

**: Strategic Planning at UPS.**

1. How does UPS' approach to strategic planning (including the use of scenario planning, development of the Charter, the Centennial Plan, and the Strategy Road Map) compare to the framework for strategic planning outlined in our March 16 class session and associated readings?

Note: Do not focus your answer to this question on details of scenario planning. Look at the whole of UPS' strategic planning process, of which scenario planning is one part. The remaining questions will ask for detail on scenarios.

2. What are the strengths and weaknesses of scenario planning (base your answer on the assigned readings: Ramirez; Wilkinson; and "A Note on Scenario Planning").
3. Evaluate UPS' scenario planning exercises (1997 and 2004).
  - a. Why did UPS conduct scenario plans (what were they trying to accomplish)? Given their goal, was scenario planning the right approach?
  - b. What were the similarities and differences between the two processes?
  - c. How do the processes compare to best practices from the assigned readings?
  - d. Did the scenario plans provide a useful output?



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## Strategic Planning at United Parcel Service

*We fully recognize that it is not possible to develop a true strategic plan more than a few years out and that business plans should have an even shorter horizon. But we are convinced that it is possible and wise, indeed necessary, to develop a set of very long-range scenarios that can form the foundation for our future strategic plans.*

—Michael (Mike) J. Eskew, Chairman and  
Chief Executive Officer, United Parcel Service (UPS)

As Mike Eskew walked through the long, open atrium of UPS's corporate headquarters late in March 2005, he thought about his upcoming lunch meeting with Vice President of Corporate Strategy Vern Higberg. Higberg was preparing a presentation for the senior management strategy committee, the Strategy Advisory Group, on improvements to the strategic-planning process. While the company had made major progress in planning for the future over the past 10 years, Eskew had charged Higberg and his colleagues with developing recommendations for moving forward, citing one of his predecessors, who had said, "The future of our company will be no better or worse than the quality of planning we do to prepare for it."

### Company Background

#### *History*

In 1907, 19-year-old Jim Casey borrowed \$100 from friends to start the small company that eventually became UPS. From its humble origins delivering messages for the city of Seattle, Washington, UPS had grown into a \$37 billion corporation (see Exhibit 1 for financial performance). Over the 98 years since its founding, it had transformed itself several times, first into a package-delivery company, then into an international air transportation company, and finally, in the late 1990s, into a logistics company. In November 1999, after 92 years as a private company, UPS went public in the largest corporate initial public offering (IPO) to date.

By 2005, UPS was the world's largest package-delivery company, as well as a leading global provider of specialized transportation and logistics services. It served more than 200 countries and territories worldwide. UPS Airlines, as of 2005, was one of the 10 largest airlines in the United States.

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Professor David A. Garvin and Senior Researcher Lynne C. Levesque prepared this case. HBS cases are developed solely as the basis for class discussion. Cases are not intended to serve as endorsements, sources of primary data, or illustrations of effective or ineffective management.

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The acquisition of Mail Boxes Etc.<sup>®</sup> had provided the company with over 3,500 retail locations in the United States. With a workforce of 384,000, only Wal-Mart and McDonald's had more employees.

### Organization

In 2002, when Mike Eskew, an industrial engineer and 30-year veteran at UPS, became the company's ninth CEO, he found a highly centralized, hierarchical organization with a traditional structure at the top. A Management Committee met weekly, with a full-day meeting once a month, to provide the day-to-day management of the company. Various other committees and staff groups assisted the CEO and Management Committee, including a Strategy Advisory Group—a subgroup of the Management Committee—that met monthly to address more strategic issues (see Exhibit 2 for an organization chart).

Within this structure, the responsibilities of corporate staff and field operations in the regions were clearly delineated. Senior management and staff, working in a collegial, consensus-building culture at corporate headquarters, set direction, determined priorities and budgets, and defined initiatives and rollout plans. The more hierarchically run field was responsible for execution and meeting revenue and cost goals. The Corporate Strategy Group's (CSG's) strategic-planning manager, Ed Rogers, explained: "All strategic decisions are made by the corporate office. UPS does tactical, rather than strategic, planning at the regional level. There is a clear line between strategy and execution, since the regions focus on delivering on the next quarter's business. They also have rollout responsibility." Said one observer, "One side of me says it would be nice to have more autonomy in the regions, but we're in a network business, and what's best for one region could easily foul things up for other regions or the overall network."

### Culture

Over the years, the company had acquired a reputation for being relentlessly focused on efficiency and execution. Founder Casey instilled a desire to run the company "like a military operation, ordering recruits to be polite at all times and to place speed above all other virtues."<sup>1</sup> Carefully researched work methods, developed by industrial engineers and rooted in time and motion studies, coupled with time-tested policies and procedures, led to UPS's reputation for low-cost and highly predictable customer service. UPS reportedly tracked its drivers so closely that it even knew how many times they shifted gears in the course of a day.<sup>2</sup>

Along with efficiency and discipline, Casey had left a legacy of continuous improvement, which he called "constructive dissatisfaction," and a set of strong values that included service excellence, employee ownership, and a commitment to stability for the company's employees, shareholders, and customers. The result was a loyal workforce, with extremely low turnover. It was not uncommon for employees to spend their entire working career at UPS. Internal promotion was standard practice. All of the company's CEOs were long-term employees who had risen through the ranks along with their peers. Most senior managers had business or engineering degrees yet had started their careers at UPS as part-time package-handling employees or package-delivery drivers.

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<sup>1</sup> Charles Haddad and Jack Ewing, "Ground Wars: UPS's rapid ascent leaves FedEx scrambling," *BusinessWeek*, May 21, 2001.

<sup>2</sup> Neil A. Martin, "A New Ground War: The package-delivery business is turning brutal, hurting both FedEx and UPS," *Barron's*, April 21, 2003.

## Evolution of Strategic Planning at UPS

### *Early Years*

Through its growth years from 1907 to 1997, UPS had shifted from message delivery to package delivery as opportunities arose (see Exhibit 3 for a timeline of key dates). Until the early 1990s, there was no formal strategic-planning process. Instead, strategy was the responsibility of a small group of senior managers and involved little more than a series of discrete, *ad hoc* projects. In the mid-1970s, one task force had recommended that UPS expand globally; its members had then been charged with opening up Canada and Germany. Roughly 10 years later, a second task force, soon named the Strategic Technology Group, was formed to identify major gaps in technology. It then became responsible for overseeing an \$11 billion investment in technology and was later reintegrated into the technology and engineering groups. In 1991, then CEO Oz Nelson and his senior managers introduced a corporate mission and strategy statement that codified the values of the founder and refocused the company on the four constituencies it intended to serve: customers, UPS people, shareowners, and communities.

### *The Decade of the 1990s*

In the early 1990s, competition from both private companies (e.g., Federal Express) and large government-supported agencies (e.g., Deutsche Post) started to threaten UPS's position. Senior leaders became concerned that the company's execution mentality was hindering management's ability to see significant changes in the environment.

In 1996, Jim Kelly, the soon-to-be CEO, began to address these challenges. He set up the Strategy Advisory Group, a small subset of his direct reports, to meet monthly for half a day to consider and debate strategic issues. Kelly also established the CSG, a staff organization of 20 people, most of them tenured UPS managers with significant line and staff experience. He expected the CSG to develop the strategic processes for planning for the future, to research and frame key strategic issues, and to assist the Management Committee and the Strategy Advisory Group in strategy development.

After surveying consultant offerings, the CSG decided to design its own strategic process. The process that ensued was actually a series of discrete activities, some linked more closely than others, involving a relatively small group of managers at headquarters. Activities included scenario planning, strategic planning, and support for strategic decision making and strategy implementation. Higberg described the process as "not the most nimble, since it uses multiple tools and methodologies. But so long as we have the backing at the top, we can use any approach it takes to make it work." The CEO played a central role. In fact, Higberg observed, "At UPS, strategy is owned by our chairman. We exist to support him and work at his direction. He is our chief strategist."

The implementation of the new strategic process involved several steps that unfolded over a period of years. An important first step was a scenario-planning session held in 1997. Two years later, in 1999, senior management completed a crucial second step when they drafted the UPS Charter, redefining UPS's mission and purpose and providing a detailed statement of the company's values and strategies. The new mission and purpose moved UPS from "leadership in package distribution" to "enabler of global commerce" (see Exhibit 4 for the UPS Charter).

### *Into the New Century*

In January 2002, shortly after Eskew became CEO, he convened a Management Committee executive retreat whose purpose was “to focus the group on the kind of company we were going to be in 2007—on our 100<sup>th</sup> anniversary.” The outcomes from that meeting formed the “Centennial Plan,” the third step in the strategic process. As UPS’s version of a five-year strategic plan, the Centennial Plan was designed to guide the company to its centennial anniversary by providing themes and broad, overarching direction. Shortly thereafter, the fourth step in the strategic process, a “Strategy Road Map,” was developed to take the Centennial Plan to an executable level of detail. Since the Centennial Plan was segmented by years, an annual plan could be separated out and translated into regional business plans that were handed down to the regions to execute.

With these steps completed, Eskew, in early 2004, decided that it was time for another scenario-planning session. He was concerned that UPS was getting closer to 2007—the end of the first scenario-planning session horizon—and believed that management needed to be thinking further out. As he put it, “I felt comfortable that we understood the strategy and had initiatives to carry us through the next five years, but I didn’t know what came after that.” Shortly after the scenario-planning exercise was completed, the Management Committee met in early 2005 to revisit and update the Strategy Road Map.

### **1997 Scenario Planning<sup>3</sup>**

To address the distinctive UPS challenge, described by one manager as “less a struggle with execution and getting things done than with coming up with creative ideas about what to do,” senior management in 1997 reviewed alternative long-range planning approaches. They ultimately chose to bring in consultants from Global Business Network to facilitate a set of scenario-planning workshops. These workshops were preceded by a series of interviews inside and outside UPS that led to the definition of the key focal issue facing UPS: “The future of UPS’s global business in an ever-changing competitive environment.” Working through the various stages of the process, the participants created four different scenarios that could impact UPS’s future.

**Axes of uncertainty** Participants, primarily UPS managers representing different functions and generally reporting to a Management Committee member, went through several hours of discussion over driving forces and critical uncertainties. They eventually defined two axes of uncertainty. The horizontal axis was the “Market Environment,” or the flow of goods and funds across borders, a continuum that ranged from regional and national markets with trade barriers to a more global market with a free flow of goods. The vertical axis was “Demand Characteristics,” or the nature of consumers and the type of goods and delivery mechanisms they required. This continuum went from traditional consumers, requesting more traditional goods and services, to proactive, sophisticated consumers (which UPS called “prosumers”), demanding high value-added services and active engagement in supply-chain activities.

**Scenarios** In combination, these two axes produced four scenarios (see Exhibit 5 for 1997 scenarios). The first scenario, “Tangled Paths,” depicted a future with a highly competitive business marketplace, constrained by strong regional and nationalistic government regulations, where consumers desired more variation in products. The second scenario, representing the “Regressive World,” described a future similarly constrained by regional and nationalistic government

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<sup>3</sup> See “A Note on Scenario Planning,” HBS Case No. 306-003, for a more detailed description of the methodology and associated process.

regulations but with a more traditional supply chain, competitive landscape, and set of consumers. The third scenario, "Global Scale Prevails," portrayed a global marketplace with slower adoption of new technology because of stable demand, more traditional consumers, and industry consolidation. Finally, the last scenario, named "Brave New World," described a future with a deregulated, globalized marketplace, providing mass customization of goods and services to proactive consumers and populated with new forms of competition and virtual organizations, such as alliances and business webs.

The teams went on to outline specific characteristics of each of the scenarios, to position UPS and its competitors within the scenarios, and to identify implications and possible strategies for the company's logistics business, technology and government affairs efforts, brand, workforce, and culture (see Exhibit 6 for 1997 scenario implications and strategies). No early warning signals were defined in 1997. Instead of creating narratives to describe the scenarios, the teams decided to use an outside media company to prepare dramatic presentations with sets constructed to illustrate each scenario so that senior management could "experience" the scenarios. Actors were hired to improvise events in the future scenarios, and videotapes were produced to describe the alternative futures.

### *Outcomes*

The sessions produced several outcomes—both tangible and intangible. They included the eventual definition of the Corporate Charter and change in the company's mission statement, identification of key themes and insights, the creation of a platform for management discussions, and a mind-set shift for at least some managers.

**Corporate charter** The insights from these sessions and the discussions they sparked resulted in the eventual definition, in 1999, of the UPS Charter, which guided the company until 2002. The Charter incorporated the change in the company's purpose from "serving the package-delivery needs of our customers" to "enabling global commerce," a move that reflected both the more global nature of the business as well as its intended focus on end-to-end supply-chain solutions. It also included detailed strategy statements. According to Eskew, "The Charter served as a springboard for a series of events, starting with the decision to go public in November 1999, and then for the company's five-year strategic plan."

**Themes and strategic conversations** The scenario-planning sessions also led senior management to define several "themes" for UPS's future. These themes included (1) a proactive shift directly to the end consumer, eliminating usage barriers; (2) leveraging this end-consumer positioning to win additional business-to-business customers within the demand chain; (3) a focus on customer solutions that integrated goods movement and financial and information services; (4) identification of opportunities to be selectively captured across entire demand chains, with integrated solutions between companies; and (5) the maintenance of a global growth perspective.

The themes and the scenarios themselves provided a common vocabulary for discussions at Strategy Advisory Group meetings, as well as a guide for investigating growth opportunities and competitive strategies. Senior managers would pepper their discussions of acquisitions and other growth alternatives with phrases such as, "That seems like a 'Regressive World' option," or "That would move us more toward 'Global Scale' or 'Brave New World.'" They also developed a shorthand for referring to the scenarios. "Global Scale Prevails" was "asset heavy," whereas "Brave New World" was "asset light." Looking back on the process, Eskew commented on the influence of the scenario sessions on their thinking:

We came out of the first scenario-planning session understanding that it would be difficult to say which way the world would go. We all liked the top-right quadrant, the "Brave New World" scenario, and didn't like the top-left quadrant, or "Tangled Paths" scenario. Left to our own devices, we would probably have ended up in "Global Scale Prevails," focusing totally on physical assets and missing more virtual opportunities. We thought that we should try to move to "Brave New World," but we had no control over how the world was going to turn out. What impact would the Seattle protests at the World Trade Organization meeting have on the scenarios, for example? A few years later, we wondered about the impact of the terrorist attacks in New York.

**Mind-set shift** A more subtle impact was the change in mind-sets. As Rogers put it, "The session got us thinking far beyond the business-planning horizon." Higberg believed the sessions had a more subtle impact as well:

As much as anything else, the scenarios are a mind-set, a place where you're going to live, a context. If the world shifts, we're at least ready for some of the options ahead. If the competition does things differently, how do we respond? If there's a major disruption in the economy, what do we do? Out of the scenario-planning exercise, we got much richer outcomes than if we had only done competitive analyses, based on trend lines and a view of the world as all about just slugging it out for market share. Without scenario planning, you don't see the big changes until they are history.

However, other participants in the 1997 session were less positive. Some felt that the exercise lacked realism. One of them observed: "I don't think that way. I'm a marketing guy, not a process guy. I could see the four alternative quadrants, but for some of them, I just couldn't believe that they could happen."

### *Use of the Scenarios*

The scenarios provided, in Higberg's view, the backdrop for strategic decisions at UPS; there was no formal or mechanical link. The acquisition of Mail Boxes Etc.<sup>®</sup> provided an example of the subtle interplay of the scenarios with strategic choices. Coming out of the 1997 scenario-planning session, senior managers realized the importance of establishing a retail presence to serve more proactive consumers and had begun to pilot a company-owned and operated retail store concept. After considerable analysis of the business and financial aspects of the deal and as the wisdom of moving toward virtual assets in the "Brave New World" scenario became even more evident, UPS instead decided in 2001 to acquire Mail Boxes Etc.<sup>®</sup>, a franchised network of retail stores providing shipping and business services.

The evolution of the decision to build a service-parts logistics business also illustrated how strategic choices were made at UPS against the backdrop of the scenarios. After the first scenario-planning session and the change in purpose to "enabling global commerce," Eskew had asked the CSG to explore new opportunities. Strategy Advisory Group members could not agree on several proposals. Although they fit with the new purpose and at least two of the scenarios and met return on investment (ROI) and other key thresholds, they were felt to be too far from UPS's core capabilities. Finally, the CSG recommended that UPS scale up the small service-parts logistics business that had come with the 1995 acquisition of SonicAir. This business, which managed returns processing, spare-parts fulfillment, equipment refurbishment, and warranty repairs, appeared to fit with the expected support needs of the then rapidly growing technology business sector in the asset-light "Brave New World" scenario. After the dot-com crash, the CSG reanalyzed the market and determined that there continued to be significant unmet customer need for a single point of contact

for fixing fulfillment and repair problems in the more traditional "Global Scale Prevails" scenario as well.

As these examples demonstrate, UPS's use of the scenarios in evaluating options did not follow a formula. At times, the scenarios seemed to be used to support almost any investment, using a particular quadrant to justify the decision. Managers rationalized the decision by arguing that UPS was following the scenario-planning guidelines of not betting on one and only one quadrant. Eskew, for example, explained: "Even though Brave New World would say go virtual, we made investments in assets that didn't fit that quadrant." Higberg was clear they recognized the dangers of betting on one quadrant or one official future:

The key is not to fall in love with one quadrant. The acquisitions that worked best were the "no-brainers," or those that were able to work in all four worlds. If we've made mistakes, it's because we bet on the upper-right quadrant, totally. For example, in the 1997 session we assumed the dot-com world would materialize into an enormous fulfillment market for UPS. The strategies that were just focused on that upper-right quadrant, such as e-logistics, did not work out because of timing and the dot-com crash. We learned we should go for options that can pay off in multiple worlds, such as brokerage activities, air-freight forwarding, and service-parts logistics.

At the same time, despite acknowledgement of this warning, at least one observer indicated, "There seems to be a gravitational pull toward one of the futures." Senior Vice President of Worldwide Sales and Marketing Kurt Kuehn explained some of the inconsistency among the different views:

It's a chicken and egg kind of thing. UPS is big enough to influence the direction of the world, so perhaps there is a value on betting on a particular future. In fact, we have to make bets because the world doesn't move perfectly to one quadrant. Or maybe we accept the fact that all four of the quadrants will coexist simultaneously, and we have to figure out how to prosper in each one.

## Strategic Plans

The third major step in the UPS strategic process occurred when Eskew became CEO at the beginning of 2002. He recalled:

The Charter had seen us through the 1999 IPO and up to 2002, but it needed to be refined. Jim Casey's company was going to be 100 years old in 2007. Our job in 2002 was to start planning then to position the company to be where we need to be in 2007, to plan for future capabilities and accomplishments, and to identify missing pieces. After all, nothing happens overnight in a company like this.

In addition, Eskew was worried about whether all the Management Committee members were aligned in their expectations for the future, since many were new to their assignments: "I knew we needed to create a future together and felt that if we didn't focus on these longer-term issues in an off-site, we would keep talking only about the day-to-day responsibilities and numbers." One CSG manager described another reason for the planning session: "Prior to the off-site, there was no framework that aligned the various corporate initiatives and projects with the strategy. We had no control over the 300 or so functional projects; they were being run on their own. We needed a separate effort to pull them together, since that was not the purpose of the scenario-planning exercise."

Eskew focused the session on qualitative, not quantitative, expectations. He observed:

Strategy development is not necessarily about numbers. Yet it is very hard for operationally minded execs to get beyond the numbers. In fact, there was almost a rebellion at the off-site. They wanted me to tell them the numbers. I did my best at that meeting to stay away from numbers. Instead, I described the future verbally. I wanted to talk about capabilities and what we needed to build for the future. I didn't want to frame the discussion with an ambitious growth-rate number. Now, of course, we have quickly added numbers to the plan because we can't operate without them. It just isn't our nature.

### *Centennial Plan*

To prepare for the off-site, managers were given an assignment: come to the meeting with 40 to 50 predictions about UPS's future. According to one observer, "The diversity of opinions was astounding." There were different assumptions about the future size of the company, its profitability, the percentage of business that would continue to come from U.S. domestic small-package delivery, and whether UPS would be a truly global company or a U.S. company with international operations.

The group distilled the predictions to a manageable set. They then reached consensus on what became known as the Centennial Plan. The Plan included three components. The first was a qualitative set of "Goals and Characteristics for the year 2007" that addressed issues such as the UPS brand, competition, growth and profitability, people, customers, operational efficiency, cost control, and quality. Second, the group developed an overarching sense of corporate direction, with the goal of creating a global, unified company with "one vision and one brand." This objective underscored the need for continued integration of the dispersed logistics units into one cohesive group.

Finally, senior management worked backwards from the proposed UPS of 2007 to identify a set of four Strategic Imperatives:

- **Winning Team:** attracting and developing a highly skilled, diverse, and aligned global workforce
- **Value-Added Solutions:** providing customers with value-added services combining movement of goods, information, and funds
- **Customer Focus:** building customer loyalty and expanding UPS's services worldwide
- **Enterprise Excellence:** creating an environment of high-quality service and value

### *Strategy Road Map*

To ensure implementation of the four Strategic Imperatives, which were considered "skeletal," individual Management Committee members were assigned responsibility for each of them. Imperative teams were formed the next month with team members from the various functional staff areas.

The teams added detailed measures and goals to each of the imperatives and broke them down into 24 more discrete projects, or "critical initiatives"; these initiatives, in turn, were supported by more than 100 specific projects. Under the "Winning Team" imperative, for example, there were initiatives to improve employee and labor relations indices and employee turnover ratios. Together, the entire set of critical initiatives became known as the Strategy Road Map.

According to one senior executive, "We believed that everything the company did from that time on should tie into those imperatives. If not, we needed to question the value of the new project." At the same time, the Strategy Road Map had no direct connection to the scenario-planning sessions. Rogers observed: "The Strategy Road Map was constructed *in consideration* of the scenario-planning process. You'll find consistency of thought between the two but not a direct linkage. Why? They are different types of exercises. You need different types of people involved in each one. There are some of us who have had a foot in both, but not many."

## Strategic Implementation

The Management Committee established a process to oversee and manage the Strategy Road Map and implement the Centennial Plan. A Project and Program Oversight Committee was responsible for providing project management support and rigor to the initiatives, applying standards, monitoring progress, resolving resource conflicts, and aligning the functions with the critical initiatives. This support was considered necessary because, in one CSG manager's view, "If these projects were easy and compartmentalizable, we would have already done them." Project priorities were set by the CEO, since, as another CSG manager commented, "not all initiatives are created equal."

### McDevitt's Role

Within the next few months, progress on some of these initiatives seemed to stall. Therefore, in March 2003, Eskew asked John McDevitt to join the Management Committee from his post of vice president of Air Operations to be in charge of "strategic integration." Perspectives on what this role meant varied. To some managers, McDevitt was "the coordinator of strategic initiatives"; to others, he was "the champion of strategy execution." Still others saw him as a neutral "tiebreaker on the Management Committee." According to one senior manager, "McDevitt was brought in to help resolve deadlocks. Before that time, Eskew was the only one who could do that at the Management Committee level, and he needed help." McDevitt's role, according to Eskew, was "to oversee these efforts and put in the discipline we needed to accomplish the 2007 plan. He made sure that the four strategic imperatives were actually aligned and executed and that development activities were moving forward at the right speed, with the right support, and with the right sense of urgency."

McDevitt confessed that he had a real challenge defining the job when he took it on: "In the beginning, I jokingly told people, 'Don't ask me what I do. At this point, I don't know. But when I do, you'll be the second to know!'" He elaborated:

The job involved a lot of change, since various parts of the organization were working on different projects and often using competing metrics. Roles were not always consistently defined. There were also different opinions about what we were trying to accomplish and how to get these imperatives operationalized. My responsibility was to make sure that all the teams delivered what they said they were going to deliver. I also made sure ideas went from being a gleam in the eye to reality.

### *An Example: Trade Direct*

McDevitt's role in the Trade Direct project, a critical initiative under the Value-Added Solutions Imperative, illustrated his contribution. Trade Direct was a new service offering that would take goods manufactured abroad and link them into the U.S. delivery system, seamlessly addressing customs, regulatory, logistics, and information-processing needs. The project involved two groups: the Supply Chain Solutions logistics group, which would handle the movement of the goods from China, for example, to the U.S., and U.S. Operations, which would move the goods into the UPS physical-delivery system, bypassing warehousing and obtaining large savings for customers. The project had been in the planning stages since 2000, and despite agreement on the opportunity, different parts of the organization were at odds over conflicting priorities and goals.

To get the project moving, McDevitt took over direct ownership, since in his view, "We clearly needed a Management Committee member to come in and drive it." He took several steps to get the project back on track: "We set up meetings with all participants and uncovered the problems. For example, we needed an approach for coming up with the funds to cover IT costs. The issues were elevated and made visible to the Management Committee, and we made sure accountability was assigned." McDevitt believed he was able to do this because "I had access to all of the players because I reported directly to the CEO." He attributed his success with Trade Direct and other initiatives to "accountability through visibility": "I worked through the staff that already existed. I went to imperative team meetings and met separately with team leaders below the Management Committee members. Then, every month, there were report outs on the Strategic Imperatives at the Management Committee meeting. Nobody wanted to be behind. That's just in the DNA of UPS."

### **Scenario Planning: Horizon 2017**

After considerable strategic progress, Eskew announced at the 2004 Management Conference that UPS needed to embark on another scenario-planning exercise to look further into the future. Kuehn described the reasoning: "We found ourselves in a situation where the timing of some of our plans was beginning to go beyond 2007. We needed to revisit the scenarios and recalibrate our compasses, since the magnetic poles had moved a bit around globalization and trade flows, for example. We had to be sure that we were not chasing a straw man." Eskew added:

It was critical for us to look as far down the road as we could at all the factors and forces affecting our future to think about the kind of capabilities that were needed and the roles that UPS might play to meet the needs of current and future customers. There was too much ambiguity. The old scenarios were becoming dated and hard to recognize. We needed to paint some new pictures so that we could refine our strategy for the next decade.

At the same time, there was concern, voiced by Higberg and others, that "we certainly didn't want to just repeat the 2007 exercise." There was speculation that the scenarios would not change drastically, although the implications might be different. Most, however, believed that "we would be more sophisticated the second time around."

### *Process*

The Horizon 2017 session, as it came to be called, was similar to the 1997 session in format and process, with three important variations. First, Eskew and the CSG decided to take the scenarios and implications deeper, to regional levels as opposed to a single global picture. Second, to prepare for the Horizon 2017 session, the preparatory interviews were even more extensive and added the

perspectives of academics, consultants, politicians, and key customers, selected from a list of those who pushed UPS the hardest and had a clear idea of what they wanted from UPS in its supply-chain efforts (see Exhibit 7 for sample questions). The interviews resulted in the definition of the key issue for Horizon 2017: "The future(s) of UPS's world market and major regional markets in 2017."

A third variation involved participants. As before, participants from operations were excluded. Rogers explained the reasoning: "We weren't going to pull operations folks from the field to do this touchy-feely stuff. It's very hard for them to suddenly break out of their day-to-day tactical responsibilities. And besides, most staff personnel have had operations experience during some part of their career." Because they were concerned that familiarity with the 1997 scenarios might bias the thinking and development process, management deliberately limited the number of participants and facilitators who had been part of the 1997 sessions. Finally, participants in this session were more globally diverse and were from lower levels in the organization. As Higberg put it, "We wanted a balance of seasoned veterans at UPS with people young enough to be here in 2017."

Eskew kicked off the session and made it very clear that this was not a strategic plan for 2017. He noted: "Plans for the next one, three, and five years would be more robust and more detailed than scenarios. Scenario planning is more about helping UPS see forks in the road and figuring out which one to take." Over the course of three workshops spaced over four months, the participants developed drivers, the scenario framework, and scenario characteristics.

**Axes of uncertainty** While the axes of uncertainty chosen by the participants addressed demand and marketplace characteristics and were thus similar to the axes from the 1997 session, the Horizon 2017 axes incorporated more complex facets of each. This time, the horizontal axis was the range of possible business models and demand characteristics, moving from traditional, proprietary business models and focused, incremental demand to a more proactive, open, and collaborative world of commerce. The vertical axis addressed the global and regional business environments, which ranged from bordered, chaotic, restricted, and fragmented to borderless, harmonious, free, and holistic.

**Scenarios** These axes formed the framework for four scenarios (see Exhibit 8 for Horizon 2017 scenario characteristics). In the upper-left quadrant was the "Company City" future dominated by large corporations, with a growing middle class and the proliferation of powerful, integrated supply-focused technologies. The lower-left quadrant described a "Bordered Disorder" world, with a highly regulated, protectionist environment with slow growth in developing nations, guarded intellectual property and technology, and an increase in security threats and environmental and financial shocks. In the lower-right quadrant, "Connected Chaos" defined a future full of global unrest, "amoral" commerce, and informal connectivity that was difficult for governments to control. Finally, the upper-right quadrant, called "Networks without Borders," defined a highly connected, stable world with low barriers to market entry and fast-moving technologies aimed at consumers.

The participants then drafted story lines and provided more detail for each of the four scenarios. Subsequently, consultants turned this work into cohesive, internally consistent scenario stories at the UPS global level and provided broad descriptions of the four scenarios at the regional level. These documents were then distributed to participants for review prior to the third session. Finally, the participants met in regional teams to define implications for technology and infrastructure initiatives, growth strategies and options, and workforce development at both the global and regional levels (see Exhibit 9 for Horizon 2017 implications and strategies). Unlike in the 1997 session, the participants also identified early warning signals to indicate movement toward one scenario or another. However, the system to monitor the signals was, according to one CSG manager, "loose" (see Exhibit 10 for Horizon 2017 early warning signals).

As it had in the first scenario-planning exercise, the Strategy Advisory Group served as both an incubator and a skeptic for the process. It reviewed the results as the teams progressed through critical points and had many discussions around the scenarios, their implications, and possible strategies.

### *Results*

The 2004 session produced scenarios that had more similarities than differences when compared with the 1997 scenarios. For Higberg, this was not a concern. "I was more worried that it would be a 90-degree turn rather than a 10- to 20-degree change. Roughly 60% of the characteristics of the scenarios were the same as in 1997. The other 40% were what's interesting." Some of the hypotheses developed in 1997, such as industry consolidation and continued growth of the Internet, had become reality. In addition, some of the huge open technological issues had been clarified. However, there were some surprises; they included the rise of safety and terrorist threats and the fall of the dot-coms. Despite the lack of major changes in direction, Higberg was convinced the session was valuable: "It validated and reaffirmed our direction. It also provided a much richer understanding of regional nuances."

In March 2005, senior management was still digesting the scenarios that had been produced. Since most of the company was focused on executing the Centennial Plan and Strategy Road Map, discussions about implications were limited to the Strategy Advisory Group members and staff in CSG, Marketing, Public Affairs, and Investor Relations.

### *Senior Management Reactions*

Senior managers differed in their views on the value and applicability of the process. Kuehn believed the sessions had value, since "they helped get our eyes above the horizon a little bit and be more sensitive to the major forces shaping the world." Other managers saw value in using the scenarios to fine tune their tracking of the competition and to define appropriate lobbying initiatives. McDevitt also found the scenarios helpful: "We don't want to just plod along. The scenarios helped us see where the opportunities are. Also, once we have them, we can look back and see where we were accurate in our work, and we can see what did and did not materialize."

Eskew continued to believe in the merit of the sessions:

Our goal is not to predict the future but to start thinking about the ramifications of the various scenarios, so that we can align our planning behind them. The exercise allows us to more effectively build in midcourse corrections and backup strategies as we create the next three- to five-year strategic plan for the organization. It is a significant undertaking and a big time commitment. But, in our business we can't afford to be caught flat-footed by trends—trends that we could have anticipated—but that sneak in under our radar screen.

More tactical, operationally minded members of the Management Committee questioned the worth of the exercise. They found the exercise too abstract and difficult to apply. These managers, one executive observed, tended to see the exercise as "pipe dreams, daydreaming, and happy talk. They had a hard time suspending disbelief long enough to free up their thinking."

These differing opinions were not surprising, for they reflected a fundamental tension in the company. One observer commented: "The mixed perceptions on the immediate value of the exercise reflect the tactical and strategic dichotomy that lies at the heart of the UPS character. UPS at its best is

a mix of execution and vision." Or as Kuehn put it, "If only 10% of the managers get it, maybe that's okay."

### *Participant Reactions*

Participants in the sessions also had a variety of reactions to the exercise. Some participants struggled with the process. According to one: "At first, everybody had trouble seeing the possible, since most managers in the company are so focused on the short term. It was also difficult to keep the perspective in mind that this was not about UPS but rather about how the world affected UPS. It was irrelevant that UPS existed." In addition, despite the desire to limit the transfer of knowledge from the 1997 session, it was difficult to keep the two exercises separate and distinct. One participant commented: "The two axes caused problems. They were very similar to the previous versions, and the names of the 1997 scenarios were well ingrained in our minds."

There were several other concerns with the sessions. Most revolved around value, purpose, and goals. Some participants were skeptical about the value of the sessions. According to one: "Scenario planning looks pretty, but does it have any impact on what people do?" Another admitted the session had had no impact on his work. A third participant observed, "It was hard to understand what scenario planning was all about. It was very clear that sessions were not to be used to develop strategy. And we didn't really feel we were in a strategy process in the first meeting. Instead it felt like we were in Saturday Night Live. It was wacky. It felt fun, but frivolous." However, he went on to acknowledge that the impact of the session was more subtle and affected his own thinking process: "I used to lay out a series of steps and say, 'Here's where we need to go, here's the plan.' What I had never done is say, 'If this happens, is the plan still right?' Now, I'll say, 'Let's look at what might happen if our competitors do x. How would things change? Are we prepared?'"

### **Strategy Road Map Status**

In January 2005, shortly after the conclusion of the 2004 scenario-planning sessions, the Management Committee members spent a day reviewing the status of the Strategy Road Map. Since roughly 50% of the members who had been at the original meetings in 2002 had retired, the session also served to give the new members a chance to hear the plans directly from the CEO.

Prior to the meeting, McDevitt and Eskew had handed out homework assignments. They asked each of the members to review the Road Map and their assignments, the original 2002 direction, and the current status of the initiatives. Members were expected to report on the status of the projects, the importance of the effort, and what needed to be added or dropped. In preparation for the meeting, McDevitt went to the teams and asked them the same questions. Books were prepared for the meeting that included a report on each critical initiative, comparing the two perspectives of the Management Committee members and the teams to highlight whether they were in agreement. Management Committee members, who had not seen the book beforehand, spent the day—after receiving a brief summary of the strategic process, including a short overview of the November 2004 scenario planning—going through each initiative, item by item. The Strategy Road Map was then refined, as needed.

McDevitt commented on the outcome of the session, "After reviewing the book, we found that we weren't that far off course. I felt comfortable that we could move forward appropriately. This was the team that would personally take responsibility for the initiatives, since they will for the most part be here in 2007." When asked if his work was done, however, McDevitt replied, "While the exercise was

very beneficial, I can't say it's complete. You never know when the next Trade Direct will come up. Even though we are much more attuned to these cross-functional issues and have achieved a certain degree of strategic integration, there is a strong tendency to go back to your area and focus there."

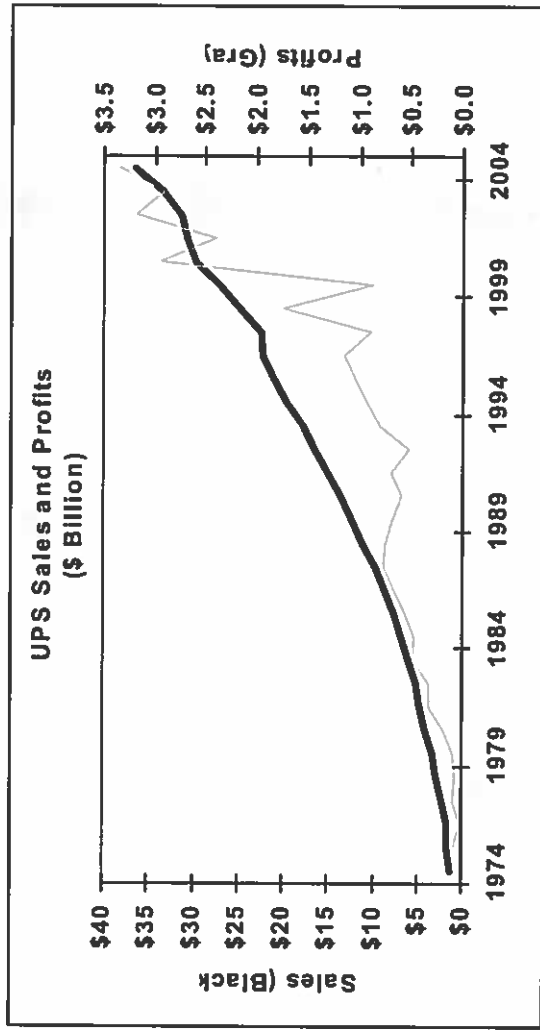
In fact, the need for someone with McDevitt's responsibilities was currently under review. With the retirement of UPS's global transportation chief in mid-February 2005, Eskew had asked McDevitt to take on that role. But he had not resolved the future of McDevitt's strategic-integration responsibility. McDevitt had argued that he should keep the old responsibilities in addition to his new ones as transportation chief, since he believed that the needs of the old job had changed. But Eskew was not convinced of the wisdom of that recommendation.

### **UPS: Beyond the Centennial**

Before resolving the question of McDevitt's role, Eskew wanted to place the decision in the larger context of strategic planning at UPS. He had two primary concerns. First, he was worried that the strategic-planning process might need changes to keep UPS on the leading edge. The company had managed to transform itself several times over the past almost 100 years. But could it continue to do so with the current processes? Did there need to be a clearer, more direct link between the different components of the strategic process, for example?

The second concern specifically involved the scenario-planning exercise. Eskew knew that the exercise had helped him see the future differently, but he was not sure of its organizational impact. He was not convinced that the scenarios were really forming the foundation for future strategic plans. Were managers thinking broadly and creatively enough? How could they incorporate the possibility of wild-card events that they had not even considered in the last session? Were they doing enough to monitor early warning signals? Should participation be broadened to include field management? Or, was scenario planning an exercise that only really benefited senior managers and strategists of the company?

Exhibit 1 Financial Performance

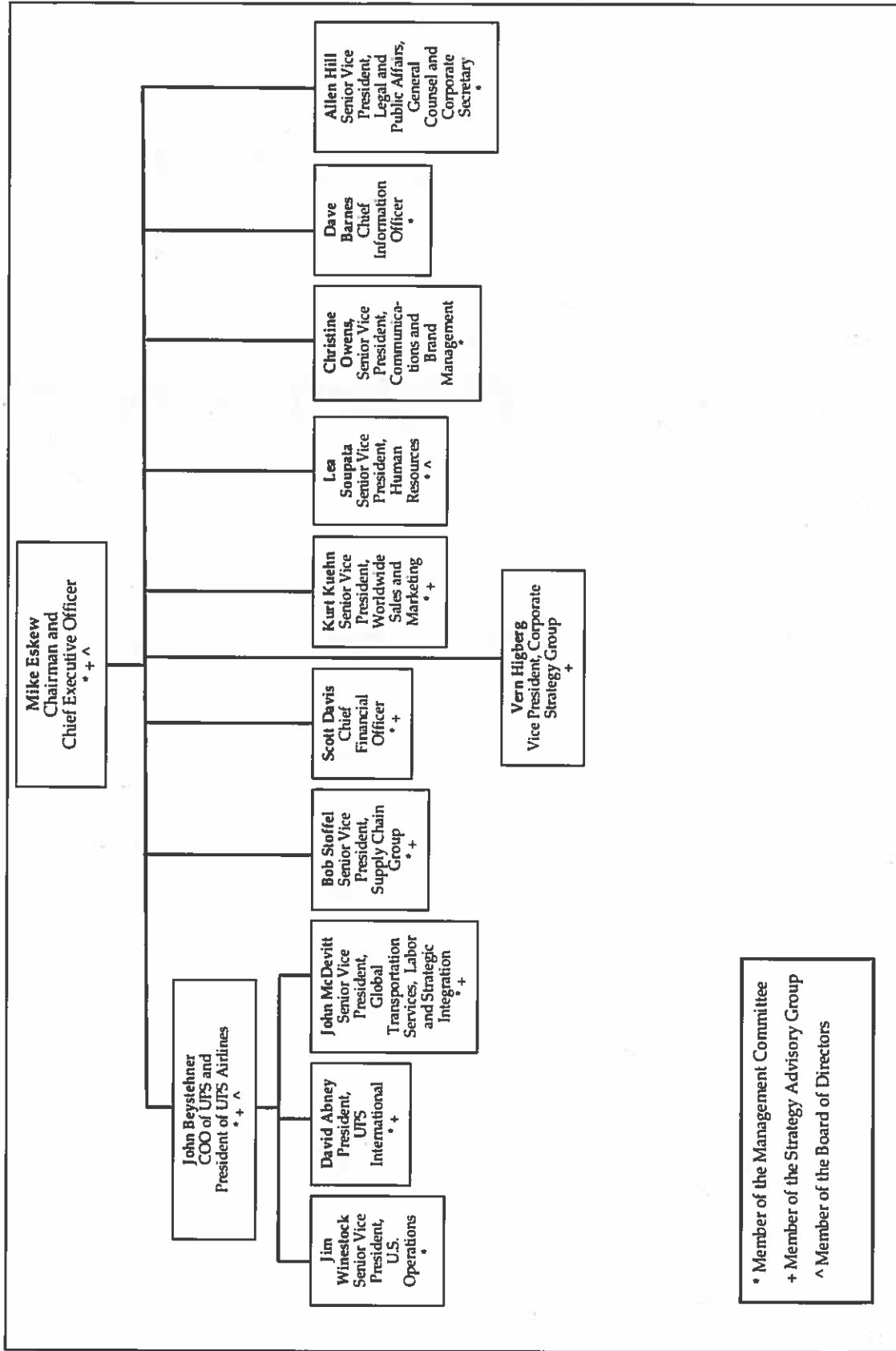


	1974	1984	1994	2000	2004
<b>TOTAL REVENUE</b>	1,303	6,833	19,576	29,771	36,582
Operating Expenses	1,226	6,104	18,020	25,249	31,593
Operating Profit	77	729	1,556	4,522	4,989
Other Expenses and Taxes	32	252	613	1,588	1,656
<b>NET INCOME</b>	45	477	943	2,934	3,333
Year-end stock price	<sup>a</sup>	<sup>a</sup>	<sup>a</sup>	59	85
Employees (year-end)	67,900	141,000	285,000	359,000	384,000

Source: Standard & Poors, Compustat accessed April 25, 2005; company Web page, accessed April 25, 2005.

<sup>a</sup>UPS went public in 1999.

Exhibit 2 Organization Chart



Source: Company documents.

**Exhibit 3** UPS Timeline of Selected Key Dates in the Strategic-Planning Process

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<b>1907</b>	United Parcel Service (UPS) founded in Seattle, Washington (as American Messenger Company)
<b>1991</b>	Corporate Mission and Strategy Statement introduced
<b>1996</b>	Strategy Advisory Group and Corporate Strategy Group formed
<b>1997</b>	First scenario-planning session
<b>1999</b>	UPS Charter completed and broadly communicated
<b>2002</b>	<ul style="list-style-type: none"><li>• Management Committee off-site, resulting in Centennial Plan</li><li>• Strategy Road Map developed</li></ul>
<b>2004</b>	Second scenario-planning session
<b>2005</b>	Management Committee review and update of Strategy Road Map

---

Source: Company documents.

**Exhibit 4 UPS Charter****The UPS Charter**

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**OUR VALUES - *Our enduring beliefs***

We believe that integrity and excellence are the core of all we do.

We believe that attention to our customers' changing needs is central to the success of UPS.

We believe that people do their best when they feel pride in their contributions, when they are treated with dignity, and when their talents are encouraged to flourish in an environment that embraces diversity.

We believe that innovation fortifies our organization through the discovery of new opportunities to serve our people and our customers.

**OUR PURPOSE - *Why we're in business***

We enable global commerce.

**OUR MISSION - *What we seek to achieve***

We fulfill our promise to our constituents throughout the world in the following ways:

We serve the evolving distribution, logistics, and commerce needs of our customers worldwide, offering excellence and value in all we do.

We sustain a financially strong company, with broad employee ownership, that provides a long-term competitive return to our shareowners.

We strive to be a responsible and well-regarded employer by providing our people with an impartial, rewarding, and cooperative environment with the opportunity for advancement.

We build on our legacy as a caring and responsible corporate citizen through the conduct of our people and company in the communities we serve.

**OUR STRATEGY - *The UPS plan of action***

**Create the future though One Company. One Vision. One Brand.**

We will continue to expand our distribution and supply chain solutions to synchronize the world of commerce - the flow of goods, information, and funds.

We will expand our position as a trusted broker between buyers and sellers worldwide.

We will harness the appropriate technology to create new services and to strengthen our operations and networks.

We will attract and develop the most talented people whose initiative, good judgment, and loyalty will help realize our company's mission.

We will continually study customers' behavior, anticipate their needs, and design our products and services to exceed their expectations.

We will create a practice of innovation that leads to sustainable growth.

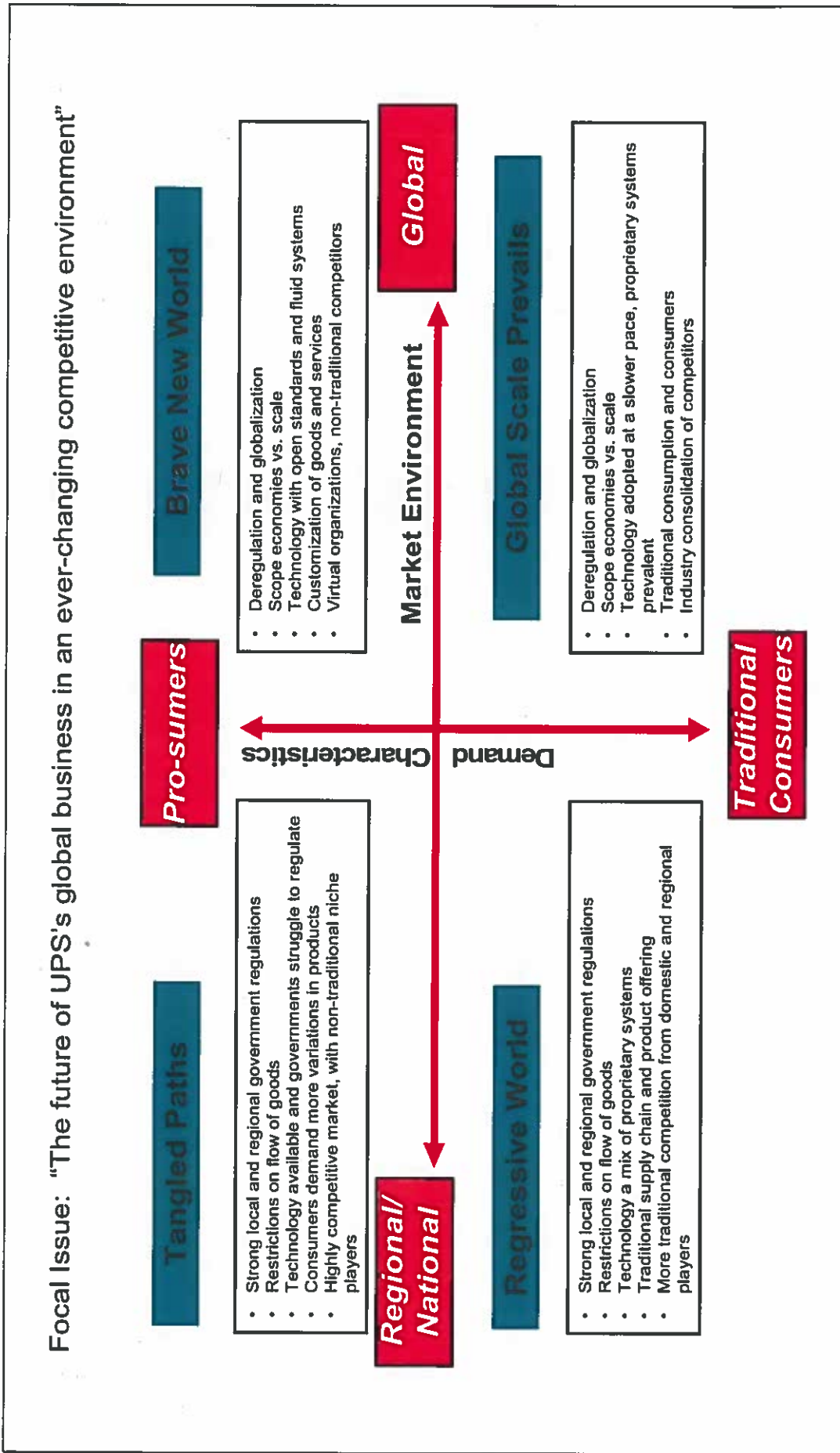
We maintain an environment that enables us to treat every customer as if they are our only one.

We will leverage the UPS brand to maximize brand loyalty among all constituencies.



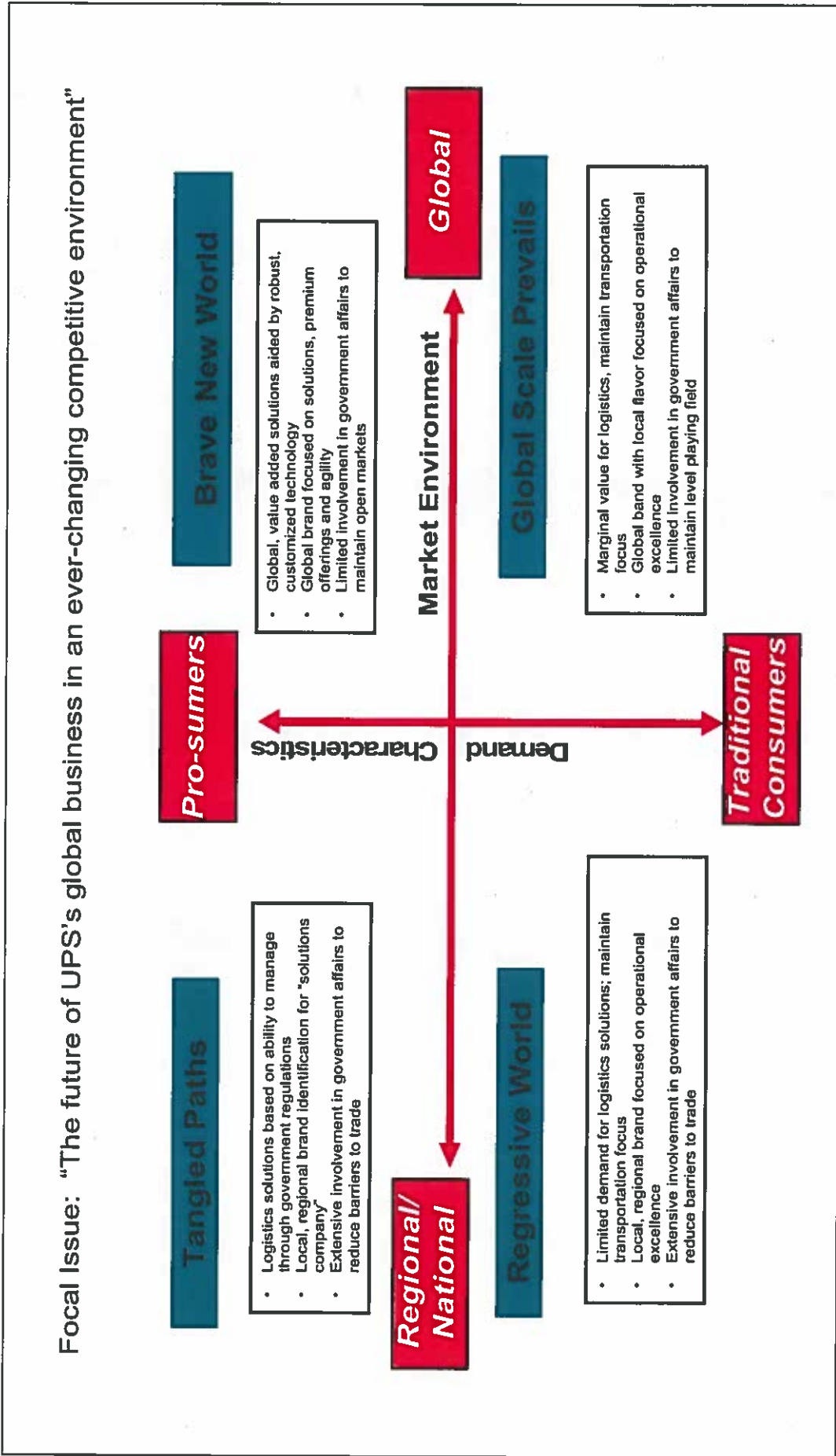
Source: Company website, accessed on August 15, 2005.

Exhibit 5 1997 Scenario Characteristics



Source: Company documents.

Exhibit 6 1997 Scenario: Implications and Strategies



Source: Company documents.

**Exhibit 7 Sample Questions, Excerpted from Interview Questions for 2004 Session****External Non-Customer Interview Questions**

- What external factors will affect the transportation and logistics industry over the next decade?
- What will deliver success (for transportation and logistics companies) 10–12 years out, and how will that differ from today?
- Paint me a picture of how transportation and logistics may look in 2017. Which current competitors will be strong players, and what kinds of new entrants do you see emerging?

**External Customer Interview Questions**

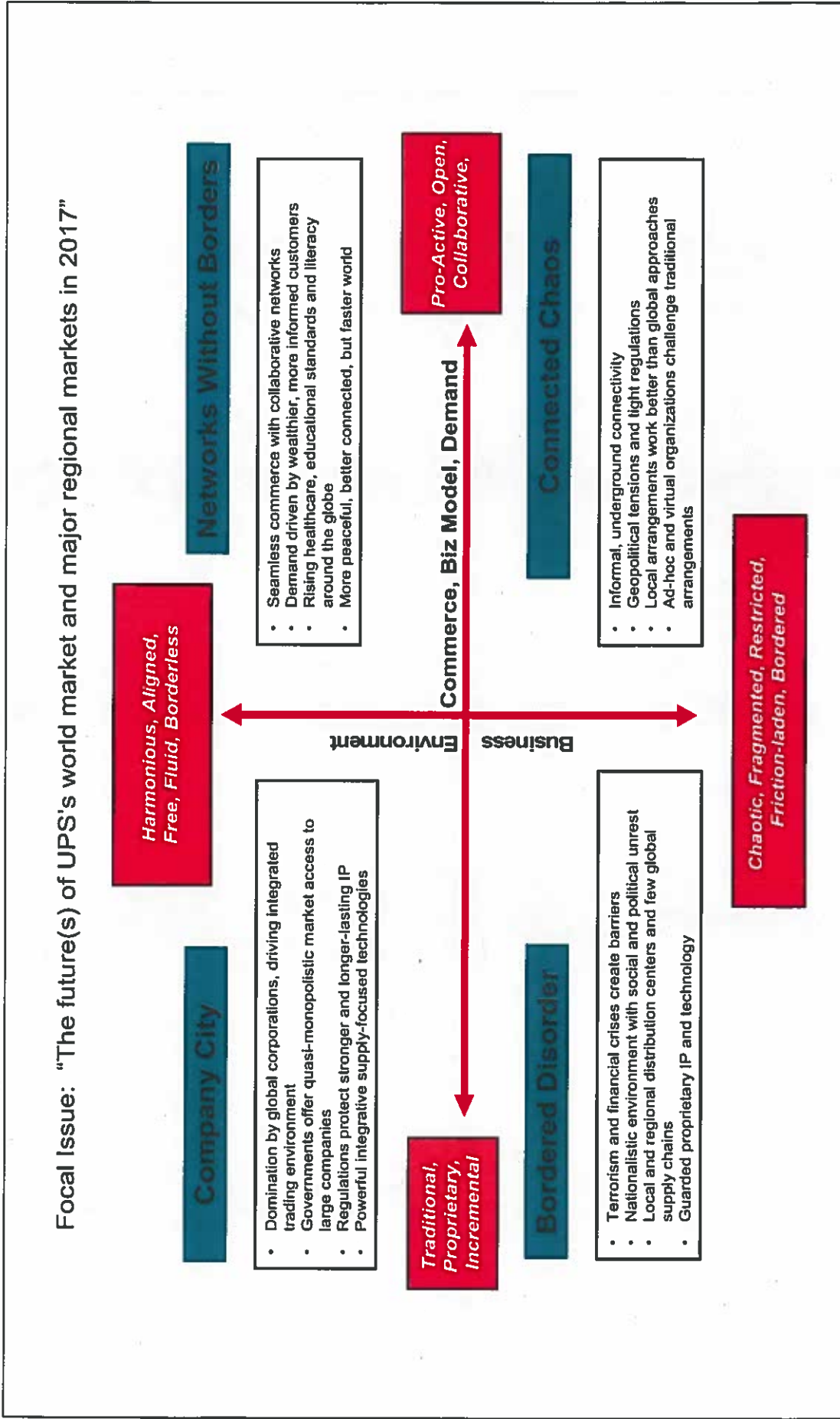
- What will make a company successful in your industry in the next decade? (What's going to be different?)
- If we could answer one question about the future to help your company succeed, what would that question be?
- What is going to stop being true in your industry over the next decade?

**UPS Management Internal Interview Questions**

- How would you describe success for UPS over the next 10–12 years? What would it look like for us? What would be the results?
- How would you like UPS to be viewed within the industry? Within the financial community? Among customers? Among employees?
- If I could answer any question for you, what would you want to know? What would you like to know that would give UPS a jump on the competition?

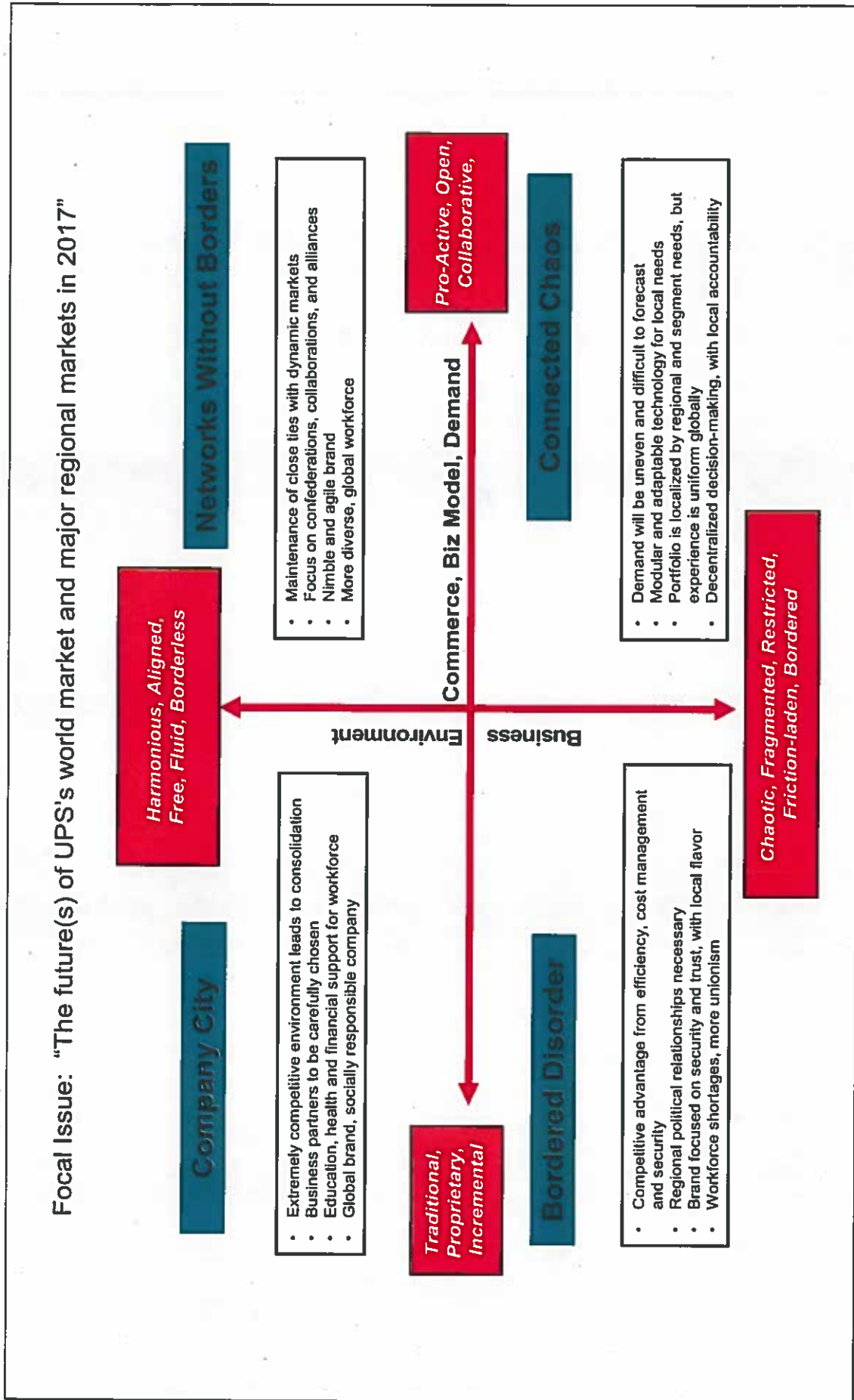
Source: Company documents.

Exhibit 8 Horizon 2017 Scenario Characteristics



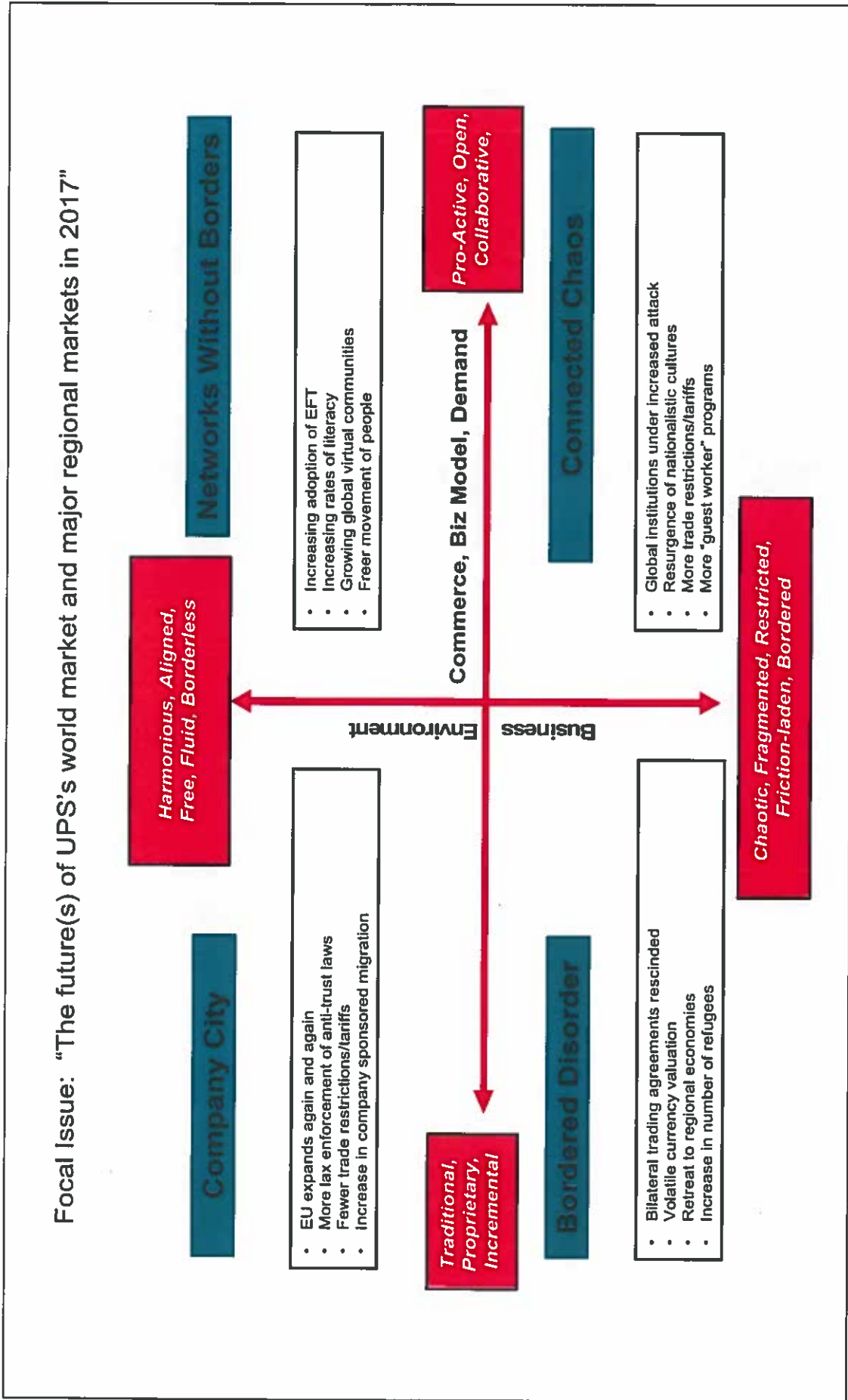
Source: Company documents.

Exhibit 9 Horizon 2017 Implications and Strategies



Source: Company documents.

Exhibit 10 Horizon 2017—Early Warning Signals



Source: Company documents.

- What are strategic plans and business plans? How do they differ from each other and other common types of plans in health care?
- What methodologies and frameworks are commonly used in health care strategic plan and business plan development?
- How will decision-makers evaluate a business plan?
- What are some of the common planning pitfalls encountered in health care organizations?

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## **Overview of Planning in Health Care Organizations**

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## The Purpose of Planning is to Support Decision-making

**“The purpose of planning is to adopt policies and to take actions with respect to the future: a function incorporated in the definition of the word and its meaning for just about everyone.”**

*(Melville C. Branch, Distinguished Professor of Planning Emeritus at the University of Southern California, Simulation and Planning, 1997)*

More practically, the purpose of business planning is to serve as the foundation for *decision-making* by:

- “Framing” the question
- Formally analyzing available data
- Identifying the best potential course of action supported by the analyses
- Assembling a persuasive communication package

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## There Are Many Types of Plans

For the purposes of this session we will limit ourselves to common types of plans and we will briefly categorize them two ways.

### Types of Plans

- Business
- Strategic
- Growth
- Cost Reduction
- Capital Expenditure
- Operational
- HR

### Categorization Methods

- What questions do they commonly seek to answer?
- Where do they fit in a framework considering both the relative importance of external vs. internal issues and the centrality of economic justifications?

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## Differentiating Types of Plans

Plan Type	Questions Commonly Answered
Business Plan	What is the business opportunity? How will we meet the consumer need? How will the business and investors profit from meeting consumer need? What are the key risks and what are their magnitudes?
Strategic Plan	What is our vision for our organization 5 to 10 years from now? What initiatives must we pursue to achieve our vision? Do we have the organizational and financial capacity to support the initiatives? Are these initiatives likely to face resistance from key stakeholders?
Growth Plan	Are there unmet needs in the community that we could remedy by expanding or adding services? Which opportunities are the most attractive for our organization (with due consideration of our Mission)? What is the magnitude of potential volume or revenue growth? How much growth should the organization target? Does our organization have the capacity to meet the targeted growth? What are the financial implications for our organization?

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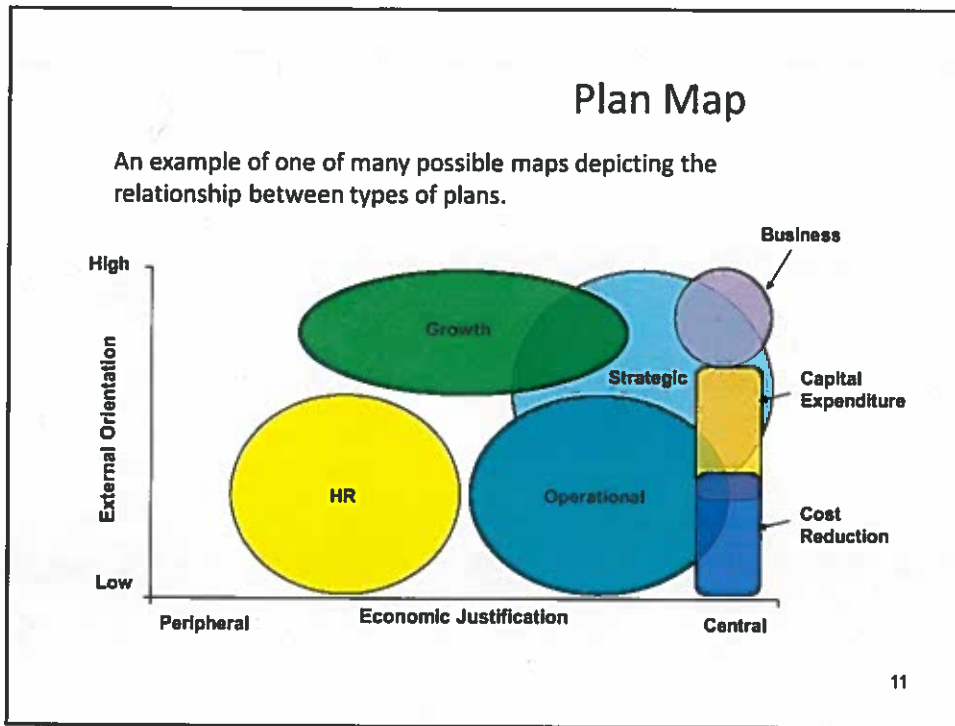
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## Differentiating Types of Plans

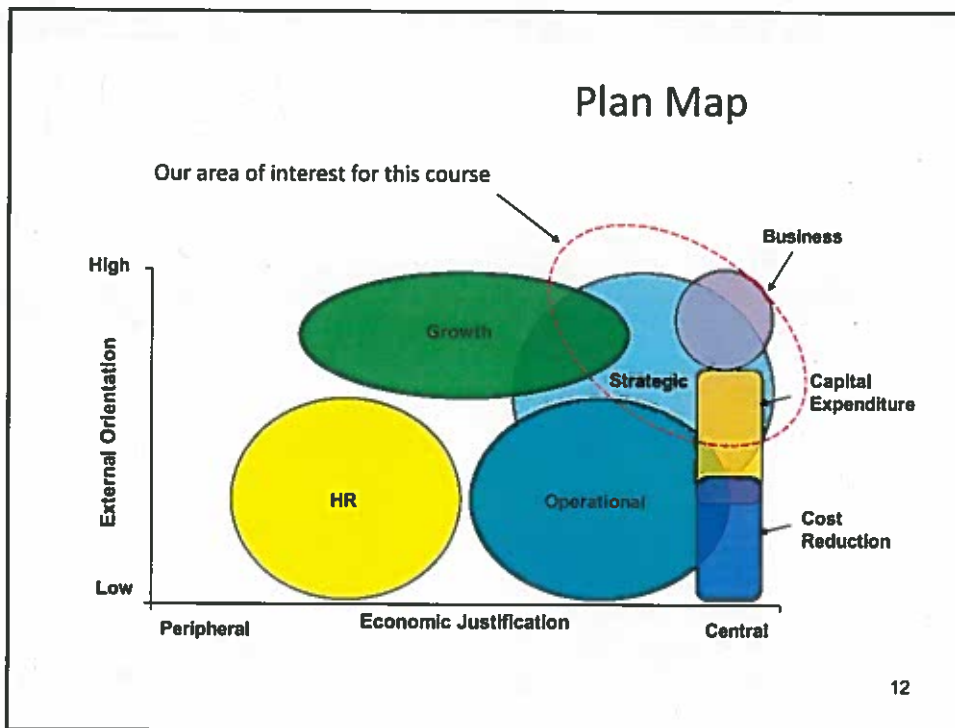
Plan Type	Questions Commonly Answered
Capital Expenditure	Is there an unmet community need or is our organization missing an opportunity to better serve our customers (i.e., what is the purpose of the expenditure)? What are the financial implications for our organization?
Operational	Is our organization operating at peak performance? How does our performance compare to similar organizations? Are there any changes that we can make to our organizational structure or processes that would improve our performance? What are the financial implications of the proposed changes? What impact will the proposed changes have on our staff?
Cost Reduction	What are our most attractive opportunities to reduce expenses? What is the magnitude of potential savings? How do the proposed changes affect our ability to serve our customers? What impact will the proposed cost reductions have on our staff?
Human Resources	Does our organization have sufficient staff and the right mix of skills to meet the needs and expectations of our customers? What initiatives should the organization pursue to recruit and retain staff?

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## Overview of Strategic Planning

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## What is Strategic Planning?

**“Strategy can be defined as the determination of the basic long-term goals and objectives of an enterprise, and the adoption of courses of action and the allocation of resources necessary for carrying out those goals.” – Alfred D. Chandler Jr.**

Less formally, it is the process of figuring out who you are, where you want to go, and how you will get there.

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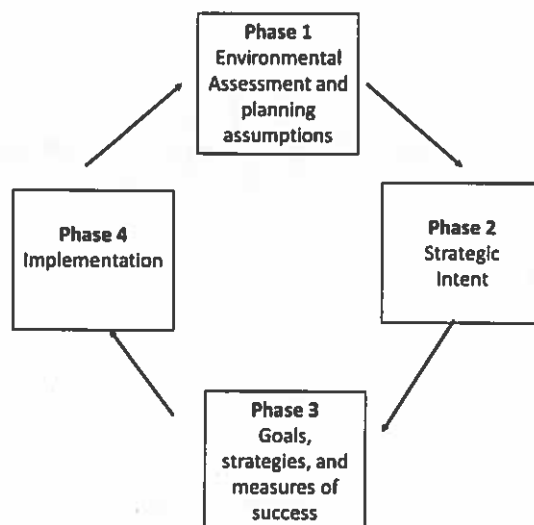
## Why use a formal planning process?

- Develop a better plan.
  - The larger and more complex the organization, the less likely the CEO has all the relevant knowledge and expertise.
- Build understanding and support for the plan.
  - A plan lacking support from key constituencies can face obstruction and delay and some initiatives may never be realized.
  - Employees who don't understand the what, why and how of the plan will be less effective in execution.

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## Strategy Cycle



*Strategy development is iterative. Results of implementation should fuel evaluation of prior phases of the cycle.*

Source | Health Care Strategy for Uncertain Times, Jennings Ryan & Kolb, 2000

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## Get the right people involved!



You need people who can: get the data, do the analysis, facilitate the planning process, approve the plan, and build broad support within the institution.

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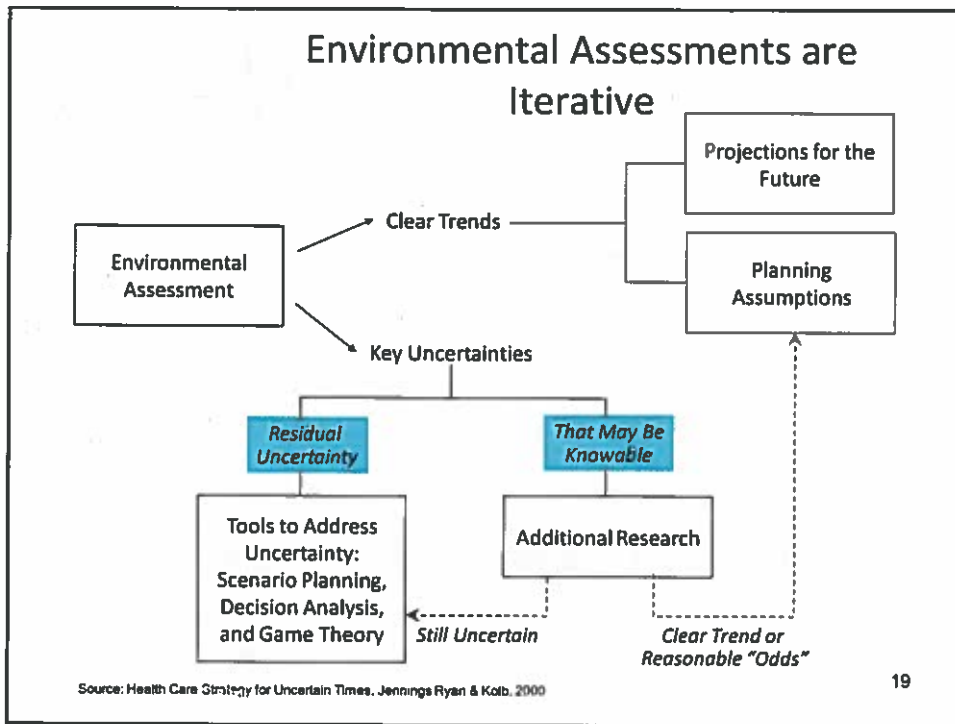
## Phase 1: Components of an Environmental Assessment

Internal Focus	External Focus
<ul style="list-style-type: none"> <li>• Inventory of services</li> <li>• Utilization trends</li> <li>• Staff profile</li> <li>• Financial performance</li> <li>• Customer mix</li> <li>• Quality and service</li> </ul>	<ul style="list-style-type: none"> <li>• Competitor profiles</li> <li>• Market share</li> <li>• Customer profiles/trends</li> <li>• Legislative environment</li> <li>• Technological environment</li> </ul>

Know your enemy, know yourself, and you can fight a hundred battles without defeat. When you are ignorant of your enemy but know yourself, your chances of winning and losing are equal. **If you know neither your enemy nor yourself, you are bound to perish.** - Sun Tzu

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## There are no facts about the future!

Planning assumptions connect the information from the environmental assessment to strategies for the future. All planning incorporates planning assumptions so it is best to make them explicit.

**Tips for developing useful planning assumptions:**

- Focus on the factors most important to success.
- Incorporate measurable information, whenever possible.
- Identify the implications for success.

The process of establishing explicit planning assumptions is helpful in uncovering differences in outlook among managers/leaders and helps build buy-in for the strategic plan among management and staff.

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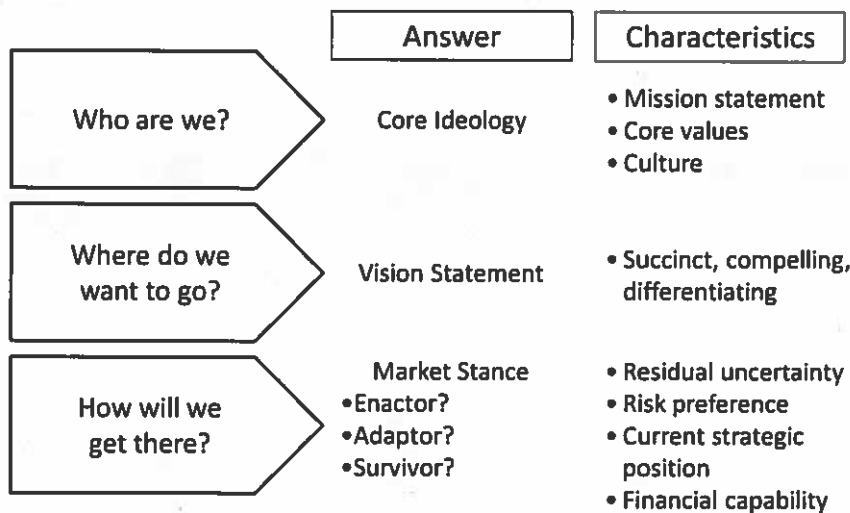
## Planning Assumptions Example

Planning Assumptions	Implications for Success
Government finances will continue to be strained leading to reductions in NIH funding.	In order to attract new customers, we will need to drive down our costs by increasing throughput.
PI's will be more price sensitive as they are forced to try to do more with less funding.	

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## Phase 2: Strategic Intent



Source: Health Care Strategy for Uncertain Times, Jennings Ryan & Kolb, 2000

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The organization's mission should be very stable over time.

University of Rochester Mission Statement:

*"Learn, Discover, Heal, Create—  
and Make the World Ever Better"*

URMC Mission Statement:

*"We improve the well-being of patients and communities by delivering innovative, compassionate, patient- and family-centered health care, enriched by education, science, and technology."*

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## What is a Vision Statement?

A vision statement is an important part of a strategic plan. A vision statement concisely describes the preferred future for the organization.

- Sets the direction for the organization.
- Serves as a goal to drive continuous improvement/change.
- Provides a focal point for the development of strategies.

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## Characteristics of a “good” vision statement

A vision statement describes where the organization wants to go and should...

- Be inspirational, but grounded in reality.
- Be succinct, compelling and easy to communicate.
- Differentiate the organization from competitors.

*Beware vision statements that look more like a paragraph than a sentence.*

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## A vision statement can be both verbose and generic...

Our vision serves as the framework for our Roadmap and guides every aspect of our business by describing what we need to accomplish in order to continue achieving sustainable, quality growth.

**People:** Be a great place to work where people are inspired to be the best they can be.

**Portfolio:** Bring to the world a portfolio of quality [products] that anticipate and satisfy people's desires and needs.

**Partners:** Nurture a winning network of customers and suppliers, together we create mutual, enduring value.

**Planet:** Be a responsible citizen that makes a difference by helping build and support sustainable communities.

**Profit:** Maximize long-term return to shareowners while being mindful of our overall responsibilities.

**Productivity:** Be a highly effective, lean and fast-moving organization.

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## A vision statement can be both verbose and generic...

Founded as "an institution of \_\_\_\_\_" and guided by the motto "\_\_\_\_\_",  
the [University] will help solve the greatest challenges of the 21st century by:

- Accelerating our progress as an international leader in sciences, engineering, social sciences, health science, business, and music.
- Empowering our students to fulfill their academic and professional passions in a University that is diverse, welcoming, and inclusive for all students, faculty, and staff.
- Creating innovative connections among education, humanities, music, the social sciences, science, engineering, and health science.
- Strengthening support for a dynamic faculty dedicated to teaching, mentoring, research, clinical care, and the creative and performing arts.
- Serving our community of alumni and friends through imaginative programs that enrich their lifelong relationship with the University and that expand our collective contributions to the world.
- Embracing our leadership position in [City] and the nation by making our community a model for partnership among academic, civic, cultural, health care, and business organizations.

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## A vision statement can be both verbose and generic...

Founded as "an institution of the highest order" and guided by the motto **Mellora or Ever Better**, the **University of Rochester** will help solve the greatest challenges of the 21st century by:

- Accelerating our progress as an international leader in sciences, engineering, social sciences, health science, business, and music.
- Empowering our students to fulfill their academic and professional passions in a University that is diverse, welcoming, and inclusive for all students, faculty, and staff.
- Creating innovative connections among education, humanities, music, the social sciences, science, engineering, and health science.
- Strengthening support for a dynamic faculty dedicated to teaching, mentoring, research, clinical care, and the creative and performing arts.
- Serving our community of alumni and friends through imaginative programs that enrich their lifelong relationship with the University and that expand our collective contributions to the world.
- Embracing our leadership position in **Rochester** and the nation by making our community a model for partnership among academic, civic, cultural, health care, and business organizations.

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...or succinct, specific, and compelling.

Our vision is to be earth's most customer centric company; to build a place where people can come to find and discover anything they might want to buy online.

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What do you think of UPMC's vision statement?

What is it?

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## What do you think of URMC's vision statement?

We will define and deliver "Medicine of the Highest Order" and set the standard for compassion and innovation, always placing patients and their families first.

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## Common vision statement pitfalls

- Contradicting core values
- Ignoring organizational culture (or requiring rapid cultural change).
- Surpassing inspirational and approaching fantasy
- Including too many "feel good" statements

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## Phase 3: Terminology

- What? • Goals – What must be accomplished in order to reach the vision.
- How? • Strategies – Descriptions of how a goal will be accomplished.
- What & Who? • Tactics – The steps that will be taken to implement a strategy.
- How well? • Measures of Success – Benchmarks used to monitor progress toward the goals.

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## Setting Goals

- Focus on important goals.
  - Is achieving this goal *necessary* to achieve the vision?
  - What other goals could we set? Is it acceptable to focus effort on this goal rather than those we did not choose?
- Think broadly about what must be accomplished.
  - Is achievement of all of the goals *sufficient* to achieve the vision?

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## Setting Goals

- Make sure it aligns with the values and culture of the organization.
  - “Culture trumps strategy.”
- Recognize the organization’s readiness and ability to achieve the goal.
  - A strategic plan without the means and resolve to implement it is a dream, not a plan.

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## Strategies vs. Tactics

### Strategies

- A strategy describes the big picture of how you will achieve the goal.
  - It is short on specifics.
- There may be more than one strategy per goal, but there will not be several.
- It can be helpful to start with brainstorming and then narrow the list.

### Tactics

- Tactics break a strategy into pieces that can be addressed.
- Tactics are actions that readily can be:
  - Assigned to an individual.
  - Measured relative to progress.
  - Financially analyzed
- If there are names, dates, and dollars, it is likely a tactic.

Strategies and tactics must be within capability of the organization (financial and otherwise).

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## Orthopedics Example

**Goal:** Attract a larger share of the growing and profitable orthopedics market.

**Strategy:** Focus our resources on becoming the acknowledged market-leader in joint-replacement.

**Tactics:**

1. Recruit renowned surgeons.
2. Make campus "senior-friendly."
3. Advertise in appropriate channels.

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## Measures of Success

- What you measure is what you get.
- Measures of success include the metric and the target.
  - Metric is the dimension to be measured.
  - The target is level/value at which success is achieved (or maintained).
- Monitor them regularly so momentum is built/maintained.

"However beautiful the strategy, you should occasionally look at the results."

– *Winston Churchill*

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## Measures of Success

- Adjust metric targets as necessary
  - Unachievable targets are demoralizing and effort will lag.
  - Opportunity for greater success squandered if too easily achieved.
- Recognize achievement of success.

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## Components of a “Business Plan”

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## Overview of "Business Plans"

A business plan makes the case for the establishment and funding of a new business or a new line of business within an existing organization.

There are an endless number of "how-to" guides for writing a business plan. Each guide may use different terms, but all would suggest the following key components:

- Executive Summary
- Assessment of the Business Environment
- Company Description
- Company Strategy
- Financial Review
- Action Plan

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## How does this template compare to Sahlman?

- Executive Summary
- Assessment of the Business Environment
- Company Description
- Company Strategy
- Financial Review
- Action Plan

Sahlman's article is oriented toward the entrepreneur. Herzlinger's is oriented toward the HC institution manager.

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## How does this template compare to Sahlman?

- Executive Summary
  - Assessment of the Business Environment
  - Company Description
  - Company Strategy
  - Financial Review
  - Action Plan
- "The Context"  
 "The People"  
 "The Opportunity"  
 "Risk and Reward"

Sahlman's article is oriented toward the entrepreneur. Herzlinger's is oriented toward the HC institution manager.

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## How does this template compare to Herzlinger?

Exhibit 1 Checklist for Evaluating New Ventures

- Executive Summary
- Assessment of the Business Environment
- Company Description
- Company Strategy
- Financial Review
- Action Plan

1. Context	Life in New Literature Death is Beautiful Success of True Believers
2. Market Assessment	Converting an Opportunity into a Marketing Plan Competitive Analysis Evaluating the Marketing Plan Sales to Whom?
3. Financial Viability	Break-even Volume: $Price \times Volume = (Fixed Costs) + (Variable Costs) \times (Volume)$ Market Share Analysis
4. Valuation Analysis	Cash Flows Required Rates of Return Terminal Value
5. Sustainability	Revenues Market Share Costs Management
6. Financial Risk Assessment	Risk Flags Accounting Considerations
7. Managerial Assessment	Fit of Managerial Skills and Opportunity "Wounded" versus "Innovative" Managers
8. Societal Impact	
9. Technological Risk Assessment	Understanding the "Risk & Return" Production, Financial, Regulatory, and Patent Considerations True Return and Its Limits

Herzlinger's assessment framework is much more detail/prescriptive and organized differently, but still covers the same areas of evaluation.

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## How does this template compare to Herzlinger?

Exhibit 1 Checklist for Evaluating New Ventures

- Executive Summary
- Assessment of the Business Environment
- Company Description
- Company Strategy
- Financial Review
- Action Plan

2. Context	<ul style="list-style-type: none"> <li>• Late to Hot Literature</li> <li>• Risk is Beautiful</li> <li>• Beware of True Believers</li> </ul>
7. Market Assessment	<ul style="list-style-type: none"> <li>• Converting an Opportunity into a Marketing Plan</li> <li>• Competitive Analysis</li> <li>• Evaluating the Marketing Plan</li> <li>• Sales to Whom?</li> </ul>
1. Financial Viability	<ul style="list-style-type: none"> <li>• Break-even Volume: Price x Volume = (Fixed Costs) + (Variable Costs) x (Volume)</li> <li>• Market Share Analysis</li> </ul>
6. Valuation Analysis	<ul style="list-style-type: none"> <li>• Cash Flows</li> <li>• Required Rate of Return</li> <li>• Terminal Value</li> </ul>
5. Sustainability	<ul style="list-style-type: none"> <li>• Revenue</li> <li>• Market Share</li> <li>• Costs</li> <li>• Management</li> </ul>
6. Financial Risk Assessment	<ul style="list-style-type: none"> <li>• Red Flags</li> <li>• Accounting Considerations</li> </ul>
7. Managerial Assessment	<ul style="list-style-type: none"> <li>• Fit of Managerial Skills and Opportunity</li> <li>• "Worshippers" versus "Empowered" Managers</li> </ul>
8. Several Issues	<ul style="list-style-type: none"> <li>• Several Issues</li> </ul>
5. Incomplete Risk Assessment	<ul style="list-style-type: none"> <li>• Underestimating the "Black Box"</li> <li>• Political, Financial, Regulatory, and Patent Considerations</li> <li>• Peer Review and Its Limits</li> </ul>

Herzlinger's assessment framework is much more detail/prescriptive and organized differently, but still covers the same areas of evaluation.

## Herzlinger adds two important points to consider.

- Beware true believers – people who are passionate about the cause are often not credible sources of information. Many passionate people in health care delivery. Are they “true believers” though?
- Societal Impact – Most hospitals and many other HC institutions are not-for-profits. They exist to advance their mission for the benefit of society.

## Executive Summary: What Are the Key Points?

The executive summary comprises the key points of the business plan condensed into one or two pages.

- Many investors/senior managers will only read the executive summary. If they read more it will be sections selected based on their assessment of the ES.
- Answer the questions:
  - What is the opportunity?
  - How are you going to capitalize on the opportunity?
  - What makes you special?
  - What is the risk/reward picture
- Be wary of “sugar-coating” or you’ll be seen as a “true believer.” Your BP and your ES should offer a frank assessment of risks in addition to the benefits associated with funding/implementing your plan.

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## Company Description: Why Are You Different?

The purpose of this section is to demonstrate what separates your company from any others pursuing the same opportunity (and others *are*).

- Do include a description of your organization, e.g., size, historical growth, structure, etc., but being descriptive is not sufficient.
  - How do the pertinent aspects of your organization position you to make the most of the opportunity?
- Most important – describe the team. Many consider the team more important than any other component.
  - Your strategies will not work as well as you expect and you will face setbacks. A good team will find a way to succeed.
- Is there anything special that your organization brings to the table (e.g., proprietary technology)?

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## Guess Who

The company will engage in research, development, and manufacture and sales of integrated electronic structures to fulfill the needs of electronic systems manufacturers. This will include thin films, thick films, semiconductor devices, and other solid state components used in hybrid and monolithic integrated structures.

A variety of processes will be established, both at a laboratory and production level. These include crystal growth, slicing, lapping, polishing, solid state diffusion, photolithographic masking and etching, vacuum evaporation, film deposition, assembly, packaging, and testing, as well as the development and manufacture of special processing and testing equipment required to carry out these processes.

Products may include diode transistors, field effect devices, photo sensitive devices, photo emitting devices, integrated circuits, and subsystems commonly referred to by the phrase "large scale integration." Principal customers for these products are expected to be the manufacturers of advanced electronic systems for communications, radar, control and data processing. It is anticipated that many of these customers will be located outside California.

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## Company Strategy: How Will You Achieve Success?

How is your organization going to capitalize on the opportunity in light of the business environment (i.e., competitors, regulation, etc.)

- Strategy is the big picture.
- Why is your strategy the right one for the business environment and your organization?
- What does your organization need to do to succeed?
  - Discuss key tactics but only in as much detail as necessary.
- How will you adapt your strategy if the business environment changes?

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## Adapt to succeed

- Some of your planning assumptions *will* prove incorrect.
- Altering direction quickly can be the difference between success and costly failure.
- Venture capitalists look for entrepreneurs with a track record of adaptation in the face of adversity.
- It can be useful to identify a "trigger point" for particularly critical or uncertain planning assumptions.

"Everyone has a plan until they get punched in the mouth."

- Mike Tyson

"In preparing for battle I have always found that plans are useless, but planning is indispensable."

- Dwight D. Eisenhower

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## Financial Review: How Much? When? At What Risk?

What is the financial justification for pursuing the opportunity?

- Pro-forma financial statements (income statement, balance sheet, cash-flow).
- Your pro-forma statements will be wrong and everyone knows it.
  - ✓ Make sure that all of the critical assumptions underlying the pro-formas are clear and are defensible.
  - ✓ Include sensitivity or scenario analyses related to the most critical assumptions.
- If you are asking for an investment, what is the return for the investor and when is the investor likely to realize it (what is the exit strategy)?
- What are the financial implications if the plan fails? Is there any salvage value or is the entire investment lost?

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## Action Plan: What Will You Do?

What steps must you take to position your organization to successfully carry out your business plan?

- Do you need to change the organizational structure?
- Will new policies or procedures be required?
- Do you need new talents/skills in the organization?
  - How will you fill that need, training or recruiting?
- If this is a plan for an existing organization, how will you build support among your staff?
- Will you need to build support among any other groups (e.g., government, community, etc.)?

*Anything that must be done, but that isn't a strategy or tactic belongs in the action plan.*

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## Make your case, but don't be a "cheerleader" or "true believer."

- The primary purpose of your business plan is to secure support (including funding) for your venture.
  - ✓ Your business plan should build a case for taking action.
- There is a very good chance that your first attempt to secure support will fail and you will need a second (or third or fourth) opportunity to make your case.
  - ✓ Make sure that your plan demonstrates that you are an intelligent, clear-eyed businessperson that should be taken seriously.
  - ✓ Don't oversell and avoid "delusional optimism."
  - ✓ Clearly state your assumptions and tie them to your environmental assessment.
  - ✓ Don't give short shrift to the discussion of risks.

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## How Does Good Planning Go Bad?

### A narrow mindset

- Bipolar thinking: Pollyanna or Eeyore?
- Lack of *allocentrism*

Covered in the third section of this course.

### Passive or vague strategies

- Evaluate/assess/plan *versus* do/implement/change
- Too many buzzwords and ambiguous statements
- Lack of measures of success and/or accountability

### Business plans lacking

- Appropriate market and demand assessment
- Forecast financial statements
- Analysis of "true" economic impact

Covered in Spring A

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## Appendix: Components of an Environmental Assessment

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## Components of an Internal Environmental Assessment

Element of Assessment	Questions Answered
<b>Inventory of Services</b> Continuum of care Core or distinctive competencies Facility and technological capabilities Portfolio analysis	Are there gaps in the services we offer? Are there particular services that we should promote as distinctive competencies? Do we have the appropriate level of technology and type of facilities for the patients we hope to serve in the future? Should we "make" or "buy" those services in which we do not have a core competency? Should we reinvest or divest certain services?
<b>Utilization Trends</b> Inpatient and outpatient volume Average length of stay Service line strengths and vulnerabilities	How has our business shifted over time by patient care setting (inpatient, outpatient, home, physician office), and is this the appropriate setting? In which service lines are we vulnerable to changes in use rates, physician practice patterns, managed care restrictions, and inroads by competitors? Are we capitalizing on those services where we are particularly strong?

Source: Health Care Strategy for Uncertain Times, Jennings Ryan & Kolb, 2000

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## Components of an Internal Environmental Assessment

Element of Assessment	Questions Answered
<b>Medical Staff Profile</b> Specialty mix Geographic distribution Activity levels, including physician dependency and loyalty Prevalent practice types Age mix and dependency Board certification	Do we have appropriate specialty coverage for the population we serve? Do we have enough primary care physicians to support affiliated specialists? Do we have an adequate referral base and geographic coverage? Whom do we rely on most for our referrals and attending coverage? Are there opportunities to increase the loyalty of physicians? Are we prepared to meet the practice needs of new physicians? Are we vulnerable in any particular specialty to physician retirement or down-sizing? Is our medical staff adequately trained?
<b>Financial Performance</b> Key financial ratios Financial capability Service line contribution margin and net income Case mix adjusted cost position	How well are we doing financially? Do we have the financial capability to sustain operations and fulfill our mission? Which service lines are most critical to our future financial success? For which service lines must we improve financial performance? Should we reinvest or divest certain services? Is our cost position in line with competitors?

Source: Health Care Strategy for Uncertain Times, Jennings Ryan & Kolb, 2000

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## Components of an Internal Environmental Assessment

Element of Assessment	Questions Answered
Payer mix Dependency on specific payers Level of managed care participation Dominant managed care payment methods Payer-specific contribution margin and net income	Upon which payers are we most dependent? Is our organization in appropriate managed care plans, given our patient population? Are there opportunities to improve our relationships with payers and to share contracting risks and rewards? What is our payment level, and what portion is under our control? How should this affect our pricing strategy?
Quality and service Customer satisfaction and loyalty Brand awareness Outcome measures	In which clinical and service areas can we offer increased value to our patients? What is our brand awareness, and how can we improve or capitalize on it to address the organization's and patients' best interests?
Work force issues Vacancy and turnover rates Average time to fill vacancies Compensation and benefit levels Employee satisfaction Productivity Skill level Professional development	Have we adequately protected a valuable asset of the organization through adequate employee compensation, education, and professional development? Are there opportunities to increase productivity?

Source: Health Care Strategy for Uncertain Times, Jennings Ryan & Kolb, 2000

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## Components of an External Environmental Assessment

Element of Assessment	Questions Answered
Service Area Definition Based on patient origin, market share, and geographic continuity	From which geographic areas do we derive the majority of our patients? What populations are dependent on us for a large proportion of our care? Is the service area reasonably defined to include not only those markets where we have considerable presence but also those we would ultimately target?
Socioeconomic Profile Population projections (age, gender, ethnicity) Household income and poverty levels Unemployment and educational levels Insurance coverage	How will the population we serve today grow or decline? How do our current (or proposed) services match our population's needs?
Use Rate Trends Admission rates by service line and age Trends in average length of stay Outpatient visit rates (ambulatory surgery, ER, observation, clinic visits, etc.)	How much will the demand for services change over the planning horizon? How will expected changes in length of stay (based on technology trends and payer pressure) affect the resource requirements to meet demand?

Source: Health Care Strategy for Uncertain Times, Jennings Ryan & Kolb, 2000

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## Components of an External Environmental Assessment

Element of Assessment	Questions Answered
<b>Market Share</b> Trends by geography, payer, and service line Key competitors	Has the organization's market position eroded or strengthened over time? In which areas are we the strongest, geographically and clinically? Who are our key competitors by service and payer, and where have they made inroads?
<b>Competitor Profiles</b> Key strengths and weaknesses Geographic distribution Contracting and pricing strategy Utilization and market share trends Financial performance and productivity Niche players and substitutes Consolidation or affiliation trends	How can we take advantage of competitors' weaknesses? How do our financial performance and productivity compare to those of our competitors? Are our services priced competitively? Are we vulnerable to encroachment by niche players for easily substitutable services? How are we positioned with respect to the boom in alternative medicine? How much has the market consolidated, and how will that affect our contracting opportunities and market position?

Source: Health Care Strategy for Uncertain Times, Jennings Ryan & Kolb, 2000

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## Components of an External Environmental Assessment

Element of Assessment	Questions Answered
<b>Physician Practice Trends</b> Physician consolidation trends Ownership and affiliations Supply and demand Aging/retirement threats	Are we vulnerable to losing any key physicians to competitors or retirement? Is there a shortfall of physicians in any specialty in our market? How does our medical staff compare to the market as a whole? Do our services and facilities match our physician partners' needs?
<b>Legislative Environment</b> Impact of proposed changes in federal regulation (e.g., Medicare funding) Not-for-profit status regulations Solvency, capital, financial requirements Certificate of need (CON) and Medicaid changes	What changes in regulation are possible? What would be the impact on us of any such changes? What tax or other incentives are being developed that might affect our strategy?

Source: Health Care Strategy for Uncertain Times, Jennings Ryan & Kolb, 2000

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## Components of an External Environmental Assessment

Element of Assessment	Questions Answered
<b>Technological Environment</b> New clinical developments Information system requirements	To what extent are existing technologies maturing? What are the significant trends and future possibilities? Are specific revenue streams vulnerable to new technologies under development? What alternative revenue streams should we consider as replacements?

On occasion, environmental assessments will include additional elements such as community health status assessments and employer profiles.

Source: Health Care Strategy for Uncertain Times, Jennings Ryan & Kolb, 2000

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# Using Scenario Planning to Reshape Strategy

Rather than trying to predict the future, organizations need to strengthen their abilities to cope with uncertainty. A new approach to scenario planning can help companies reframe their long-term strategies by developing several plausible scenarios.

# Using Scenario Planning to Reshape Strategy

Rather than trying to predict the future, organizations need to strengthen their abilities to cope with uncertainty. A new approach to scenario planning can help companies reframe their long-term strategies by developing several plausible scenarios.

BY RAFAEL RAMÍREZ, STEVE CHURCHHOUSE, ALEJANDRA PALERMO, AND JONAS HOFFMANN

IN RECENT YEARS, organizations have been caught off guard by economic volatility, unexpected political events, natural disasters, and disruptive innovations. In response, we are seeing increased interest in scenario planning. Rather than tying their company's future to a strategy geared to a single set of events, many senior executives are coming to the view that smart management benefits from a richer understanding of the present possibilities afforded from multiple views about possible futures.

Scenario planning came to prominence following World War II and gained recognition in the corporate world in the late 1960s and 1970s, around the time when Royal Dutch/Shell used it to help address the turbulence<sup>1</sup> caused by the 1973 oil crisis. While several different approaches to scenario planning have emerged since then, this article focuses specifically on what we call the Oxford scenario planning approach.<sup>2</sup> This approach is intended to be collaborative in order to get individuals and groups at all levels and functional backgrounds within an organization to examine an array of factors that contribute to the future and, in the process, to reframe their collective understanding of the present. (See "About the Research," p. 32.)

Unlike approaches to scenario planning that take a *probabilistic* stance (that is, making predictions in percentage terms or as best-case/worst-case scenarios<sup>3</sup>) or a *normative* stance (that is, envisioning what a future should look like), the Oxford scenario planning approach is based on *plausibility*. By recognizing the part of uncertainty that is unpredictable<sup>4</sup> and by

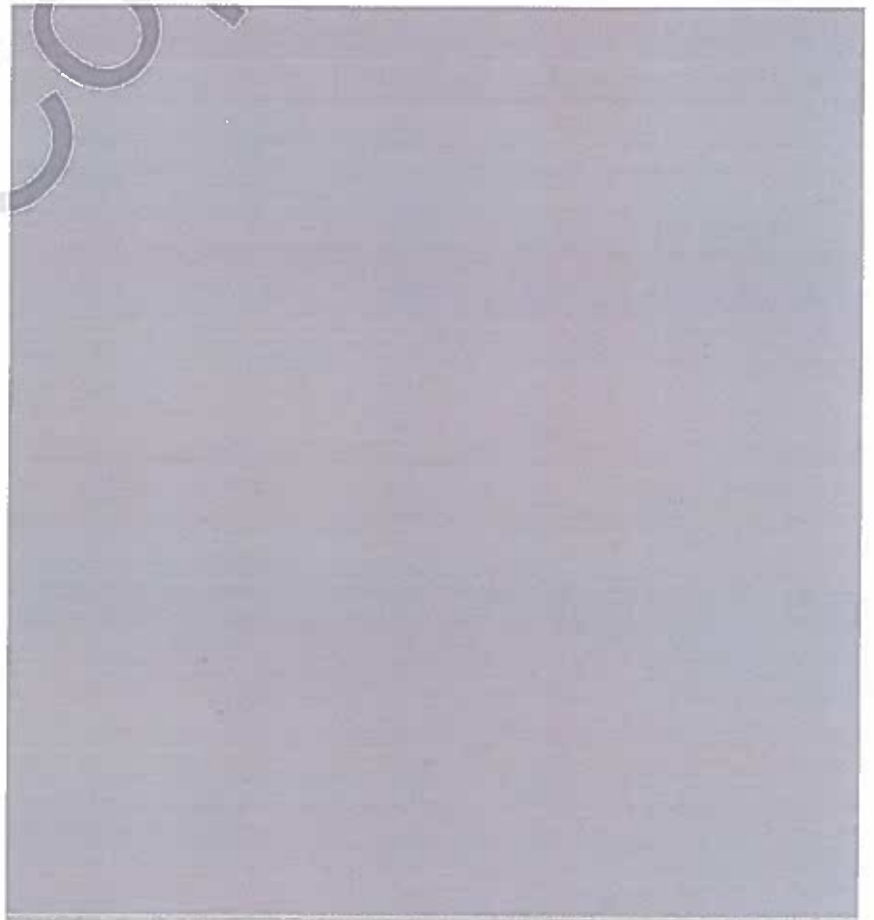


## THE LEADING QUESTION

How can organizations use scenario planning in turbulent times?

## FINDINGS

- ▶ Instead of trying to determine the most probable outcome, explore a number of plausible scenarios.
- ▶ Develop scenarios by considering the effects of plausible changes in the larger contextual environment.
- ▶ Include a variety of participants in the scenario planning process.



actively exploring the sources of the turbulence and uncertainty, the goal is to iteratively and interactively generate new knowledge and insights to help organizations re-perceive their circumstances.<sup>5</sup>

During periods of turbulence, unpredictable uncertainty, novelty, and ambiguity (what the Oxford scenario planning approach refers to as TUNA conditions), organizations frequently experience serious challenges that threaten existing value chains, communities, and even whole fields of endeavor. Such conditions can be unsettling and destabilizing on many different levels. But they also present opportunities for organizations to reframe their strategies and innovate.<sup>6</sup>

### ABOUT THE RESEARCH

This paper is part of a long-standing research and practice stream on scenario planning practices and the use of scenarios as a scholarly methodology. The research has included integrating scenario planning with other fields such as social ecology, sense-making, and design through the Oxford Futures Forum, an interdisciplinary forum. The research has also included an inquiry on specific scenario planning issues raised by participants in executive development programs. Among other things, we have conducted a survey that was completed by 163 professionals who attended our executive education program and that assesses how organizations use scenario planning interventions. We also conducted philosophical and social science investigations into the nature of plausibility, probability, uncertainty, and turbulence. In addition to coauthoring two books, *Strategic Reframing: The Oxford Scenario Planning Approach* (Oxford University Press, 2016) and *Business Planning for Turbulent Times: New Methods for Applying Scenarios* (Earthscan 2008), the lead author of this article has examined the ideas in a number of articles. We wish to thank a number of our colleagues, including Kees van der Heijden and Angela Wilkinson, as well as Trudi Lang, Cynthia Selin, John W. Selsky, Jerry Ravetz, and Malobi Mukherjee.

A core feature in the Oxford approach is making a distinction between the immediate business environment an organization inhabits (where business transactions take place) and the broader environment, or context, in which it operates.<sup>7</sup> In principle, our approach focuses on two layers. The first layer is the immediate business environment and includes a company's suppliers, customers, competitors, partners, and other stakeholders. The second layer is made up of all the factors that are beyond the organization's direct influence. Scenario planning is about exploring how the second layer might transform the first layer. (See "The Role of the Contextual Environment in Scenario Planning.")

In recent years, the Oxford approach has been used to examine a variety of circumstances, including the future of retailing in India, the tourism industry

in Mexico, the changing environment in global shipping,<sup>8</sup> and the future role of the European Patent Office.<sup>9</sup> Our experience shows that different organizations have gone about scenario planning in different ways — there is no cookie-cutter method. Nevertheless, we have found that there are a handful of best practices that the most effective scenario planning processes use. First, they draw on the knowledge and perspective of a broad cross-section of parties, both inside and outside the senior management team. Second, both the participants and the organization are willing to invest time and resources to gain insights.

And third, successful scenario planning processes are committed to examining and understanding *plausible* futures as opposed to *probable* futures. In turbulent and uncertain conditions, it is impossible to assign precise probabilities to possible scenarios.<sup>10</sup> As a result, the Oxford scenario planning approach eschews assigning probabilities to scenarios and instead focuses on identifying and developing scenarios that the group finds plausible, challenging, and useful. Each scenario consists of a story that relates to possible changes in the larger contextual system in which an organization operates.<sup>11</sup>

In this article, we examine two cases in which the Oxford approach to scenario planning was used. The first case involves Rolls-Royce plc, a leading supplier of power systems for aircraft and the marine and energy markets; the second case looks at the Royal Society of Chemistry, a London, U.K.-based international organization involved in advancing the field of chemical sciences. In addition to showing how these organizations used scenario planning, we will discuss the challenges and opportunities of scenario planning more broadly. (See "Putting Scenario Planning to Work," p. 34.)

### Scenario Planning at Rolls-Royce

Rolls-Royce was founded in 1906 to produce quality cars in the United Kingdom. Although Rolls-Royce Holdings plc is no longer in the auto business (that operation is owned by BMW AG), it is currently involved in the design, manufacturing, and distribution of power systems for aviation and other industries. With underlying revenue of £13.8 billion and about 50,000 employees,<sup>12</sup> the company has 50% of the wide-body airliner propulsion market. Rather than selling the equipment outright, it

generates much of its revenue by selling power services by the hour to aircraft operators.<sup>13</sup>

Rolls-Royce avoided the worst consequences of the 2008 financial crash, thanks to its substantial order book and the stability of its aftermarket service business, but in early 2014 the company ran into difficulties. These involved a cyclical decline in wide-body airliner orders, the slowdown in the growth rate of the Chinese economy, and the end of a commodities boom, which impacted the corporate jet business. Also, oil price declines affected both the marine and energy markets, and the company's civil nuclear power business suffered in the wake of the accident at a nuclear power plant in Fukushima, Japan, in 2011. While these events were mostly unrelated, they affected every aspect of Rolls-Royce's business. During 2014 and 2015, management issued five profit warnings, and the share price fell more than 50%. An activist investor bought just over 10% of the stock, and there were calls from some commentators to break up the company.

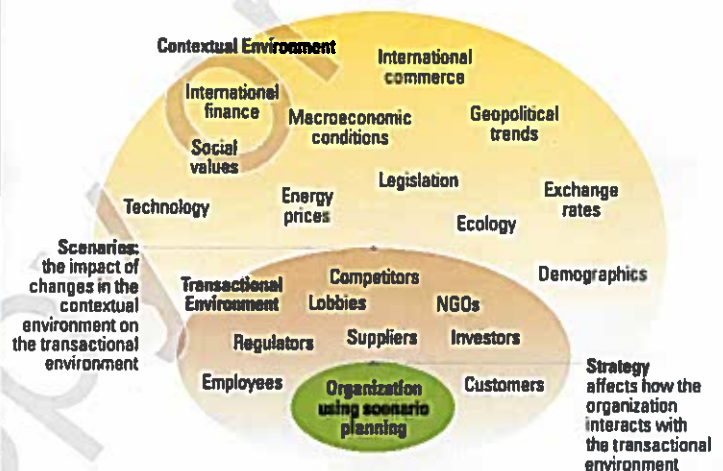
The arrival of a new CEO in July 2015 greatly intensified the company's search for ways to improve its prospects. That summer, several dozen of the company's top managers participated in an executive education course at Oxford University. One of the early sessions focused on scenario planning. Based on what the executives heard, some of them began to lobby internally within Rolls-Royce for a company-wide scenario planning process. The idea was to catalog significant factors that might affect Rolls-Royce by the year 2040<sup>14</sup> and to develop a set of strategic questions. Management agreed to pursue this course, and over the next few months, management, in conversation with board members, began working with some of the authors of this article to design and run a program for developing and reviewing a set of future scenarios.

**Process** To kick off the process at Rolls-Royce, about 25 mid- and senior-level Rolls-Royce executives were selected from different business units, functions, and locations. In preparation for a three-day workshop slated for early 2016, this group was asked to begin studying a wide range of topics deemed to have relevance to the company's future. Among the topics: the future of Moore's law; tools for detecting counterfeit parts (and the distinctions

## THE ROLE OF THE CONTEXTUAL ENVIRONMENT IN SCENARIO PLANNING

In using the Oxford scenario planning approach, it is important to distinguish between immediate actors one does business with (located in the smaller brown oval) and the diverse factors in the larger contextual environment. The contextual factors are beyond the influence of the organization.

Scenario planning is about exploring how larger contextual factors might affect an organization. Scenarios are developed by combining contextual factors (particularly ones that are less well-known and more uncertain). Each scenario will be based on a unique combination of contextual factors.



between fake and real); and how transportation needs are likely to change in response to factors such as environmental concerns and migration patterns.

On the first day of the workshop, the participants were asked to present posters summarizing their research. Then the group was divided into four subgroups and given the task of creating scenarios for Rolls-Royce for 2040. According to the assignment, the scenarios had to be plausible and relevant to Rolls-Royce's circumstances, and also had to challenge some of the assumptions underlying the company's current strategies.

On the second day, the subgroups shared their draft scenarios with the larger group. Based on the feedback, participants began to coalesce behind three draft scenarios. The first scenario envisioned a world of high connectivity, where efficiency and collaboration would be the norm. The second one saw the emergence of a new world order, where India and China leverage technology to rival the United States, and other countries are forced to adjust accordingly. And the third scenario anticipated a highly divided (and unequal) digital future that

some groups would be able to take full advantage of and others would not.

On the third day of the workshop, participants held a final meeting to review and critique the scenarios, and to consider four strategic questions.

- **What would digitization look like in the future?** For example, in what ways would digital technology radically reshape society and the way business is conducted?
- **What factors would affect relations between employees and companies in 2040?** For example, how might changing employee expectations about long-term employment affect how organizations are structured?
- **What conditions will determine the future of emerging markets?** For example, to what extent would political factors and factors such as controls on

immigration weaken the trend toward globalization?

- **How might technology pathways develop?** For example, how will future technologies change the power systems market?

**Outcomes** Following the three-day workshop, Rolls-Royce management endorsed the scenarios as a new basis for the 2016 strategic planning process and began sharing them with the wider strategy community and the company's senior executives. In practice, this meant that any investment proposal had to take into account how it would be affected by each of the three scenarios and what, if anything, should be done to mitigate or exploit the scenarios; investments that didn't meet this qualification were rejected. The scenarios therefore became a determining factor in the selection of the investment initiatives that emerged from the 2016 strategy process. Already, outlines of the scenario futures have begun to become apparent. There is little doubt, for example, that the unfolding digital future provides advantages to some groups and disadvantages to others. According to Rolls-Royce, the scenarios provided the backdrop for the company's 2017 strategy development process.

### Scenario Planning at the Royal Society of Chemistry

In contrast to Rolls-Royce, where the objective of the scenario planning process was to envision future directions for one organization, the goal at the Royal Society of Chemistry (RSC) was broader: to understand how the chemical sciences might evolve over the next 10 to 20 years, and how the changes might impact industry, academia, and society at large.

Scientific, social, and technological trends are rapidly changing the way people live and work, and these changes have affected the nature and practice of chemistry as well as the roles of chemists. While chemistry is a mature discipline and forms the basis of our fundamental understanding of what happens at the atomic and molecular levels, it is also concerned with the creation of new matter and interacts with disciplines such as biology and astronomy. What's more, it plays a key role in solving practical problems such as curing disease; developing sustainable energy, food, and water; and creating new industries.<sup>15</sup> As chemistry faces new opportunities and obligations, the fundamental question was:

### PUTTING SCENARIO PLANNING TO WORK

Here are five important characteristics of the Oxford approach to scenario planning:

**1 Scenario planning involves attending explicitly to what is framed in and what is framed out when setting strategy.** In the scenario planning process, what matters is not so much the organization's strategy itself but the *frame* that strategy is built on. The frame is made up of assumptions, and these assumptions implicitly shape how the strategy comes together. For example, a frame might include the period of time you are considering; the breadth of factors to be included; whether the scenario planning process is to be predominantly competitive and collaborative; whether it is a one-time activity as part of the yearly planning cycle, or whether the strategy should be shared or kept secret.

**2 By proposing a limited number of scenarios, scenario planning enables organizations to re-perceive current and plausible future contexts.** For example, at the Royal Society of Chemistry, the links between disciplines and between scientists and artificial intelligence are different in each of the scenarios.

**3 Scenario planning relies on iterative reframing and re-perception.** By building several frames from the contextual environment factors, strategists have an opportunity to see the actors they do business with take different roles in each scenario. For example, a supplier in one scenario could be a partner in another scenario. This allows strategists to revisit the role configuration used in the current strategy — reexamining the assumptions and bringing in new questions to consider.

**4 Everyone involved in and affected by the process should be considered a learner.** This means that people involved with scenario planning need to work on the organization rather *in* it. Having external facilitators or dedicated staff members assigned to the process helps make this possible.

**5 Scenario planning is designed to explore different types of weak signals.** Either they are weak because they are very new (scenario planning considers how they might look when they have been around longer and are stronger); they are weak in relation to other signals managers might respond to (scenario planning focuses on how they might become salient); or they are weak in relation to the dominant cultural, strategic, or professional frame (scenario planning invites its intended users to look at them from an alternative framework). In order to explore weak signals, scenario planning needs to focus on the plausible as opposed to the probable.

“How should people think about the future of chemistry?”<sup>16</sup>

The mission of the RSC is to advance excellence in the chemical sciences for the benefit of science and humanity. Its roots go back to the 1840s, when a group of 77 scientists, who included doctors, academics, manufacturers, and entrepreneurs, founded the Chemical Society of London. Today, the RSC has more than 55,000 members worldwide and a reputation as an influential champion for the chemical sciences.

In December 2014, the RSC launched a long-range planning initiative with a broad set of goals. Although the initiative did not refer to scenario planning per se, its aim was to identify possible future directions for the chemical sciences and to anticipate, plan, and prepare for how the field might unfold over the next 10 to 15 years.

The RSC began by identifying some of the big questions its leadership wanted to consider: How might the identity of chemistry change? Could chemistry be facing a future in which academic chemistry departments disappear altogether? If public funding is not available to support the type of blue-skies research that has traditionally produced the next major advances, how will future research be funded? And how will increasingly sophisticated technology and computational techniques change the way new hypotheses are analyzed and tested?<sup>17</sup>

**Process** The RSC convened a one-day workshop for the leadership team and selected senior managers to consider a wide range of factors. The workshop helped focus senior staff members from throughout the organization on the importance of taking a broad look at how the field was changing, and it set the stage for defining the new role the RSC could play.

What followed was the development of a multi-phase scenario planning program. In phase one, which ran for three months, approximately 50 stakeholders from industry, government, and academia who had been selected by the RSC leadership team, were interviewed by phone to identify possible trends.

Next, there were a series of follow-up in-person interviews with some of the stakeholders in order to understand controversial viewpoints or, in some cases, to secure buy-in from key chemical industry leaders. During this process, several themes emerged.

Some of the themes had a direct bearing on the chemical sciences (for example, new opportunities for funding research). Others raised questions about how technology might influence the chemical industry, and the effect of changes on intellectual property, the market, and social factors.

Based on the themes, the RSC ran three one-day scenario-planning workshops (two in London and one in Boston) as a vehicle for identifying weak signals that might emerge as important catalysts of future change. The goal was to spark conversations about the future in order to help executives, academics, and policy-makers make more proactive decisions. Each workshop was attended by about 10 people.

In an effort to challenge the assumptions of leaders in the chemical sciences, the RSC developed four scenarios.

- The first scenario focused on the benefits chemistry brings to the world — its ability to provide answers to global challenges, such as climate change, water shortages, natural resources scarcity, and providing health care for an aging population.
- The second scenario focused on changes in the way chemistry is done and how it is organized, envisioning a world where the chemical sciences are increasingly automated and decentralized.
- The third scenario spoke to the growing separation of chemistry into subdisciplines and how that might negatively impact the pipeline of future chemists.
- And the fourth scenario explored the impact of reduced public funding for the chemical sciences.

**Outcomes** These scenarios helped to develop the RSC's long-term strategy and to nudge leaders in the chemical sciences to move beyond conventional thinking and plan for the future. The RSC's original long-range planning team continues to play a role in encouraging the chemical community to reflect on opportunities and challenges. The findings from the scenario planning process were issued in a 2016 report<sup>18</sup> aimed at broadening engagement with RSC communities. The organization's leadership team has said it wants to initiate new activities based on the scenarios, including launching new programs to advance the future of chemistry education and scholarly communication consistent with developments in open-access publishing and the trends in open science; bringing the RSC “futures thinking”

Typically, because the board's role is to question and prod the executive team, scenario planning is easier to align with the board than with the executive team.

conversation to a wider audience (including the organization's general assembly and meetings with international partners around the world); and preparing for the different possible futures through internal strategic conversations with senior management and the RSC's external governing body.

Each element of the RSC's new strategy, which the governing board is slated to approve in July 2017, has been tested against the opportunities and challenges identified by the scenario planning work. The next priority will be to amplify the voice of the chemistry community. This will involve the RSC management sharing success stories from the chemical sciences community not only with other companies but also with governments, funders of research, and society at large. In addition, the RSC has set a goal of improving how it listens to the broader community.

### Reframing Strategy

As the Rolls-Royce and RSC cases show, scenario planning can help strategists look beyond their current circumstances — and with longer time horizons — to test existing strategies, make sense of the causes and effects of turbulent, uncertain, or ambiguous conditions; invent new options; open up or enhance the quality of strategic conversations; and pave the way for collaborative strategies.

So, what does this mean for strategists or policymakers at companies and nonprofit organizations that want to consider future directions? Based on our experience, we have four recommendations.

#### 1. Invest time and effort in preparing participants.

First, it's important to identify who the intended participants in the scenario planning process should be and how these participants learn. Typically, because the board's role is to question and prod the executive team, scenario planning is easier to align with the board than with the executive team. But in cases where strategies have run into trouble or there is a new management team, senior leaders may welcome the opportunity to

engage in scenario planning. We have found scenario planning generates the most value when it's clear who the intended learners are and what they wish to learn. Indeed, as a rule of thumb, organizations should expect to spend twice as much time setting expectations and defining the intent and usability of their scenarios as they do producing the scenarios themselves. It pays to invest time and effort throughout the process — both in preparing the participants and setting expectations at the outset, as well as in using the scenarios in strategy development. Otherwise, the scenario planning exercise may become a waste of time.

2. Help participants identify the assumptions about the future that underpin their current strategy. You should be prepared to help the learners articulate their sense of the future and the set of assumptions they are using in their current strategy. In our experience, this part of the process depends heavily on gathering information and developing insights gained from internal and external interviews. Scenario planning that explores a limited number of scenarios (usually between two and four) helps to develop an alternative to the existing framing.

3. Be prepared to invest significant amounts of time and resources in the scenario planning process. Although every situation is different, the amount of time and resources required will depend on what the organization is trying to achieve and its goal. Scenarios that will be presented broadly or publicly tend to require much more detail and peer review (and, as a result, more time and budget) than less formal scenarios involving small teams who are used to working together.

4. Remember that scenario planning is an iterative process. In our experience, this point cannot be overemphasized. It's important to recognize that the initial set of scenarios that organizations develop may not be sufficient. Often, additional insights are gathered in a second iteration. Rolls-Royce, for example, began with a total of 12 scenarios before multiple iterations led it to focus on three.

Organizations need to have criteria for assessing whether the scenarios they develop are plausible. (By plausible, we mean that they should be neither too improbable nor too familiar.) At the same time, executives and board members need to ask themselves whether the scenarios are sufficiently challenging, easy to communicate, and capable of being adopted.

As we have worked with organizations, we have noticed that considerable value can be extracted from reconsidering and re-perceiving the immediate business environment that each of the different scenarios implies. In reconsidering how the roles of one actor change from one scenario to another, managers can gain new perspectives and see how new actors begin to emerge. The scenario planning approach we have described helps organizations assess the kinds of threats and opportunities that might occur in turbulent, unpredictable, and ambiguous settings. By freeing the mind from the current framing, strategists can use the process to envision and begin to implement a new set of options.

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## REFERENCES

1. F.E. Emery and E.L. Trist, "The Causal Texture of Organizational Environments," *Human Relations* 18, no. 1 (February 1965): 21-32; and R. Ramirez, J. Selsky, and K. van der Heijden, eds., "Business Planning for Turbulent Times: New Methods for Applying Scenarios" (London: Earthscan, 2008).
2. R. Ramirez and A. Wilkinson, "Strategic Reframing: The Oxford Scenario Planning Approach" (Oxford, U.K.: Oxford University Press, 2016).
3. "Best-case" and "worst-case" scenarios are not seen as true scenarios for the purposes of the Oxford scenario planning approach; instead, they are disguised forecasts.
4. F. Knight, "Risk, Uncertainty, and Profit" (Boston: Hart, Schaffner, and Marx Prize Essays 31; Houghton Mifflin Co., 1921).
5. R. Ramirez and C. Selin, "Plausibility and Probability in Scenario Planning," *Foresight* 16, no. 1 (2014): 54-74; E. Eidinow and R. Ramirez, "The Aesthetics of Story-Telling as a Technology of the Plausible," *Futures* 84, part A (November 2016): 43-49; and R. Ramirez and J. Ravetz, "Feral Futures: Zen and Aesthetics," *Futures* 43, no. 4 (May 2011): 478-487.
6. R. Ramirez and J. Selsky, "Strategic Planning in Turbulent Environments: A Social Ecology Approach to Scenarios," *Long Range Planning* 49, no. 1 (February 2016): 90-102; and R. Ramirez and U. Mannervik, "Strategy for a Networked World" (London: Imperial College Press, 2016).
7. This distinction was first introduced by Emery and Trist in "The Causal Texture of Organizational Environments" and was more fully developed in K. van der Heijden, "Scenarios: The Art of Strategic Conversation" (New York: John Wiley & Sons, 1996).
8. See "Shipping Scenarios 2030," [www.shippingsscenarios.wartsila.com](http://www.shippingsscenarios.wartsila.com).
9. See S. Elahi and R. Ramirez, "Appendix E: European Patent Office Case Study," in Ramirez and Wilkinson, "Strategic Reframing: The Oxford Scenario Planning Approach."
10. Probability involves possible deviance from trajectories established from past facts and their distribution. In turbulent conditions, these facts and their distributions are either irrelevant or nonexistent.
11. Ramirez and Wilkinson, "Strategic Reframing: The Oxford Scenario Planning Approach," 42-43.
12. Rolls-Royce Holdings plc Annual Report 2016, [www.rolls-royce.com](http://www.rolls-royce.com).
13. The "power by the hour" concept was introduced in the 1960s for the Viper engine developed by Armstrong Siddeley (which later became Bristol Siddeley and then Rolls-Royce). It was conceived as a tool to provide maintenance cost assurance. The company contracted with customers for the total in-service cost of the product, not only providing airline customers with predictable operating costs but also aligning Rolls-Royce's commercial incentives with those of the customer.
14. The year 2040 was chosen because it was beyond Rolls-Royce's long-range technology scanning horizon of 20 years and beyond the planned introduction dates for any products under consideration.
15. S. Matlin, G. Mehta, and H. Hopf, "Chemistry Embraced by AI," *Science* 347, issue 6227 (March 13, 2015): 1179.
16. G. Whitesides, "Reinventing Chemistry," *Angewandte Chemie International Edition* 54, issue 11 (March 9, 2015): 3196-3209.
17. Researchers at Johns Hopkins University recently developed a "map" to predict the safety of untested chemicals, using data collected by the European Chemicals Agency.
18. "Future of the Chemical Sciences," [www.rsc.org](http://www.rsc.org).
- i. R. Ramirez, "What Might Decision-Making Be in a Complex World?" invited lecture coauthored with J. Ravetz, T. Lang, and A. Wilkinson, International Risk Assessment and Horizon Scanning Symposium 2010, March 2010, Singapore.

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## A Note on Scenario Planning<sup>1</sup>

### Background

Scenario planning is a process that stimulates imaginative, creative thinking to better prepare an organization for the future. Participants in a scenario planning exercise first conduct research to understand the major forces that might move the world in different directions. They then map out a small number of possible alternative futures (called "scenarios"), craft narratives to describe these scenarios, and develop options for their organization for managing within these future worlds.

Scenario planning has been described as a way of rehearsing the future to avoid surprises by breaking through the "illusion of certainty." According to an experienced participant: "The purpose of the exercise is not to come up with a forecast, because you know it will be wrong. Instead, it's to draw a circle around multiple possibilities and think about whether you are prepared to face the range of futures that might unfold. It also helps you think about how you might be a catalyst for moving the world a little bit in the direction you want it to go."

Unlike traditional strategic planning, which assumes that there is usually one best answer to a strategic question, scenario planning entertains multiple possibilities. Unlike contingency planning, which normally focuses on a single uncertainty, scenario planning investigates several uncertainties simultaneously. And unlike simulation modeling, which is heavily numbers-driven, scenario planning involves subjective interpretation as well as objective analysis. For these reasons, the technique is particularly useful in situations where uncertainty and change are high, costly surprises have occurred in the past, and the quality of strategic thinking or the supply of new opportunities is low.<sup>2</sup>

Scenario planning was originally used for military planning during World War II. In the early 1970s, it was adapted for industry and popularized by planners at RoyalDutch/Shell, who were looking for better ways to prepare managers for possible changes in the price of oil. Using the new approach, Shell was the first to see the emerging overcapacity in the industry, was better prepared to deal with the ensuing drop in demand, and was consistently able to forecast oil-price changes better than its competitors. Since then, companies in many other industries have used scenario planning for such purposes as providing input to strategic planning, improving investment decision-making, and

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<sup>1</sup> This note draws on Peter Schwartz, *The Art of the Long View* (New York: Currency Doubleday, 1996); Lawrence Wilkinson, "How to Build Scenarios," in *Wired*, "Scenarios: The Future of the Future," Special Edition (1995); and Jay Ogilvy and Peter Schwartz, "Plotting Your Scenarios," *Global Business Network* (2004).

<sup>2</sup> Paul J. H. Schoemaker, "When and How to Use Scenario Planning: A Heuristic Approach with Illustration," *Journal of Forecasting*, 10 (1991): 550.

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Professor David A. Garvin and Senior Researcher Lynne C. Levesque prepared this note as the basis for class discussion.

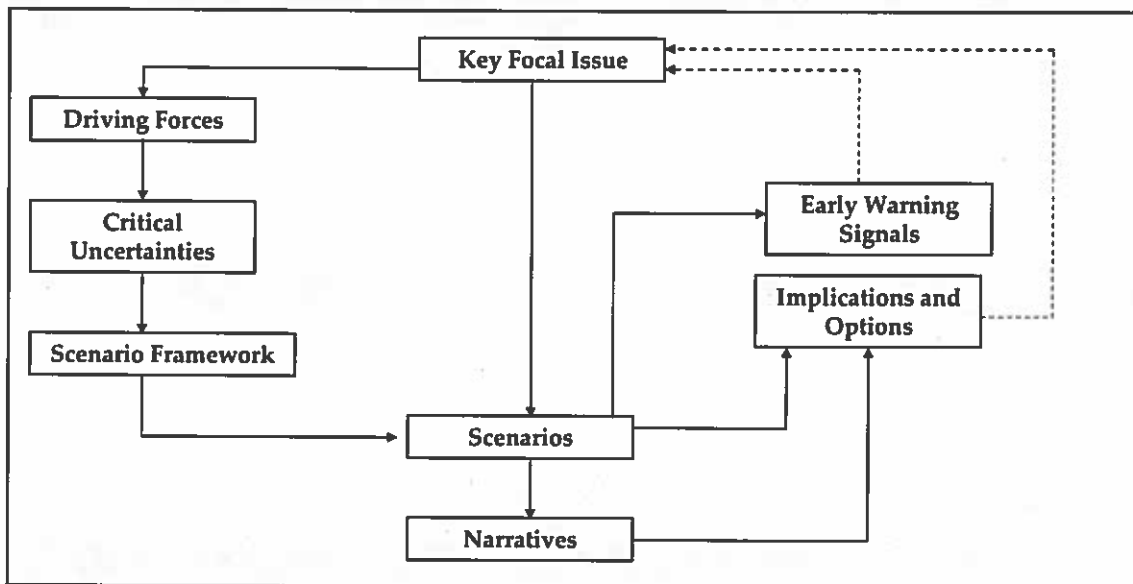
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guiding thinking about competitive moves (e.g., product line extensions, new market entry, or the formation of joint ventures and alliances). Specific applications include a regulated monopoly's preparation for a more free-market-oriented existence in an increasingly integrated Europe, the Los Angeles Department of Water and Power's investigation of future residential water use, and a health-care system's search for options to best position itself for an uncertain future.

## Components

Scenario planning involves several elements or components that together yield a composite, multifaceted view of the future. See Figure A for an overview of the process and the relationship among components.

Figure A Scenario Planning Components



Source: Casewriter.

**Key focal issue** All scenario planning exercises are built around a critical choice or key focal issue. Usually, the issue is a significant, upcoming decision or a strategic uncertainty that has important, long-range consequences for the fortunes of the organization. The scope and timeframe for choices and concerns should be clearly identified. Many key focal issues take the form of questions. Examples include: "Should we build a research facility in India within the next five years?" "Should we invest in new customer-based technology during the coming year?" and "What is the future of white-collar work in the United States over the next 10 years?"

**Driving forces** Research is an important part of scenario planning. It normally requires interviewing an organization's key stakeholders—customers, competitors, and suppliers—as well as "remarkable people," truly unconventional thinkers who may be in fields or industries unrelated to the issue at hand. This research aims to uncover driving forces: themes and trends that are likely to

affect, influence, and shape the key focal issue in fundamental ways. Among the major categories of driving forces are:

- Social dynamics (e.g., changes in population, demographics, lifestyle choices, consumer demands, and societal values);
- Economics (e.g., changes in international trade flows, the value of the dollar or the euro, and industry structure);
- Political affairs (e.g., changes in the electoral landscape, tax legislation, regulations, and the legal environment); and
- Technology (e.g., changes in hardware, software, communication devices, and applications).

In each case, driving forces are further divided into two categories: predetermined and uncertain. Predetermined forces are virtually inevitable; they are unlikely to change radically over the defined timeframe. Examples include trends that are already in the pipeline (such as demographic shifts), slow-changing phenomena (such as the development of new oil resources), and seemingly inevitable collisions (such as the Social Security crisis in the U.S.). Once these predetermined factors have been identified, all other driving forces are classified as uncertain.

**Critical uncertainties** Some of these uncertain forces are more important than others. Those uncertain driving forces that are most likely to define or significantly change the way the future unfolds around the key focal issue are ranked by level of uncertainty and importance to the organization. The top two that are most influential and informative are defined as critical uncertainties.

**Scenario framework** Each critical uncertainty is reduced to a single spectrum or axis of uncertainty, with polar cases at each extremity. The two axes are then combined to create a 2x2 matrix with four different quadrants of uncertainty or futures to be explored. The goal is to end up with a few, clearly contrasting environments “whose differences make a difference to decision-makers.”<sup>3</sup> An example comes from the California wine industry’s inquiry into the future of their business. The first critical uncertainty was a set of changes in the regulatory environment; this axis ranged from a tight regulatory environment to a loose one. The second critical uncertainty was the image of wine with consumers; that axis ranged from a positive, health-priority image to a negative, alcohol-infused image. In combination, these axes produced four distinct futures.

**Scenarios** The different futures that result from the interaction of the critical, selected uncertainties are called scenarios. They are plausible, alternative hypotheses about how the world might unfold, specifically designed to highlight risks and opportunities facing the organization. Effective scenarios challenge the thinking of participants by instilling a deeper appreciation of the many factors that could shape the future. There are no right or wrong scenarios. According to one expert: “Scenarios don’t fall neatly into “good” and “bad” worlds, desirable and undesirable futures. [They] are mixed bags, at once wonderfully dreadful and dreadfully wonderful.”<sup>4</sup> The California wine industry example resulted in four possible futures: a loose regulatory environment with a positive image (greater supply, higher demand, but possibly lower prices); a loose regulatory environment with a negative image (intense competition, lower demand, and wineries facing possible bankruptcy); a restrictive regulatory environment with a positive image (higher demand and

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<sup>3</sup> Peter Schwartz, *Art of the Long View*, p. 243.

<sup>4</sup> Lawrence Wilkinson, “How to Build Scenarios,” p. 4.

higher prices); and a restrictive regulatory environment with a negative image (high prices but low demand, leading to excess supply).

**Narratives** Each scenario is then fleshed out and woven into a narrative or story.<sup>5</sup> These stories must be logically coherent and consistent. They should hang together like a well-written novel, with persuasive and surprising plots that stretch the imagination and break old stereotypes without being seen as science fiction. To that end, it is important to link the scenarios back to the present by answering the question, “How did the world get from here to there?” This link increases the probability that scenarios will be perceived as realistic, rather than as far-fetched staff exercises. It also overcomes a common concern of middle managers—that big picture “strategic scenarios don’t address the competitive issues and the critical decisions that they face in the trenches of their business.”<sup>6</sup>

**Implications** Once narratives have been created, participants return to the key focal issue, place the organization within each of the four scenarios, and explore the implications of each alternative future. This examination results in the identification of strengths and vulnerabilities, alternative strategies, and options to address gaps in capabilities, as well as further research requirements, necessary actions, and critical decisions and choices.

**Early warning signals** Early warning signals are leading indicators that highlight the likely emergence of one scenario or another. They strongly suggest that the world is, in fact, moving in a particular direction, and the signals are best used to trigger strategic re-evaluation and midcourse corrections. If carefully selected, these signals can give a company a head start on the competition when changes in the environment occur. Possible examples include changes in governmental regulations, the outcome of pending lawsuits, and shifts in the price of basic commodities like oil.

## Methodology

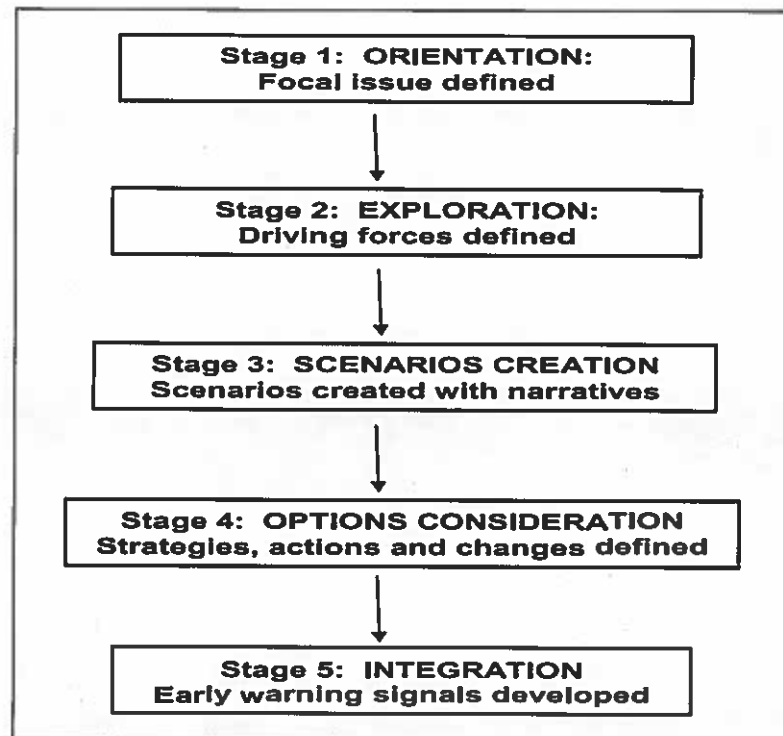
A typical scenario planning exercise involves 15 to 30 participants, selected to represent a cross-section of the company or organization. Often, customers, suppliers, regulators, industry experts, academics, and other relevant outsiders are involved as well, largely to provide information. The process typically requires significant preparatory research, a series of half-day or full-day workshops, and a number of senior management debriefing meetings. A complete exercise takes from three to nine months and proceeds through the following five steps: orientation, exploration, scenario creation, identification of options and implications, and integration into current management processes. (See Figure B for scenario planning stages; see Exhibit 1 for a detailed example of a scenario planning exercise.)

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<sup>5</sup> The term “scenarios” is often used interchangeably with the terms “stories” or “narratives.” However, scenarios do not have to be presented in narrative form and may involve the use of other media, such as live or videotaped dramatic scenes.

<sup>6</sup> Stephen M. Millett, “The Future of Scenarios: Challenges and Opportunities,” *Strategy & Leadership*, 31 (2) (2003): 16.

Figure B Scenario Planning Stages



Source: Casewriter.

**Stage 1: Orientation.** This stage includes background interviews and other research to determine the key issue and associated challenges.

- **End product.** The orientation stage results in a clear statement by senior management of the key focal issue, with specific time and place dimensions.

**Stage 2: Exploration.** This stage involves extensive research and workshop sessions to identify and deepen the team's understanding of the driving forces and critical uncertainties surrounding the focal issue.

- **Identify, analyze and rank driving forces.** In this interactive brainstorming step, the planning team defines the many driving forces in the macro-environment that impact the success or failure of the key focal issue, and distinguishes those forces that are predetermined from those that are uncertain.
- **End product.** This step produces both a set of driving forces and a list of critical uncertainties. Once the team is satisfied with the list of uncertain driving forces, it then ranks them to identify the two critical uncertainties that are most influential and informative to serve as the basis for developing scenarios.

**Stage 3: Scenarios and narratives creation.** This stage involves two steps: the selection of the scenario framework and the creation of narratives.

- **Select scenario framework.** The team creates a 2x2 matrix from the two most critical uncertainties, resulting in four scenarios. The team then identifies the key characteristics of the scenarios, their causes, and the events that occurred as the world evolved from the present to the future point.
- **Create the narratives that describe the scenarios.** This next step involves a great deal of imagination as the team creates narratives for each scenario. This step is often undertaken by subteams, with each assigned to write one narrative.

Scenario planning experts suggest starting the process with the development of a headline, a catchy title or name for the scenario that can be easily remembered. Headlines can be song or movie titles, cartoon characters, or memorable phrases. Writers then weave the scenario characteristics and driving forces into stories that match the headline.

Here, several techniques are helpful for building compelling narratives:

- **Craft a newspaper story.** The technique starts with a headline describing key events or trends that might take place during the time of the scenario. A straightforward, believable news item is the goal. For example, "Cell phone use sees dramatic decline in 2010," "U.S. government ends all immigration restrictions," or "Moore's Law disproved." The story then steps through the history of the developments that preceded or followed the headlined event.
- **Use characters.** Another technique for story development is to identify characters who live in or drive the scenarios, conveying vividness as well as the magnitude and direction of change. Unexpected connections are especially powerful. For example, "Bill Gates named Education Czar," or "Oprah Winfrey named head of General Motors."
- **Draw on standard plot lines.** The best plots are easily recognizable because they are so common in popular fiction. Many involve conflict or competition—"winners and losers," "good news and bad news," "David and Goliath"—and are easy to build into full-blown narratives. For example, "Europe, India, and China commit to a common currency, eliminating all trade barriers in an effort to overtake the U.S."
- **End product.** The result of these creative activities is a set of believable narratives that are simple to understand, yet compelling enough to stimulate new thinking. Experts emphasize that the point of the exercise is not to create four stories, one of which will materialize and turn out to be true. Rather, the goal is heightened sensitivity and awareness, a recognition "that the 'real' future will not be any of the four scenarios, but will contain elements of all of the scenarios."<sup>7</sup> For this reason, most experts recommend that teams avoid assigning probabilities to the stories and not try to determine which is the likeliest future.

**Stage 4. Options consideration.** The next phase involves the generation of implications for presentation to senior management, senior management reviews, and prioritization and selection of options. It is only in this phase that planners should start thinking about their own company and the impact of the scenarios on their own strategic choices.

- **Idea and option generation.** Once scenarios have been developed, the team returns to the initial focal issue and plays it out across each scenario to determine the implications in terms

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<sup>7</sup> Lawrence Wilkinson, "How to Build Scenarios," p. 4.

of gaps, vulnerabilities, and options. The team packages the scenarios and the list of implications for senior management discussion.

- **Prioritization and selection of implications.** Senior management then reviews the scenarios and discusses their implications. The primary goal is to test alternative strategies and options for “robustness”—their ability to be successful over the full range of possible scenarios. Robust options are preferred because they provide benefits whatever future emerges. Non-robust options are also examined to determine whether there are low-cost, low-risk actions that would allow the company to move quickly once it is clear that a particular scenario is likely to emerge.
- **End products.** This stage results in a list of strategies to implement and actions to consider, as well as a sense of the robustness of different approaches.

**Stage 5: Integration of scenarios into current management processes.** A successful scenario planning exercise is not a one-time event. Instead, it is woven into senior management decision-making in several different ways. In part, this integration occurs through osmosis, as the language of the stories is incorporated into senior management conversations. The accuracy of the scenarios is less important than the types of strategic conversations and discussions they spark. More explicit integration steps include the monitoring of the environment through an early warning system and the use of scenarios to guide strategic choices.

- **Select leading indicators and signposts.** For those actions that will only be effective in certain circumstances, experts recommend developing early warning signals that indicate the likely emergence of one scenario rather than another. These warning signals should be monitored regularly.
- **Use the scenarios to evaluate strategic options.** The scenarios can be used to evaluate the effectiveness of strategic investment decisions, as well as other significant choices. Shell, for example, introduced a rule requiring that all investment proposals presented to top management be economically evaluated against the full set of oil price scenarios to examine their robustness. This rule forced managers “to pull out the scenario book each time they wanted to propose a project.”<sup>8</sup>
- **End products.** This stage results in a list of early warning signals, as well as the continued use of scenarios in the analysis of significant decisions.

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<sup>8</sup> Kees van der Heijden, “Scenarios, Strategy, and the Strategy Process,” *Global Business Network, Presearch*, 1 (1) (August 1997): 28.

## Exhibit 1 An Example of Scenario Planning: Linux Strategy at ABC Company

### Stage 1. Orientation.

The **Key Focal Issue** identified by senior management at ABC company was: “How will Linux affect our company, its customers, and suppliers both here in the United States and around the globe over the next 10 years?”

### Stage 2. Exploration.

**Driving Forces:** Exhibit 1A lists some of the approximately 200 driving forces identified by the team at ABC company exploring the issue.

#### Exhibit 1A Key Factors and Environmental Forces

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1. Customer push
  2. Government mandate
  3. Supplier push
  4. Windows backlash
  5. Copyright laws
  6. Terrorist strike against Microsoft
  7. Anti-American sentiment
  8. Company profitability
  9. Budget reductions
  10. Vendor adoption
  11. Application availability
  12. Future of Linus Torvalds
  13. Future of Bill Gates
  14. Survival of Sun
  15. SCO lawsuit
- 

**Critical Uncertainties:** The team at ABC company reviewed its list of driving forces, divided the factors into several groups, and then ranked them by importance and uncertainty. Exhibit 1B lists the two most critical uncertainties that were identified in the ABC company example.

#### Exhibit 1B Critical Uncertainties Ranked by Uncertainty and Importance to ABC company

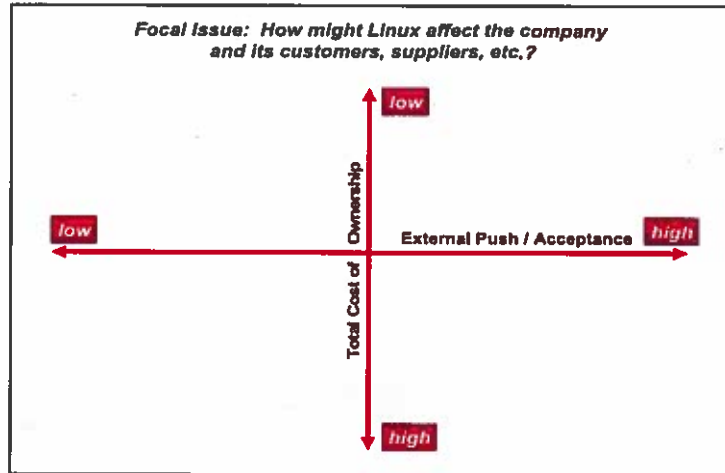
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1. External Push/Acceptance
  2. Total Cost of Ownership
- 

### Stage 3. Scenarios Creation.

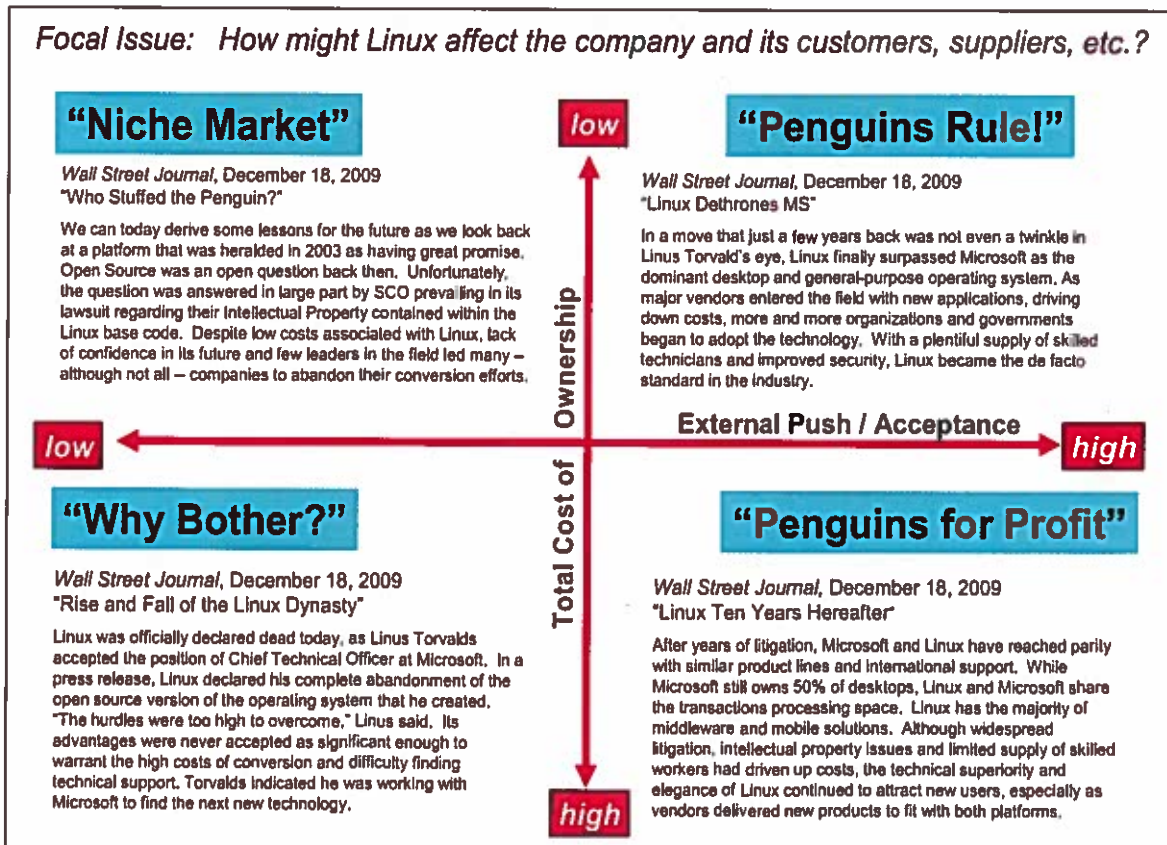
**Step 1:** The team used the two most critical uncertainties to create the scenario framework, and then built the matrix shown in Exhibit 1C.

**Exhibit 1C**  
Axes for Linux Example



**Step 2:** The team then wrote narratives for each of the four scenarios. Exhibit 1D provides a brief synopsis of the narratives developed by the ABC team.

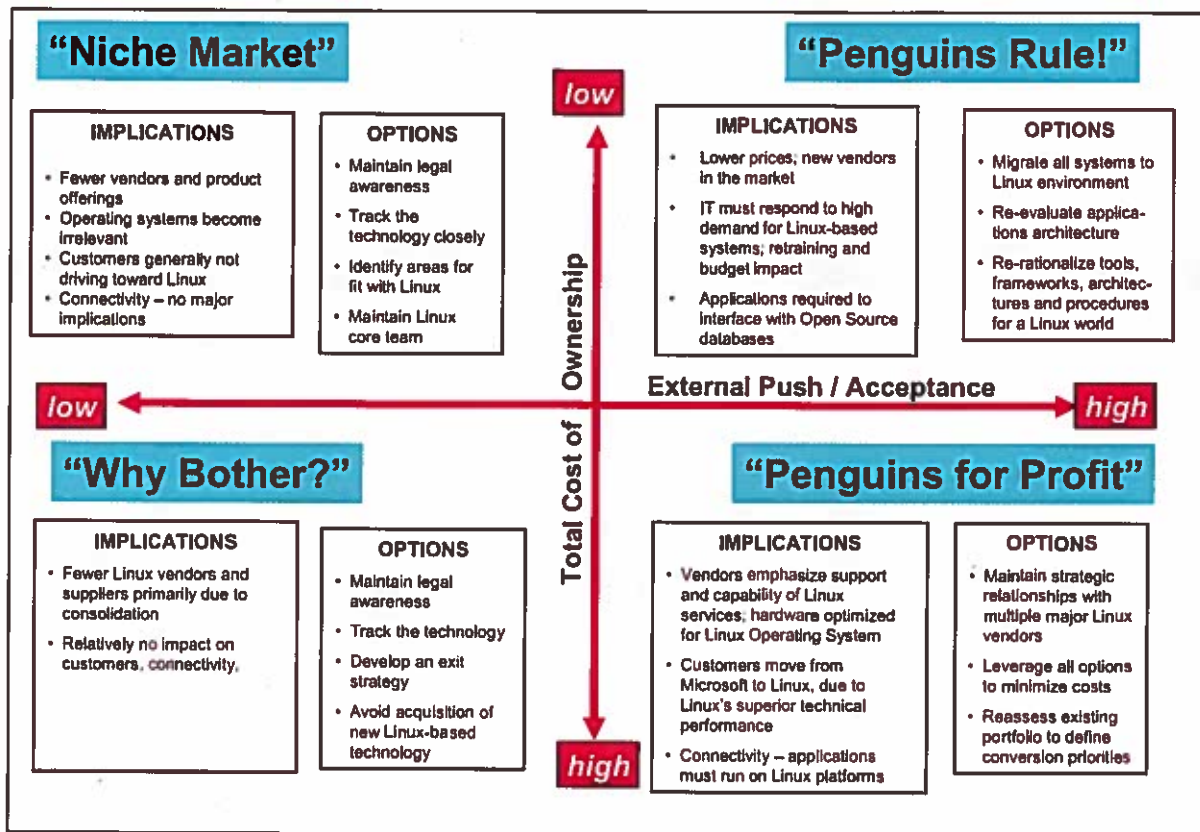
**Exhibit 1D**  
Narratives



**Stage 4. Options Consideration.**

The team then developed implications and options for the organization. Exhibit 1E presents the implications defined by the ABC team.

**Exhibit 1E**  
Implications and Options



**Stage 5. Integration.**

The team then identified early warning signals that could point to possible future directions and the likely emergence of one scenario rather than others. These signals are described in Exhibit 1F.

**Exhibit 1F**  
Early Warning Signals

- SCO wins lawsuit over Linux
- Microsoft changes its pricing model
- Non-US countries demand Linux
- Sun declares bankruptcy

Source: ABC company documents.

HBR.ORG

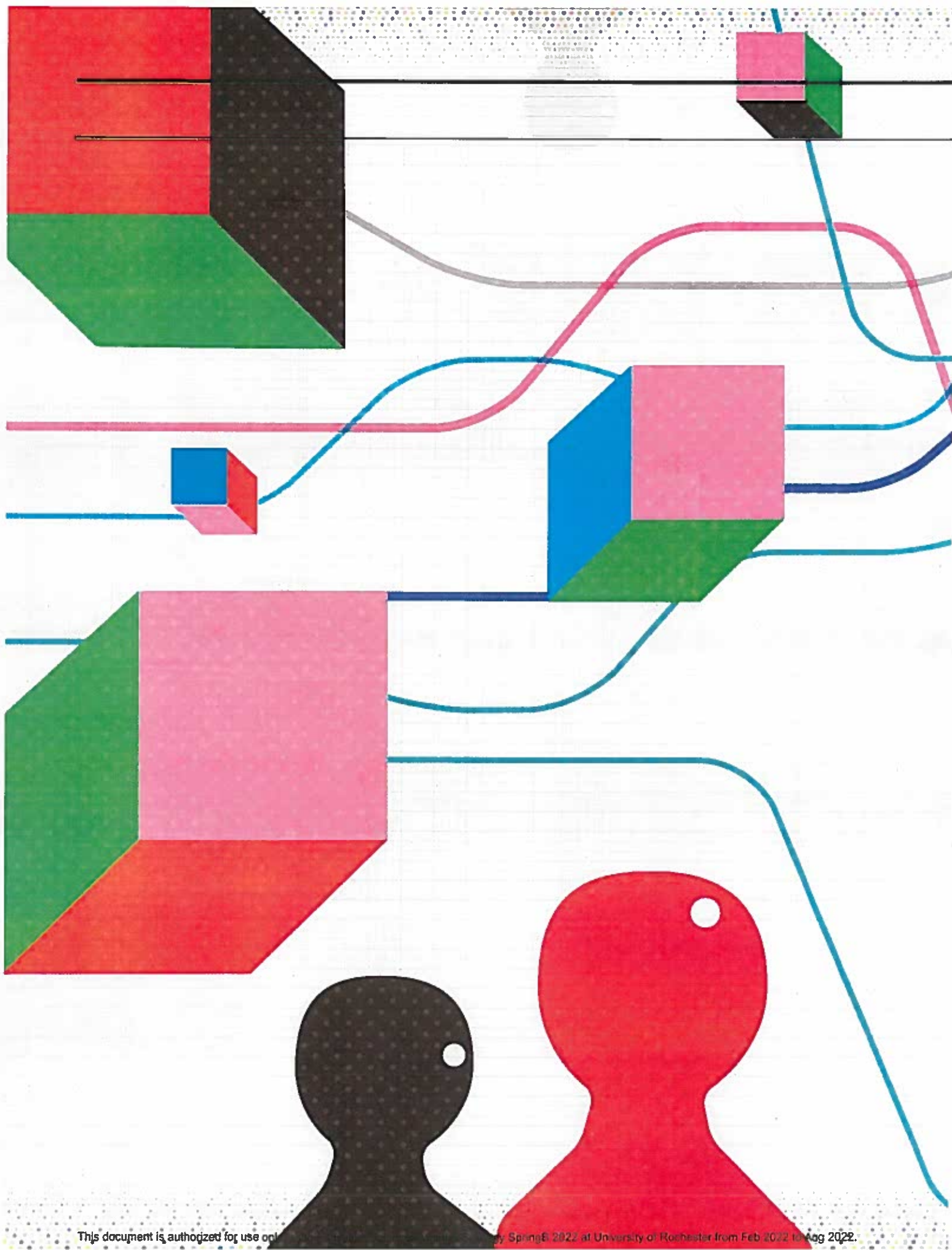
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## Living in the Futures

**How scenario planning changed corporate strategy**  
*by Angela Wilkinson and Roland Kupers*



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# LIVING IN THE FUTURES

How scenario planning changed corporate strategy  
by Angela Wilkinson and Roland Kupers

In 1965 Royal Dutch Shell put into service what it called the Unified Planning Machinery (UPM), a computer-driven system meant to bring more discipline to the company's cash flow planning. This kind of rational, model-based financial forecasting was very much in vogue in the 1960s. But before long, Shell's top executives realized that many of the commitments they had to make extended well beyond UPM's six-year time horizon—and that even within that horizon, UPM

tended to get a lot wrong. In the early 1970s they shut it down.

Things have gone much better for another Shell initiative that was begun in 1965, albeit with far less fanfare. Jimmy Davidson, the head of economics and planning for Shell's exploration and production division, tapped the company veteran Ted Newland to start an activity called Long-Term Studies at the London headquarters. "I was placed in a little cubicle on the 18th floor and told to think about the future,

ILLUSTRATION: JOHN HERSEY

with no real indications of what was required of me," Newland recalls. His appointment marked the start of a remarkable and still ongoing experiment in using scenario planning to engage with an uncertain future.

Under the leadership of Newland and Davidson, who became Shell's first overall head of planning in 1967, the "futures" operation began to take shape. Newland started by delivering a "Year 2000" study report. Then, together with his new colleague Henk Alkema, he began to develop long-term outlooks in the form of alternative futures. The very first oil-price scenarios prepared by this duo were sent to senior executives by mid-1971. Around this time Davidson brought in Pierre Wack, who had been the head of planning for Shell Française, to try to secure the attention and interest of Shell's most senior executives. Wack, a former magazine editor with a bent for Eastern philosophy and mysticism, focused on

telling plausible stories about how the wider business context of Shell might develop. Together with Newland he came to define the practice of scenario planning at Shell; each man headed the team at some point during an eventful decade of oil crises and economic turmoil that they and their colleagues had to some extent envisioned ahead of time. (Wack described the development of some of the early scenarios in his article "Scenarios: Uncharted Waters Ahead," HBR September–October 1985.) But Shell-style scenario planning has never really been about predicting the future. Its value lies in how scenarios are embedded in—and provide vital links between—organizational processes such as strategy making, innovation, risk management, public affairs, and leadership development. It has helped break the habit, ingrained in most corporate planning, of assuming that the future will look much like the present. As unthreatening stories, scenarios enable Shell executives to open their minds to previously inconceivable or imperceptible developments.

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

The practice is also enjoying a renaissance outside Shell, with growing evidence of its effectiveness. A recent survey of 77 large companies by René Rohrbeck, of Aarhus University, and Jan Oliver Schwarz, of Germany's EBS Business School, found that formal "strategic foresight" efforts add value through (1) an enhanced capacity to perceive change, (2) an enhanced capacity to interpret and respond to change, (3) influence on other actors, and (4) an enhanced capacity for organizational learning. Two Bain researchers reported in 2007 that the firm's regular survey of management tools showed "an abrupt and sustained surge" in the use of scenario planning after 9/11 ("A Growing Focus on Preparedness," HBR July–August 2007), and although there have been ups and downs since, Bain's most recent survey showed that 65% of companies expected to use scenario planning in 2011.

## STORIES OF THE FUTURE

The first formal round of Shell scenarios was completed in November 1971. Since then Shell's scenario planners have produced 34 rounds of global and long-term energy scenarios and updates and many more-focused ones. Some synopsis examples are included here and on the following pages, under the actual Shell titles.

### SHELL SCENARIOS 1973

**"CRISIS SCENARIO"** A late response to an impending energy gap causes oil prices to spiral upward. Producer governments exert tight control on the industry through nationalization.

**"DIRIGISTE SOLUTION"** The governments of consumer nations intervene in energy markets, supported by public opinion. The energy industry gets subsidies, constraints are imposed on consumption, and conservation is encouraged.

(This was a very active year for scenarios: The above are just two of the six that were issued in January, and two more, focused on the likelihood of an energy shortage, came nine months later.)

**Idea in Brief**

In the mid-1960s Royal Dutch Shell started experimenting with a new way of looking into the future: scenario planning. Almost half a century later, scenario planning is still thriving at Shell, and it has had a huge influence on how businesses, governments, and other organizations think about and plan for the future.

Several principles have come to define the Shell approach. The most important is that scenarios are not predictions but plausible stories about the future. They are designed to help break the habit, ingrained in most corporate planning, of assuming that the future will look much like the present. They create a safe space for dialogue and for acknowledging uncertainty—allowing an organization to see realities that would otherwise be overlooked.

Credit for originating scenario planning often goes to the American game theorist and futurist Herman Kahn. However, a form of the practice emerged simultaneously in France in the work of Gaston Berger, Bertrand de Jouvenel, and others. The American approach came to emphasize probability, with degrees of likelihood assigned to various outcomes, while the French approach focused more on what *should* happen. Newland and Wack, aware of both, steered clear of probabilistic forecasts and normative statements and instead insisted that scenarios should first and foremost be *plausible*. One U.S. government report from a decade ago estimated that 85% of the scenario studies surveyed by the report's authors were based on or derived from the Royal Dutch Shell process, suggesting that Shell's experience contains lessons relevant for anyone—investors, corporations, governments, nongovernmental organizations, and others—trying to engage with the future.

We are a former Shell scenario planner and a former Shell executive who recently completed a history of scenario planning at the company after interviewing almost every surviving veteran of the operation, along with current and former top company executives. With help from Betty Sue Flowers, who edited several Shell scenarios in the 1990s, we discovered that although the practice has evolved over the decades, we can identify the principles that both define the process at Shell and help explain how it has survived and thrived for so long.

**Make It Plausible, Not Probable**

**But, of course, you can never identify all the forces at play. If you could, and see their interactions, then real prediction of the future would be simple. This is never likely to be possible, and furthermore, there are some situations that balance on a hair's breadth.**

—Jimmy Davidson, head of group planning 1967–1976

**SHELL SCENARIOS 1977**

**“CARTER MIRACLE”** The moral leadership exuded by U.S. President Jimmy Carter restores confidence. Governments take measures to strengthen international trade and investment.

**“CONVALESCENCE”** Recovery is slower than normal. Unemployment combines with a dim view of government in general to make the system fragile.

**“RELAPSE”** Inflation rises sharply, as do wages. The global economy is buffeted by conflict in the Middle East and other external shocks.

From the beginning, those engaged with Shell's scenario practice maintained that scenarios are not predictions but can provide a deeper foundation of knowledge and self-awareness in approaching the future. They also felt that the “official” view of the future—the business-as-usual outlook—both reflects an optimism bias and is based on the human tendency to see familiar patterns and be blind to the unexpected.

In the late 1960s Shell's business-as-usual approach was embodied by UPM and its quantitative, model-based methodology, which some worried was likely to suppress discussion rather than to encourage a healthy exchange of differing perspectives. Deductive methods for generating scenarios—for example, a 2x2 matrix with axes for public/private and more-expensive/less-expensive—were never core to the Shell practice, although they are often identified with it because Peter Schwartz, who ran

the scenario team in the early 1980s, subsequently promoted their use at the strategy consulting group Global Business Network. In general, the company has also avoided expressing a preference for one scenario over another. The trap of having a “good” versus a “bad” future is that there is nothing to learn in heaven, and no one wants to visit hell.

The Shell method instead emphasized plausibility. During the early years of experimentation, Wack encouraged his team to consider any scenario as long as it could not be rendered implausible through logical reasoning. Later he decided that approach generated too many scenarios to be effective. But the focus on plausibility remained. Shell scenarios are intended to set the stage for a future world in which readers imagine themselves as actors and are invited to pay attention to deeply held assumptions about how that world works. What happens at a scenario’s horizon date is not as important as the storyline’s clarity of logic and how it helps open the mind to new dynamics.

Plausible stories encourage judgment, not just attention to data and other information. By acknowledging that subjective judgment and intuition are an integral part of the leadership process, scenarios create a safe space in which to acknowledge uncertainty. An intuitive understanding of the world precedes and frames the analytical understanding that

follows. Intuition is the essence of entrepreneurial value creation, and it can be stifled by a paralysis of analysis.

Plausibility can be strengthened by how relevant and memorable the scenario is, as well as by a logical story line. In the mid-1980s Lo van Wachem, the chairman of Shell’s committee of managing directors, instructed the scenario team to begin considering the impact of sustainability concerns on the energy business. The process took years, but it ended up shaping opinion throughout the group as the threat of global warming became more real. Shell’s 1998 sustainability report was one of the first acknowledgments by a major energy corporation of the challenge of climate change.

### Strike a Balance Between Relevant and Challenging

**All successful scenarios are focused in the sense that they are derived from a fundamental consideration of their client’s dilemmas and needs.**

—Ged Davis, head of the scenario team 1999–2003

Shell’s scenario practice started out by exposing and questioning the official version of the future. This was especially important because of the company’s decentralized nature: Until 2005 Shell had two parent companies (one British, one Dutch) and two headquarters (one in London, one in the Hague). Its country operations around the world enjoyed striking autonomy. It was led not by a CEO but by a committee of managing directors (CMD). As a result, consensus was crucial, and to a large extent the corporate view of the future was implicit and unarticulated—and thus particularly hard to change.

Scenarios facilitated dialogue in which managers’ assumptions could safely be revealed and challenged. They enabled consideration of unexpected developments—such as the chairman’s sustainability agenda in the 1980s—and inconvenient truths, such as OPEC’s power over oil prices in the 1970s. They encouraged strategic conversations that went beyond the incremental, comfortable, and familiar progression customary in a consensus culture. Many business units, and corporate functions beyond strategy and finance, went on to develop scenarios.

To seize and retain the attention of all these constituencies, though, Shell’s scenarios had to be more than disruptive and challenging; they had to be *relevant* to executives, from the CMD on down. In the early days, global events conspired to make them

#### SHELL SCENARIOS 1989

**“GLOBAL MERCANTILISM”** Economic power is the driving force. Conflicting regional interests affect economic security and the environment. Protectionism grows, and trade is managed through bilateral agreements. Many developing countries are left behind.

**“SUSTAINABLE WORLD”** The environment dominates the agenda. The global economic system is resilient, and developing countries are brought on board. Growth in the energy business is limited. An emphasis on clean fuels leads to a reconstruction of the industry.

so. Scenarios prepared in 1971 and 1972 sketched the possibility that the power in oil markets would shift from consumers to oil-producing nations—and that the interests of those producers would dictate cuts in production, not the eternal increases foreseen in the business-as-usual version of the future. After subsequent scenarios in 1973 deemed business-as-usual implausible, and a Mideast oil embargo and global energy crisis followed mere months later, there was no questioning the relevance of this work.

In the 1980s, though, Shell's top management largely ignored the plausible and challenging scenarios of global economic growth and power shifts. The reasons that have been offered for this range from a failure of the scenario team to listen to the concerns of executives to an overemphasis on big-picture developments as opposed to the energy industry and Shell in particular. Kees van der Heijden, who took over as scenario chief in 1988, decided that extensive interviews with Shell leaders were needed to ensure that the scenarios addressed relevant issues. "Deep listening" through structured interviews soon became standard practice; interview questions probed the core concerns of decision makers and their hopes for the future and uncovered uncertainties about the company, its business, and its environment. Van der Heijden's successor, Joseph Jaworski, spent his first six months on the job conducting more than 100 one-on-one interviews with Shell executives that lasted three or four hours each. This approach continued and has been effective: Despite the challenging and uncomfortable nature of many scenarios, only rarely have Shell leaders dismissed them as irrelevant or too dangerous to share (although rewrites have sometimes been requested).

To stay relevant, the scenarios have had to change. The early ones were designed to open up executive thinking in an environment in which oil companies had long been logistical machines that saw no need to communicate with one another or to focus on external events. Demand was assumed to be predictable, and the main job was to get oil to the customer as efficiently as possible. This was the context in which Wack "opened the company to the outside world," as Van der Heijden puts it.

Since then the global energy business has transformed Shell from a strategic player that produced 10% of the world's oil and gas before the 1970s crises to just one of many large energy companies (it produces less than 2% today). The organization's structure has also changed: Formerly a one-of-a-kind

### SHELL SCENARIOS 1995

**"JUST DO IT!"** Success comes to those who harness the latest innovations in technology to take advantage of quick-moving opportunities in a world of hypercompetition, customization, self-reliance, and informal networking.

**"DA WO"** (Chinese for "Big Me") Countries and companies discover that relationships of trust and the enabling role of government provide long-term strategic advantage. This favors Asia, because its people and businesses view individual and societal welfare as inextricably linked.

dual-nationality company with roots in the colonial past, it is now a more conventional multinational with a CEO at the top and a focus on shareholder returns. As a result, recent Shell scenarios have been more concerned with energy than with social and economic issues and have been more broadly institutionalized so as to have an impact on corporate decision making. As the current CEO, Peter Voser, says, "We have maintained intellectual agility and operational flexibility by shifting beyond global to more 'sliced and diced' scenarios."

It remains difficult to strike an appropriate balance between relevant and challenging. Relevant can be too familiar, but challenging can go unheard. As Wack once said, "You take the piece of bread and you put it in front of the goldfish, but not so far that the goldfish can't get it."

### Tell Stories That Are Memorable Yet Disposable

**You are trying to manipulate people into being open-minded.**

—Ted Newland, manager of Long-Term Studies 1965–1971; scenario team leader 1980–1981

Corporations, like human beings, act on the basis of an agreed-upon reality—which is, in essence, a story. Stories of the past and the present can be based on facts, but a story of the future is *just* a story. The problem is that the stories we most commonly tell about the future simply extrapolate from the present.

**SHELL SCENARIOS 2001**

**“BUSINESS CLASS”** A globally interconnected elite and the only remaining superpower lead the world toward greater economic integration and prosperity. Cities and other power centers diminish the influence of national governments and unleash a “new medievalism.”

**“PRISM”** The persistent power of culture and history shape a “new regionalism,” putting the monochromatic world of global integration in question.

Perhaps the greatest power of scenarios, as distinct from forecasts, is that they consciously break this habit. They introduce discontinuities so that conversations about strategy—which lie at the heart of any organization’s capacity to adapt—can encompass something different from the present.

Storytelling is key to making this process work. A story is not a position, so no one has to be for or against it or line up behind the CEO’s opinion. If it’s sufficiently vivid and memorable, it allows executives to discuss difficult issues without having to revisit arguments connected with them: A few words can evoke a world. Charismatic presenters; evocative graphics; memorable phrases, images, and archetypes; illustrative graphs of future outlooks; and the preparation of the audience through interviews, workshops, and other forms of participation all contribute to the storytelling power of Shell’s scenarios.

In the early years, the Shell team developed sets of six or seven scenarios. By the mid-1970s three scenarios were common, but that tempted managers to choose a “middle way” as a best guess. Starting in 1989, two scenarios became the norm, enhancing usability and recall. Two stories open the mind but don’t numb it with too many variables. In addition to these, some more-focused scenarios—on a project, a country, a crisis, a market entry, or an investment decision, for example—were often developed throughout the organization.

Scenarios have a limited shelf life. As they become familiar, the temptation arises to cling to them—which risks thinking within, rather than looking beyond, the box. Generating new scenarios on an ongoing basis counters the tendency to hold on to

familiar ones. Over the past decade, Shell has abandoned its former practice of creating them according to a regular rhythm and shifted toward updating, discarding, or building new ones on an as-needed basis. Thus the scenarios act as temporary scaffolding—rather than a fixed structure—to support the strategic conversation.

**Add Numbers to Narrative**

**Engineers are numbers people, and if you can’t quantify what you are talking about, they tend to dismiss you as interesting (at best) mystics.**

—DeAnne Julius, Shell’s chief economist 1993–1997

As noted, Shell’s scenario practice developed partly out of dissatisfaction with mechanistic, model-based projections. Scenarios were meant to harness intuition, not fall back on numbers. Wack, says his longtime colleague Napier Collyns, “regarded computer modeling as the enemy of thought.”

Yet Collyns, who served on the scenario team from 1972 to 1986, frequently used numbers and computer models. Shell’s scenarios have never been developed from mechanistic modeling, but they have always been associated with quantification to enhance internal consistency, reveal deep story logic and systemic insight, and illustrate outcomes using the language of numbers that characterizes most corporate cultures.

In the early years of the scenario practice, Collyns and Harry Beckers—who later became Shell’s head of research—supported quantification despite Wack’s limited appetite for it. Peter Schwartz later experimented with computer models linked to scenarios as a means of encouraging serious learning through “play.” In the 2001 scenario round, two econometric models were used after the global scenarios had been developed to quantify the implications for GDP growth of various patterns of oil and gas price coupling, decoupling, and volatility.

During preparation of the 2007 long-term energy scenarios, the team built a comprehensive world energy model that simulated the development of the energy market over decades. It allowed the team to explore a much wider range of what-ifs by tweaking a large number of inputs, including the energy efficiency of electrical appliances, the depreciation time of coal-fired power plants, and shifts in consumer behavior.

Of course, large-scale quantitative models require considerable investment, which can lead to a

kind of “model lock-in”: Difficulty in changing basic assumptions, along with the natural authority of algorithmic calculations, can result in users’ being blindsided by changes in the world that don’t fit a model’s parameters. In the few years following publication of the 2007 scenarios, at least three major energy-market events failed to fit the world energy model: the 2008 financial crisis; the U.S. shale-gas boom; and Germany’s decision, after the Fukushima nuclear disaster, to speed up its transition to renewables. However, the model *had* been used to trace the energy impact of a deep recession—giving credibility to the recession-and-recovery scenarios that were created and presented to Shell’s executive committee within days of the Lehman Brothers collapse in 2008.

Quantification is essential to scenarios. The challenge lies in realizing how, when, and why models linked with them can hide assumptions and constrain thinking rather than refine it. If, for example, Shell begins to rely on its state-of-the-art global energy model to provide what-if analysis, the signature advantage of scenarios in reframing thinking will be weakened. But used as a secondary tool, a quantitative model can fortify a rapid-response scenario. The persuasive power of scenarios in the world of business rests on an effective combination of narrative and numbers.

### Scenarios Open Doors

**We facilitated a set of scenarios for the Chinese government. The notion that you would actually think outside the official plan was like pulling teeth. Over a one-year period we developed the scenarios with them, and it gives you insights into the way they are thinking that you just can’t get otherwise and, of course, you wouldn’t get as a businessperson across the table discussing things with them.**

—Doug McKay, scenario team member 1996–2002

Over time, agreement appears to have been unanimous that scenarios are valuable in external engagement. Shell has used global scenarios to add color to corporate speeches, to open doors to privileged conversations with resource holders and governments, and to build a network of NGO contacts. Since 1992 it has released smaller, public versions of its global scenarios—after enough time has passed for the company to gain competitive advantage from internal digestion and use. But more important has been the way scenarios have created value through new busi-



### SHELL SCENARIOS 2013

**“MOUNTAINS”** Governments play a strong role, helping to develop more-compact cities and to transform the global transportation network. New policies unlock plentiful natural gas and accelerate carbon capture and storage technology, resulting in a moderation of greenhouse gas emissions.

**“OCEANS”** Strong economic growth accelerates energy demand. Power is more widely distributed, and governments are slower to agree on major decisions. Market forces rather than policies shape the energy system: Oil and coal remain part of the mix, and greenhouse gas emissions bring dramatic climate change.



## FURTHER READING

**Shell Scenarios**

[www.shell.com/global/future-energy/scenarios.html](http://www.shell.com/global/future-energy/scenarios.html)

**Scenarios: The Art of Strategic Conversation**, by Kees van der Heijden (John Wiley & Sons, 2005)

**"How Shell's Domains Link Innovation and Strategy,"** by Rafael Ramirez, Leo Roodhart, and Willem Manders (*Long Range Planning*, August 2011)

**"Scenarios: Uncharted Waters Ahead,"** by Pierre Wack (HBR September-October 1985)

**"Scenarios: Shooting the Rapids,"** by Pierre Wack (HBR November-December 1985)

ness development, joint venturing, and new market entry. Building scenarios with key stakeholders in prospective joint projects has enabled an invaluable exchange of perspectives and insights. Shell has developed focused scenarios for state oil companies in, for example, Brunei, Kuwait, Nigeria, and Oman.

Members of the scenario team have also occasionally shared their expertise. For example, since the 1980s, when a remarkable body of unpublished scenario work on greater China was started by one of their number, team members have been involved in a variety of scenario initiatives focused on energy, sustainable development, and other concerns relevant to the Chinese government. In 1991 one team member assisted in creating scenarios that helped focus the attention of both the African National Congress and the De Klerk government on the importance of economic development during South Africa's messy political transition. Another led a 1998 effort to develop global scenarios covering 2000-2050 for the World Business Council for Sustainable Development, which highlighted alternative models for thinking about progress. In 2005 yet another helped build scenarios for UNAIDS that exposed difficult choices between prevention and treatment and care. Shell's scenario experts often contributed to other efforts after leaving the company—starting with Wack, who participated in scenario rounds in South Africa in the 1980s.

### Manage Disagreement as an Asset

**In hindsight, the greatest value of scenarios is that they created a culture where you could ask anyone a question, and the answer would need to be contextual. Answering "Because I'm the boss" or "Because the business case is positive" was out-of-bounds.**

—Ted Newland

Scenarios have the power to engage and open the minds of decision makers so that they pay attention to novel, less comfortable, and weaker signals of change and prepare for discontinuity and surprise. When the oil crisis of October 1973 hit, Shell's committee of managing directors had already considered a comparable scenario. As one scenario team member put it, "And then, of course, high oil prices came, and everybody said, 'You're very clever, you've got that right.' And we all said, 'No, wrong. We're not forecasters. We're your 'personal trainers.'"

Under Shell's earlier, decentralized structure, scenarios provided a common learning culture, helped

create a shared view of the world, and refreshed the strategic agenda, enabling new concepts, such as resilience (1970s), sustainable development (1989), and systemic risk (2002), to penetrate the organization. They were a steering tool for the CMD and served as corporate glue to hold the organization together. As Shell became more centralized, scenarios provided a way to manage disagreement about group strategy or priorities and helped disturb the business-as-usual view that tends to result from wishful thinking or the linear extrapolation of current trends.

Within the CMD, scenarios also became a mediation tool. Given that the committee did not vote things into effect but recommended them for formal approval by the boards of the parent companies, scenarios were a unifying force. They redirected attention and encouraged dialogue rather than prescribing action, which made them nonthreatening.

### Fit into a Broader Strategic Management System

**Scenarios provide the right framework for appreciating fundamental long-term choice, which is not the same as next year's annual plan.**

—Peter Voser, Shell's CEO 2009-

In one of a series of retirement presentations to Shell's CMD in 1981 and 1982, Pierre Wack borrowed a phrase from the organizational theorist Russell Ackoff: "corporate rain dance." This is a ritual that happens at a given time of the year, when the strategic planning process is rolled out. "It has no impact whatsoever on the weather, but everything that comes afterwards is nicely linked to and explained by this rain dance," Wack said. "And some people enjoy it very much." Wack was convinced that creativity could be institutionalized in corporate strategic planning, avoiding the rain dance. And he believed that scenarios, because they follow a rhythm distinct from the annual strategy cycle, allow an organization to see realities that might otherwise be overlooked.

Wack identified three essential starting points for corporate strategy: global scenarios, competitive positioning, and strategic vision. The first represents the world of possibility, the second the world of relativity, and the third the world of creativity. The challenge in effective scenario work is to go beyond the usual strategic focus on current trends and competitive positioning (profitability, for example) to find

the right scale of observation. The next challenge is to look for some degree of fit between the company's core capabilities and the variety of plausible future conditions.

Wack argued that strategic vision is not driven top-down by a corporate leader but involves a capacity to ask the right questions and to be amazed. He saw the organization as an animal that can prosper within a particular habitat. The success of the strategic vision thus depends on matching capabilities and context. Scenarios can help that vision evolve and become a source of dynamism.

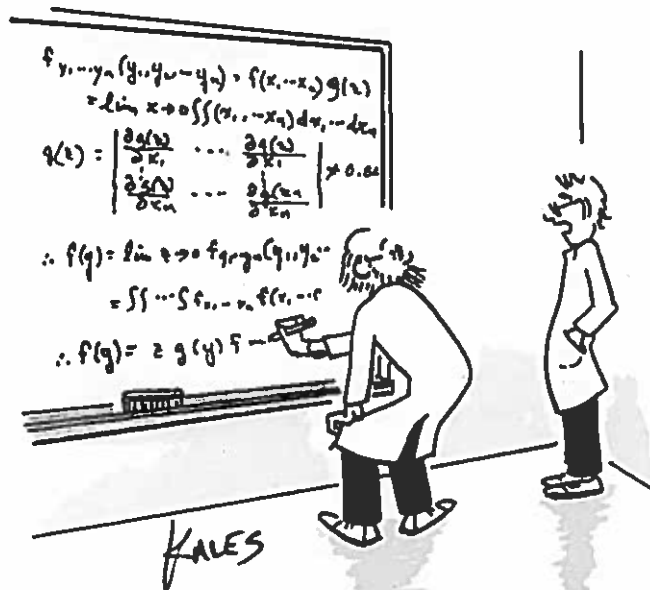
**THE MOST COMMON QUESTION** about Shell's scenario practice is "Did it work?" That is, did it create direct business value by enabling better decisions? The answer is "yes" in the case of more-focused scenarios and "only indirectly" in the case of global scenarios. We have no solid examples of Shell's having anticipated future developments better than other companies—the mythology around anticipation of the 1970s oil crises notwithstanding. The historian Keetie Sluyterman characterizes Shell as being perhaps faster than other companies in catching on to changes in market or culture, by virtue of its sensitivity to emerging topics such as climate change,

the rise of China, and the controversial boom in the development of extensive unconventional gas resources in the United States.

How can anyone determine in advance if one decision is better than another? In contrast to decision theory, which assumes that all outcomes can be known, scenarios encourage attention to the future's openness and irreducible uncertainty. Success in the future depends on the future success of decisions, which can't be known in advance. The outcome is at best a hypothesis rather than a range or a precise data point.

What does seem clear is that a sustained scenario practice can make leaders comfortable with the ambiguity of an open future. It can counter hubris, expose assumptions that would otherwise remain implicit, contribute to shared and systemic sense-making, and foster quick adaptation in times of crisis. Scenarios can build social capital within and beyond the organization. They can aid in navigating complexity and conflict—managing disagreement while avoiding the extremes of groupthink and fragmentation. At Shell and elsewhere, scenarios have helped leaders prepare for futures that *might* happen, rather than the future they would like to create. ♡

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"Now can you explain that with a parable?"

CARTOON: PAUL KALES