FAMES ESD.04 / 1.041 Spring 2007

#### Scenario Planning

#### Lecture 21

#### Displays

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# PRACTICE

When you are not practicing, remember, someone somewhere is practicing, and when you meet him he will win.

-- Ed Macauley

(as quoted by Bill Bradley in John McPhee's "A Sense of Where You Are")

### REHEARSING THE FUTURE

(Planning) ...indicates trade-offs that may be necessary, sets boundaries so that possibilities can be carefully accessed, simulates plausible scenarios, integrates ideas and forces people to think about consequences. Additionally, it can put management on what Jivan Tabibian calls and "anticipatory alert", so that it is better prepared for the unexpected.

-- Richard Farson

in Management of the Absurd

## **SCENARIOS**

# Introductory Concepts Schwartz' View

### **SCENARIOS**

#### **INTRODUCTORY CONCEPTS**

### WHAT IS A SCENARIO?

- What is a scenario as we will use the term here?
  - It's a story (and it may be fun to construct) but it's NOT just an ordinary story
  - It's a structured, plausible, internally-consistent, comprehensive story about the future
  - Based on careful research and quality thinking
  - Informed by "remarkable people" with special insights about the future

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# WHY SCENARIOS?

- The FAMES problem space
  - Uncertainty is everywhere -- deal with it
  - Nested Complexity
- Scenarios are a high-level mechanism for understanding uncertainty dealing with fundamental changes in our world
- Different worlds, not just different outcomes in the same world (Wack)
- Scenarios is not a forecasting method -- it is a method for conceiving alternative futures, so as to be prepared for them.

# WHY SCENARIOS? (2)

- Creatively think about the future -- getting out of the rut of a continuation of the status quo.
- Identify possible discontinuities
   -- the Bend in the Trend
- Challenge our mental models about the future

# WHY SCENARIOS? (3)

 Create a test bed against which to check the robustness of bundles (where robustness is the ability of a particular bundle to perform reasonably well under most scenarios)

	Scenario 1	Scenario 2	Scenario 3
Bundle 1	+	-	+
Bundle 2	+	+	+
Bundle 3	0	0	+

# WHY SCENARIOS? (4)

- Stretch the minds of decisionmakers -- to think the unthinkable
- Rehearse the future --"The 2-minute drill -- skip the brain."
- A mechanism for continuous organizational learning

### ORGANIZATIONAL LEARNING

- Understand the possible longterm consequences of shortterm decisions
- Decisionmakers can begin to identify milestones and leading indicators
  - Identify which scenario pathway they are on
  - Adapt to changing circumstances
- Indicators
  - Reveal shifts from one scenario to another, and prepare an organization for response to these changes

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### ORGANIZING INFORMATION FOR COMPLEX POLICYMAKING

"Scenarios can effectively organize a variety of seemingly unrelated economic, technological, competitive, political, and societal information and translate it into a framework for judgment -- in a way that no model could do."

-- Wack

- Structure and understand uncertainty
- Identify a few alternative and internally consistent pathways
- Different worlds, not just different outcomes in the same world.

### NESTED COMPLEXITY?

- Understand the dynamics and interactions of different parts of the systems
- Scenarios "are not intended to specify the future, rather they aim to draw attention to the major forces underlying potential futures"

-- Gakenheimer and Sussman, 1999

 Help policymakers link decisions to the broader economic, social and political trends that can impact their local strategies

### LEARNING FROM SCENARIO BUILDING

- Provide not forecasts, but insights into the underlying dynamics and fundamental drivers of the air quality problem
- Framework for understanding the scope of the problem and the interactions between these different activities
- Platform for bringing together decisionmakers and analysts from relatively segregated policy arenas such as industry and transportation, in order to examine the implications of an agreed-upon set of future scenarios.

### ORIGINS AND EVOLUTION OF SCENARIO PLANNING

- Corporate Roots
  - Royal Dutch/Shell (30 years)
  - Initially utilized in high-level corporate strategy to improve business decisions in an uncertain environment
  - Needed to move away from forecasts
- Evolution within Shell
  - ◆ 1970s
    - Challenged prevailing assumptions of stable oil prices
    - Six scenarios before the oil shocksone suggested a disruption to oil supply and a sharp rise in prices

### ORIGINS AND EVOLUTION OF SCENARIO PLANNING (CONTINUED)

- Evolution within Shell (cont.)
  - 1980s
    - Broadened perspective to sociopolitical developments and energy market dynamics
    - Recession, sharp rises and collapses in oil prices, longevity of the USSR and the Cold War
  - 1990s to today
    - Addressing more complex issues and being used more widely throughout the company as well as outside the company

### ORIGINS AND EVOLUTION OF SCENARIO PLANNING (CONTINUED)

- Scenarios for corporate strategy or "civic change"?
  - Not only was scenario planning increasingly adopted by other leading companies, but....
  - Scenario planning began to see applications in more complex issues, involving multiple stakeholders.
- Do you prepare for the future or to you create it?
  - Robustness in an uncertain environment
  - Normative strategies developing a "vision"
  - In fact, for Shell it was a mixture of both
    - The Mont Fleur Scenarios in South Africa
    - Stability in South Africa in the Post-Apartheid era was seen as key to Shell's decision to stay in South Africa
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### PERSPECTIVE ON SCENARIOS (1)

- Scenarios should be
  - ♦ Plausible
  - ♦ Recognizable
  - Challenging
  - Internally consistent
  - Consequential

-- Patag - Shell - 8/30/02

### PERSPECTIVE ON SCENARIOS (2)

- In developing scenarios we need to get "outside the box" we want to think of things that matter that people don't know about
- How to get outside the box
  - "Remarkable" people
  - Look for analogies
  - Professionals in other fields
  - Cross-disciplinary teams

-- Patag - Shell - 8/30/02

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### PERSPECTIVE ON SCENARIOS (3)

- Scenarios as a mechanism for developing vision and strategies
- Scenarios as a neutral environment for negotiation
- Scenarios as normative: how do we want things to be and how do we get there?

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### PERSPECTIVE ON SCENARIOS (4)

- Scenarios in a corporate environment
  - Assume that corporate strategies do not affect the overall future
- Scenarios in a public-sector environment
  - Assume that strategies do affect the overall future -indeed, that's what they are intended to do

### **SCENARIOS:**

#### SCHWARTZ --THE ART OF THE LONG VIEW

### SCENARIOS: WHAT ARE THE STEPS? SCHWARTZ APPROACH

Schwartz (*The Art of the Long View*), on the other hand, proposes an eightstep approach:

- 1. Identify focal issue or decision
- 2. Identify key factors in local environment
  - --These are the key factors -- locally -which influence the success or failure of the decision or focal issue identified in Step 1
- 3. Identify driving forces in macro environment
  - -- Social, economic, political, environmental and technological *macro* issues might behind the local forces

#### SCENARIOS: WHAT ARE THE STEPS? SCHWARTZ APPROACH (CONTINUED)

- 4. Rank key factors and driving forces
  - -- According to *importance* to key decision and degree of *uncertainty*
- 5. Select scenario logics
  - -- Identifying plots that capture situational dynamics and communicate effectively
- 6. Flesh out the scenarios
- 7. Examine implications
  - -- How does the focal issue/decision play out in the future?
- 8. Select leading indicators

### SCHWARTZ -- THE ART OF THE LONG VIEW

- Why scenarios -- "an imaginative leap into the future"
- How can you see, most clearly, the environment in which your actions will take place?
- How will those actions relate to prevailing forces, trends, attitudes and influences?
- ◆ <u>HOW</u>
  - Invent, and then consider, *in-depth* several stories of plausible futures.
- ◆ <u>THE POINT</u>
  - Make strategic decisions that will be sound for all plausible futures.
  - No matter what future takes place, you are more likely to be ready for it if you have thought seriously about scenarios.

# THE PROCESS

- ♦ Time Frame
- Research
- Driving Forces
  - Some are predetermined
  - Some are "critical uncertainties"

 Rehearse the implications -act out your options (decisions) in each future world and refine your understanding of your plausible futures and your options.

- "... the precise definition of 'scenario' is: a tool for ordering one's perceptions about alternative future environments in which one's decisions might be played out."
- "... scenarios are vehicles for helping people learn. Unlike traditional business forecasting or market research, they present alternative images of the future; they do not merely extrapolate the trends of the present."
- "The purpose of scenarios is to help yourself change your view of reality -- to match it up more closely with reality as it is, and reality as it is going to be.

- The end result, however, is not an accurate picture of tomorrow, but better decisions about the future.
   The planner and the executive are partners in taking a long view."
- "... too many people react to uncertainty with denial. They take an unconsciously deterministic view of events. They take it for granted that some things just can't and won't happen; for example, 'oil prices won't collapse,' or 'the Cold War can't ever end.' Not having tried to foresee surprising events, they are at a loss for ways to act when upheaval continues. They create blind spots for themselves."

### **CREATING SCENARIOS**

- Driving Forces: What moves the plot of a scenario? -- think about what these are in the context of the decisions you have to make -- brainstorming in groups.
- "Familiar litany of categories (of driving forces)
  - Society
  - Technology
  - Economics
  - Politics
  - Environment"

- Predetermined elements:
   What we know we know --Strategies for looking at predetermined elements
  - Slow-changing phenomenon
  - Constrained situations
  - In the pipeline (e.g., demographics)
  - Inevitable collision

- Critical Uncertainties: Dwelling-place of our hopes and fears.
- Critical uncertainties are intimately related to predetermined elements. You find them by questioning your assumptions about predetermined elements: what might cause the price of oil to rise again?

#### So, to review:

#### Elements of Scenario Building

- Driving Forces
- Predetermined Elements
- Critical Uncertainties

# **COMPOSING A PLOT**

- The scenario-planner looks at converging forces and tries to understand how and why they might intersect -- then extends that imagination into coherent pictures of alternative futures. That's what gives texture to scenarios."
- Your goal is to select plot lines that lead to different choices for the original decision. What plots might make you do something different?"

#### COMBINING DRIVER STATES AND SELECTING SCENARIO PLOTS

- Choose some combinations of macro-drivers to serve as the basis for the scenario plots
- Internally consistent
  - Connections between the states of the different drivers
- Range of possible outcomes

◆ Plausible ... if unlikely

- Include not only the "most likely" but also incorporate big events
  - Any missing ones?

### **OTHER AUTHORS**





#### Wack

♦ Hammond