which exploit the remarkable capacity of humans to both imagine and to learn from what is imagined"	Human imagination and learning made explicit

*(continued)*



FIGURE 1.1 Scenario Planning Definitions and Outcome Variables (*continued*)

Author	Date	Definition	Dependent Variables
Fahey and Randall	1998	"Scenarios are descriptive narratives of plausible alternative projections of a specific part of the future" (p. 6)	Plausible alternative projections of a specific part of the future
Alexander and Serfass	1998	"Scenario planning is an effective futuring tool that enables planners to examine what is likely and what is unlikely to happen, knowing well that unlikely elements in an organization are those that can determine its relative success" (p. 35)	Examined future likelihoods and unlikelys
Tucker	1999	"Creating stories of equally plausible futures and planning as though any one could move forward" (p. 70)	Stories of equally plausible futures that inform planning
Kahane	1999	"A series of imaginative but plausible and well-focused stories of the future" (p. 511)	Plausible stories of the future
Kloss	1999	"Scenarios are literally stories about the future that are plausible and based on analysis of the interaction of a number of environmental variables" (p. 73)	Informed, plausible stories about the future
Wilson	2000	"Scenarios are a management tool used to improve the quality of executive decision making and help executives make better, more resilient strategic decisions" (p. 24)	Improved executive strategic decision making
Godet	2001	"A scenario is simply a means to represent a future reality in order to shed light on current action in view of possible and desirable futures" (p. 63)	A represented future reality

defining what they do and explicitly stating what they intend to achieve by doing it.

Figure 1.1 shows that almost half of the available definitions date from 1997 to the present. Such a surge of publication activity related to scenario planning suggests a recent increased use of this strategic tool. Of interest is that the first available definition of scenario planning is offered in 1985, yet the process has been applied in practice since the 1960s. The increase in recent scholarly literature around scenario planning suggests that the process is developing and maturing with the help of professionals concerned

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