

# Scenario Planning:

An introduction to the process of developing and using alternative futures

Presentation for SRA by

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# Scenario Planning

- What is the difference: prediction, forecasts, projections
- Common uses of the word scenario
  - to describe the expected continuation of the current situation (Peterson, Cumming, and Carpenter, 2001)
  - variations in the assumptions used to create simulation models (Peterson, Cumming, and Carpenter, 2001)
  - thinking about future possibilities and “what-if’s”
  - sophisticated word for “stories”



# Scenario Planning is...

- A planning methodology which carefully challenges current thinking about driving forces and creates several versions of how the future may develop.
- An approach to creating possible future worlds in which strategic options are evaluated.
- An approach which deals effectively with complexity and uncertainty.
- A means of bringing together diverse points of view thus creating strategic critique and innovation.



# Scenarios are...

- Alternative, dynamic stories that capture key ingredients of our uncertainty about the future of a study system. (Peterson, Cumming, and Carpenter, 2001)
- Multiple and equally plausible futures which serve as test-beds to consider and judge policies and plans. (van der Heijden, 1996)
- Plausible, challenging descriptions of what *might* happen in the form of a set of stories about alternative futures—they are not forecasts, preferences or predictions. (Wilkinson and Eidinow, *Journal of Risk Research*, 2003)



# Scenarios are...

- Attempts to describe in some detail a hypothetical sequence of events that could lead plausibly to the situation envisaged. *Herman Kahn*
- Stories about the way the world might turn out tomorrow, stories that can help us recognize and adapt to changing aspects of our present environment. *Peter Schwartz*



# Scenario planning is good at...

- Providing new illumination
- Challenging thinking traps
- Finding key driving forces that will really make a difference
- Focusing on opportunities rather than problems
- Developing a shared understanding of the situation at hand



# A brief background

- Scenario planning first emerged following WWII as a method for war games and military planning
- Herman Kahn (1960's) US Air Force and RAND Corporation
  - one of America's top futurists at the time
  - in 1967, Kahn published *The Year 2000*
  - developed scenario planning for the corporate world

# A brief background (continued)

- Pierre Wack (1970's) planner in London office of Royal Dutch/Shell
  - Looking for events that could affect the price of oil
  - US exhausting oil supplies & OPEC asserting power
  - Wack developed two scenarios, but no change in Shell management behavior
  - Further scenario development with full-blown implications of driving forces in story form
  - Helped Shell managers imagine the decisions they would have to make
  - October 1973: only Shell was prepared
  - Shell moved from one of the weaker of the seven large oil companies to 2nd in size and 1st in profitability



# Van der Heijden's account

- Scenarios first developed with “predict and control” mindset
  - Probabilistic assessment of different futures leading to “most likely” projection
  - No fundamental advance over other forecasting approaches
- By 1970s, flaws in this approach were evident
- Many changes to the methodology over the past 45 years.

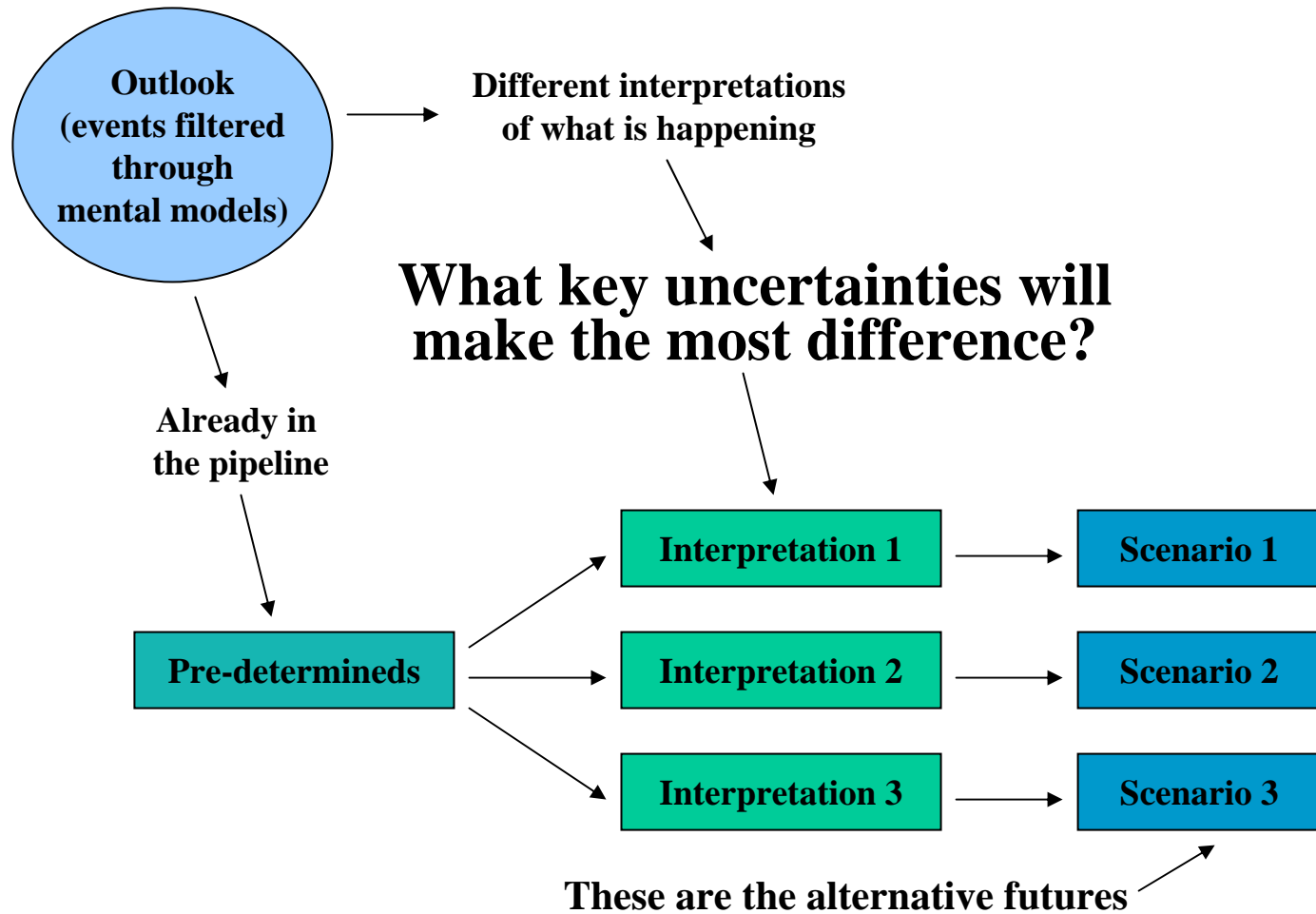


# Van der Heijden (continued)

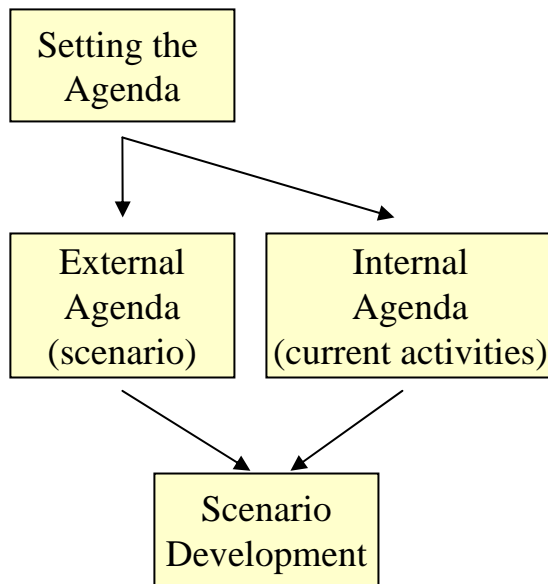
- Decisions are never based on one scenario being more likely than another
- Planning takes place by judging the impact of a number of different futures which are all equally plausible and treated with equal weight
- Scenarios help plan for uncertainties and find opportunities that otherwise would not be considered deeply
- Scenario planners look at the people behind the decisions, not just the technical or macro phenomena

# Scenario building framework

Scenarios operate best in situations where uncertainty outweighs the predetermined



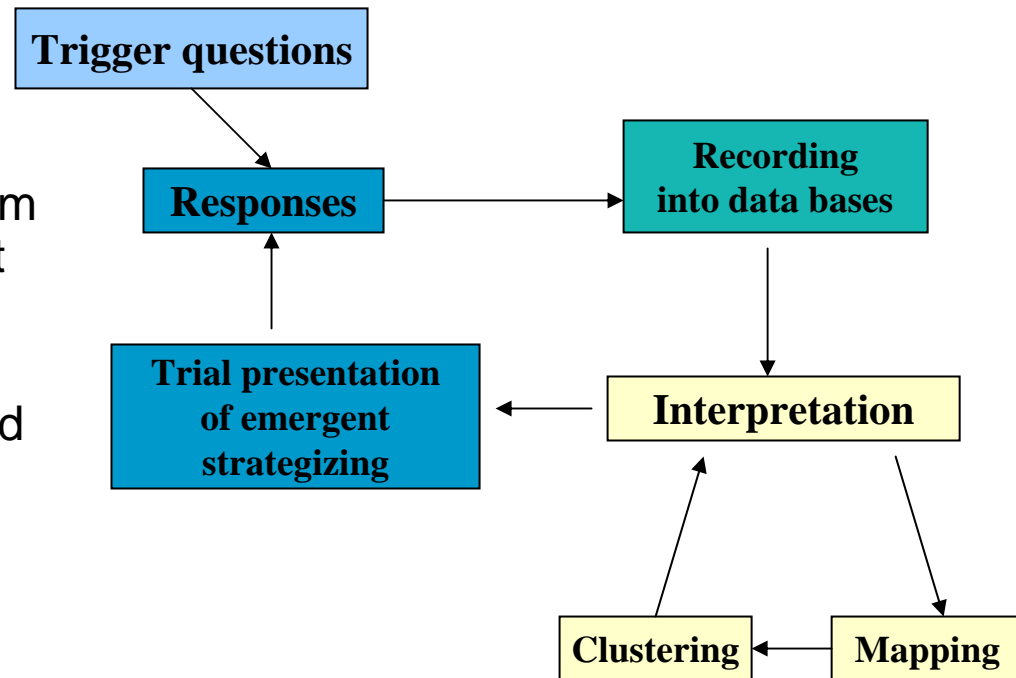
# Overview of process: agenda



- Clear picture of what is strategically important
- Elicit views and insights
- Discover underlying driving forces
- Map fundamentals of the organization/project
- Identify important uncertainties and potential impact
- Target “horizon year”
- Team members must be able to tolerate ambiguity
- Find “Remarkable people”

# For Example: Elicitation

- Scenario planners start from the client's insights of what drives the success of their organization
- These insights are surfaced through a process of elicitation
  - Group brainstorming
  - Individual interviews
  - Feedback



## The Elicitation Cycle

# For Example: Interviews

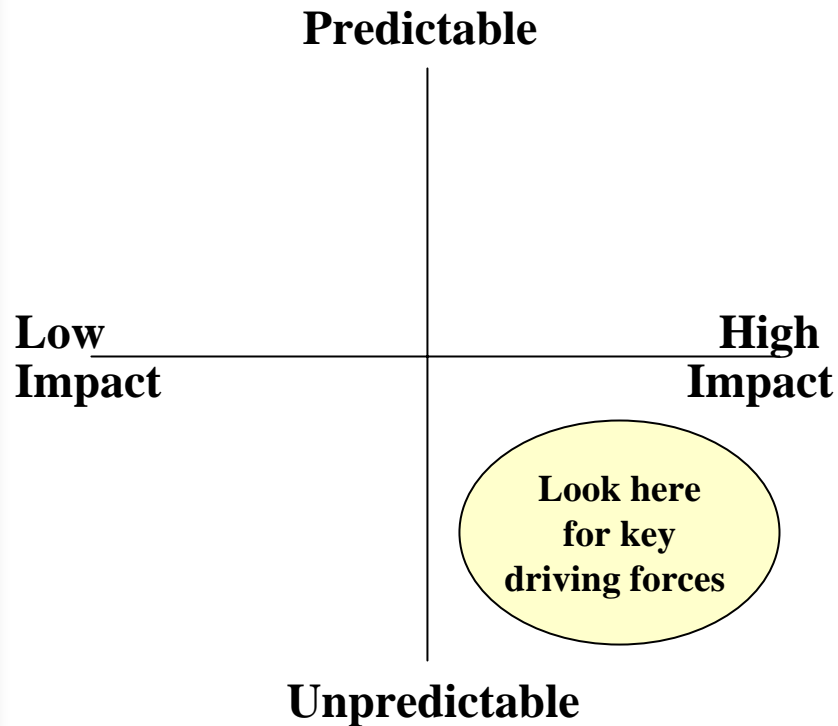
Interview Questions	Purpose of Question
“How did you come to be in your present position?”	Allows interviewee to express a personal view point relating to the subject under discussion.
“If you could pose only three questions to a clairvoyant who could foretell the future, what would you want to know?”	Introduces the issue of priorities and relative impact of interviewees concerns and uncertainties.
“Imagine that the world is a good one, rolling out as you would like it to be, how would you answer your own three questions?”	These questions surface the interviewee’s idea of how things hang together in the world, what they consider to be good and bad. As a result, their value system begins to surface.
“Imagine that the world develops in an undesirable direction, representing your worst fears, how would you answer your own three questions?”	
“What pivotal events can you identify in the past of this organization, good or bad, that should remain in our memories as important lessons for the future?”	This question acknowledges that mental models are representations of patterns we have seen in past events. Listen carefully for organizational “myths.”

# For Example: Interviews

## Processing the data collected from interviews:

- responses are analyzed and separated into two data files, one with comments about the external environment and another with the internal environment
- each statement is then clustered and linked to find patterns and similarities
- the clustering can be visual, or larger projects can use a computer database and hierarchical outlining
- the exercise is iterative until clusters are reasonably independent and each idea falls naturally in one cluster only
- clusters are named and then a second level of clustering and categorization is undertaken
- finally the analyst identifies common and divergent views and assumptions within each cluster which are presented to the scenario team
- from these discussions, the scenario agenda is established

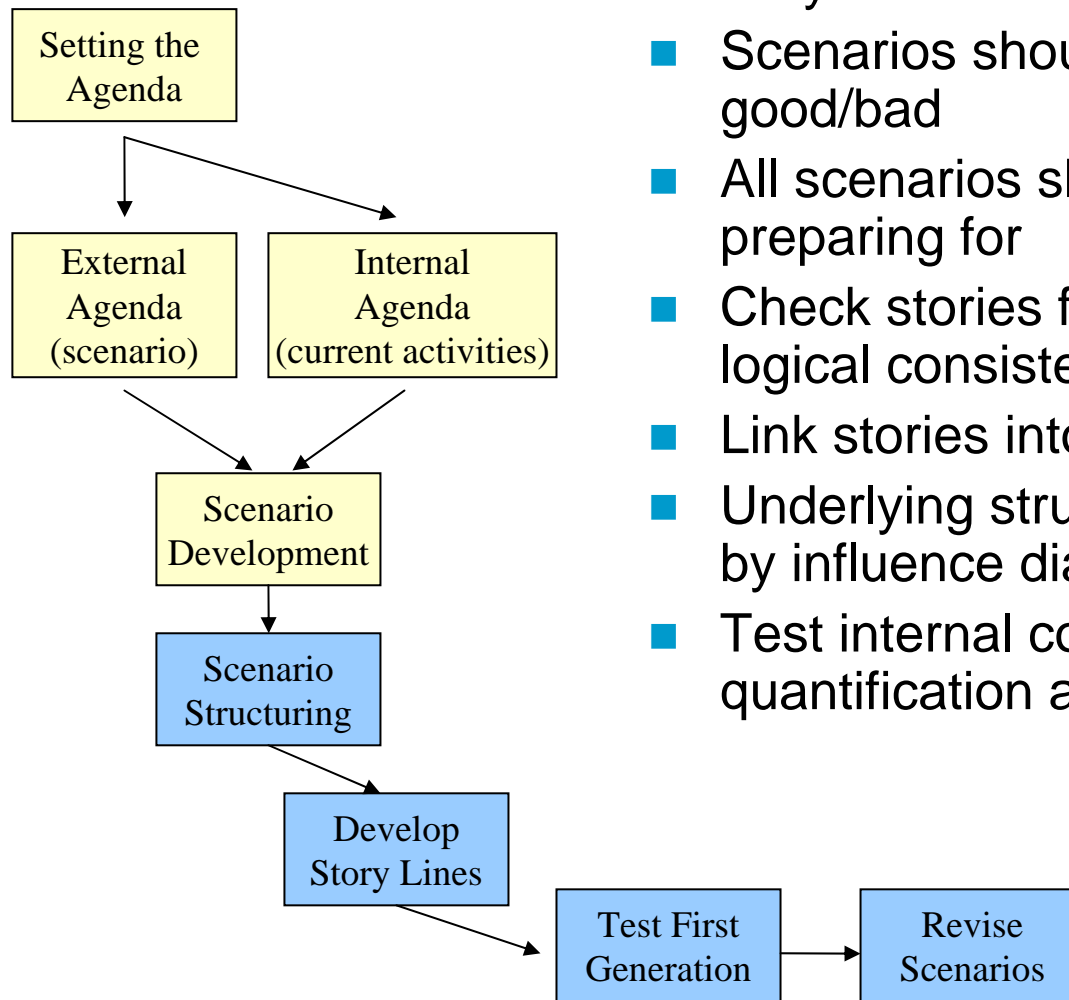
# For Example: Predictability-Impact



## Predictability/Impact Ranking

- The scenario agenda yields many concerns and issues that could form part of the scenarios
- Which issues are the most important?
- Must find the driving forces and key concerns that will make the most difference to the future of the organization or project
- Several tools available: one is ranking by predictability and impact

# Overview of process: story lines



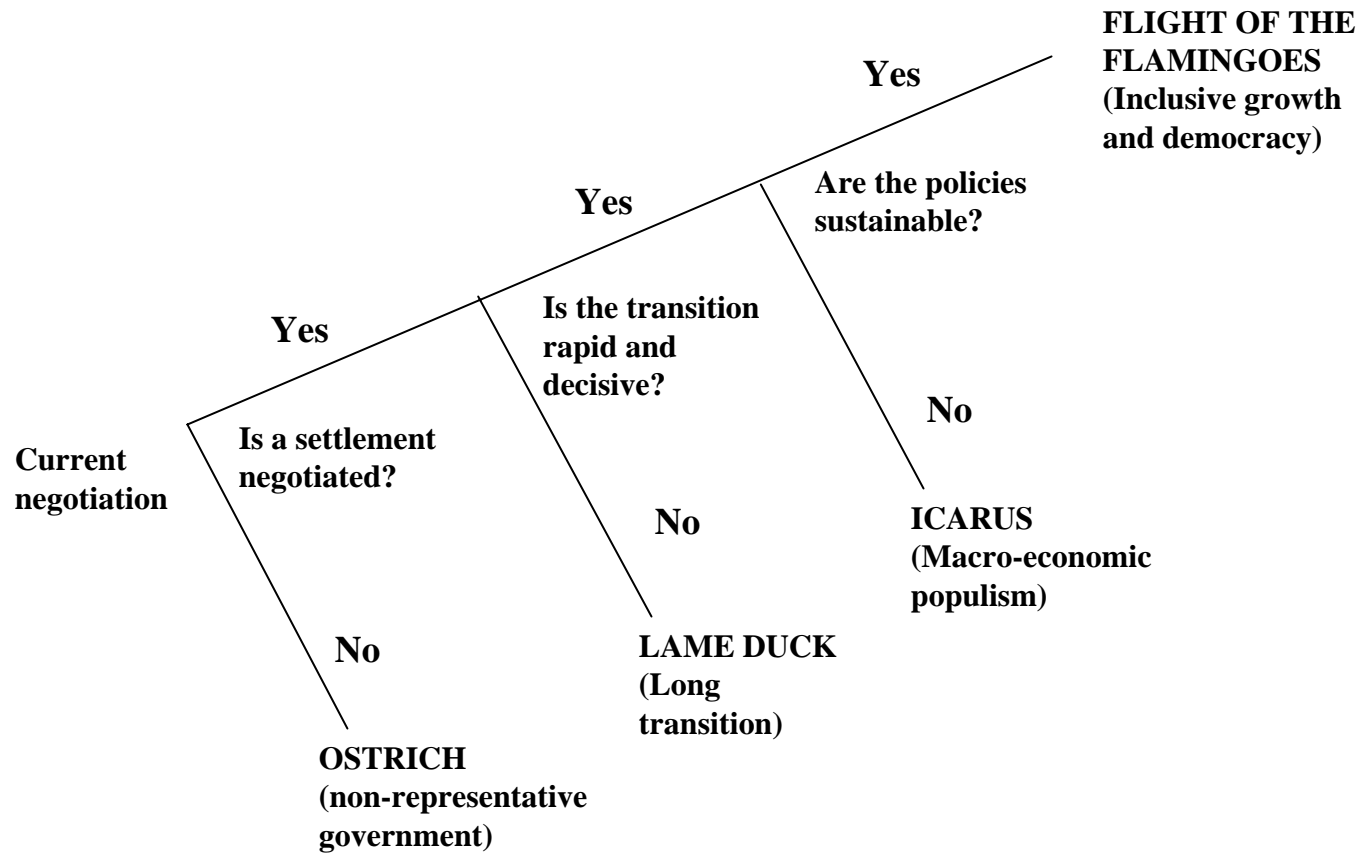
- Only 2-4 scenarios needed
- Scenarios should not become good/bad
- All scenarios should be worth preparing for
- Check stories for plausibility and logical consistency
- Link stories into past events
- Underlying structure represented by influence diagrams
- Test internal consistency: quantification and actor testing



# For Example: Mont Fleur (Kahane, 1992)

- South African political leaders gathering to talk about the future of the country in 1991
- Could not find a common language
- Scenario team: 22 members from all political parties
- Goal: develop common mental models about the future of South Africa
- Each member presented their view of what *might* happen in the future of South Africa, not what they wanted to happen
- Evaluated stories for plausibility and logical consistency—pruned down to four “useful” stories

# For Example: Mont Fleur (Kahane, 1992)





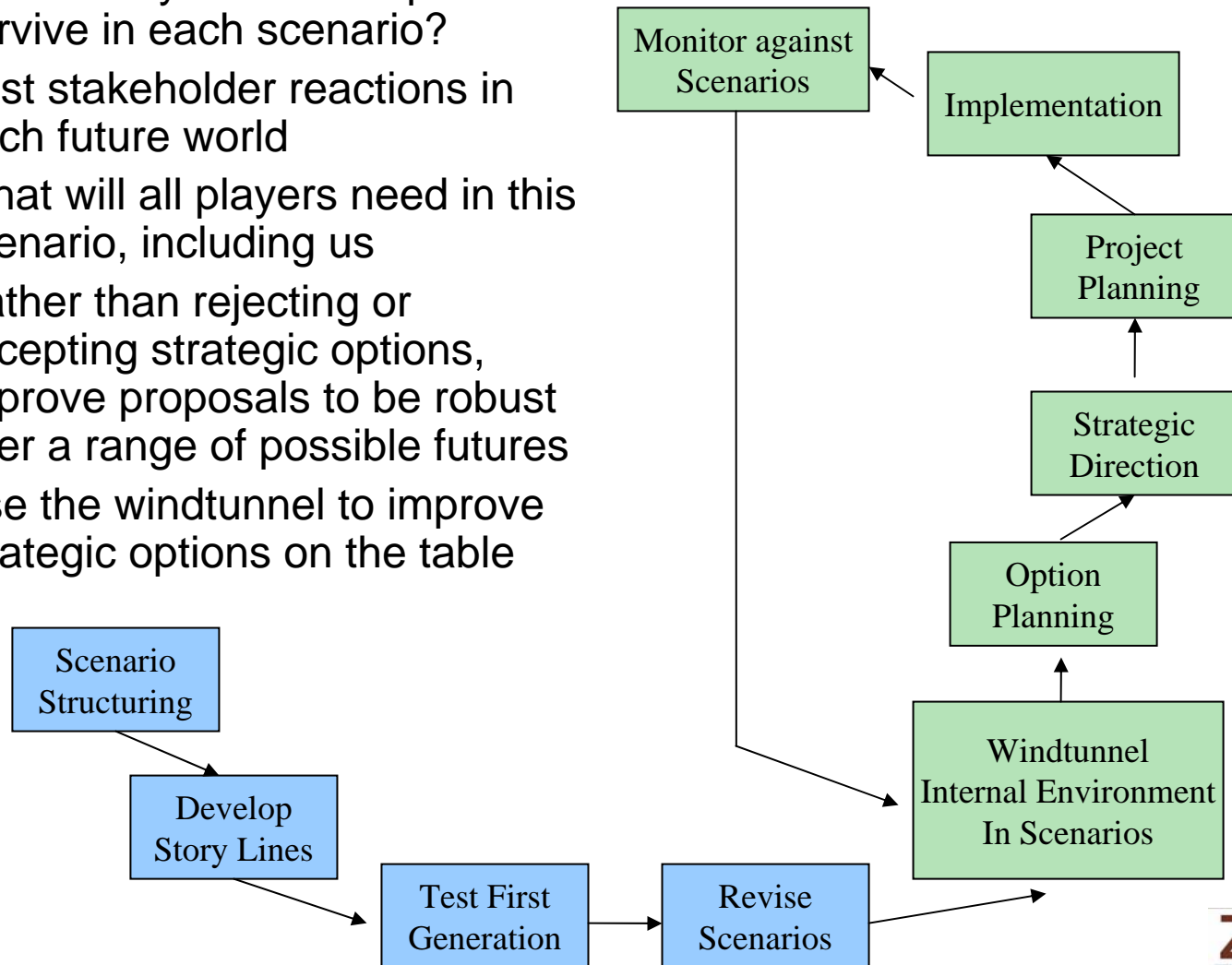
# For Example: Mont Fleur (Kahane, 1992)

Adam Kahane reports:

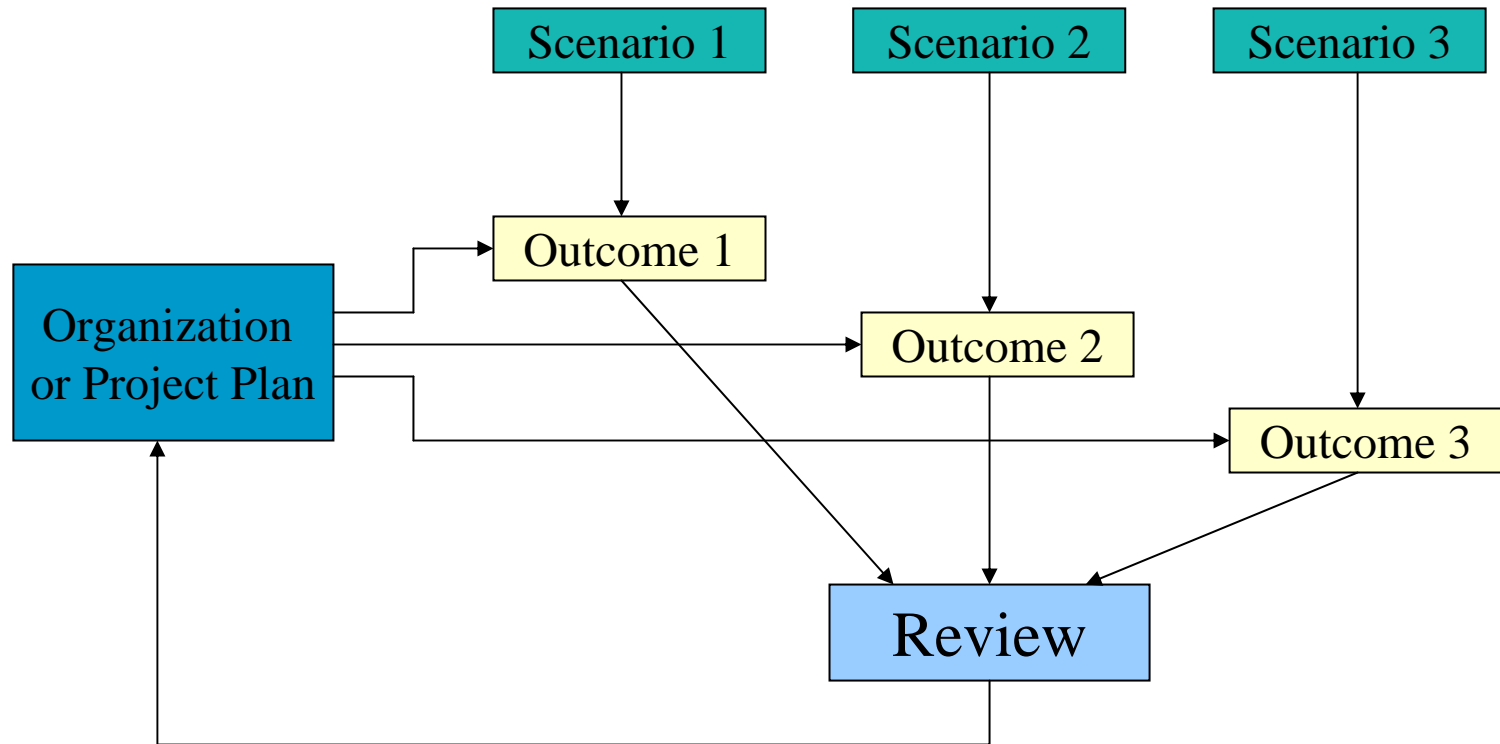
“The advantage of scenarios is that...people see a common language – a common way of understanding the world – emerge fairly early in the process....This exercise made me hopeful about the use of scenarios as a foundation for collaborative action, especially among people who are enmeshed in conflict.”

# Overview of process: windtunnel

- How does your current plan survive in each scenario?
- Test stakeholder reactions in each future world
- What will all players need in this scenario, including us
- Rather than rejecting or accepting strategic options, improve proposals to be robust over a range of possible futures
- Use the windtunnel to improve strategic options on the table



# For Example: Windtunnel



**The Organization or Project Plan considered against Scenarios**

# For Example: Windtunnel

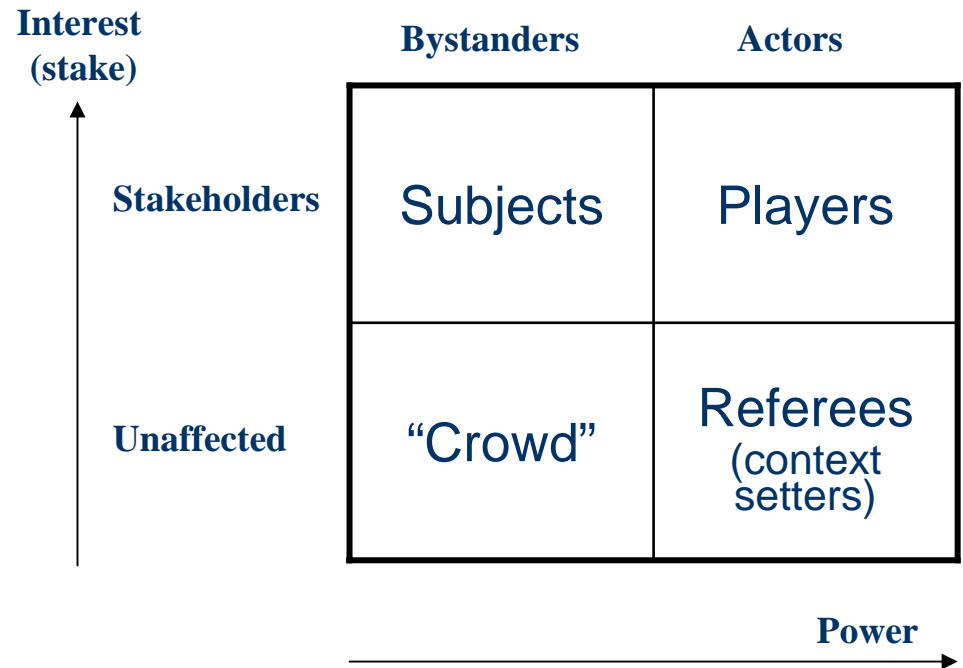
- All designs must be tested against the full range of scenario conditions
- Option evaluation in light of all possible futures
- Scenario/Option Matrix provides a quick overview of the degree of robustness of each option
- Scenarios are the test conditions which bring out the strong and weak points of a proposed design or plan
- Important that all scenarios are equally likely futures to be used as test conditions

	Ostrich	Lame Duck	Icarus	Flamingoes
Withdraw	+		-	--
Continue as is				
Short-term Investments	-		++	+
Long-term investments	---	--		+++

Mont Fleur: Scenario/Option Matrix

# For Example: Windtunnel

- Evaluate the strategies emerging from the process against the most important stakeholders and actors
- Categorize main actors and stakeholders around a strategic issue
- Particularly interested in “players” who have both interest and power
- “Referees” (actors who cannot be influenced) were considered previously in order to judge the internal consistency of the draft scenarios



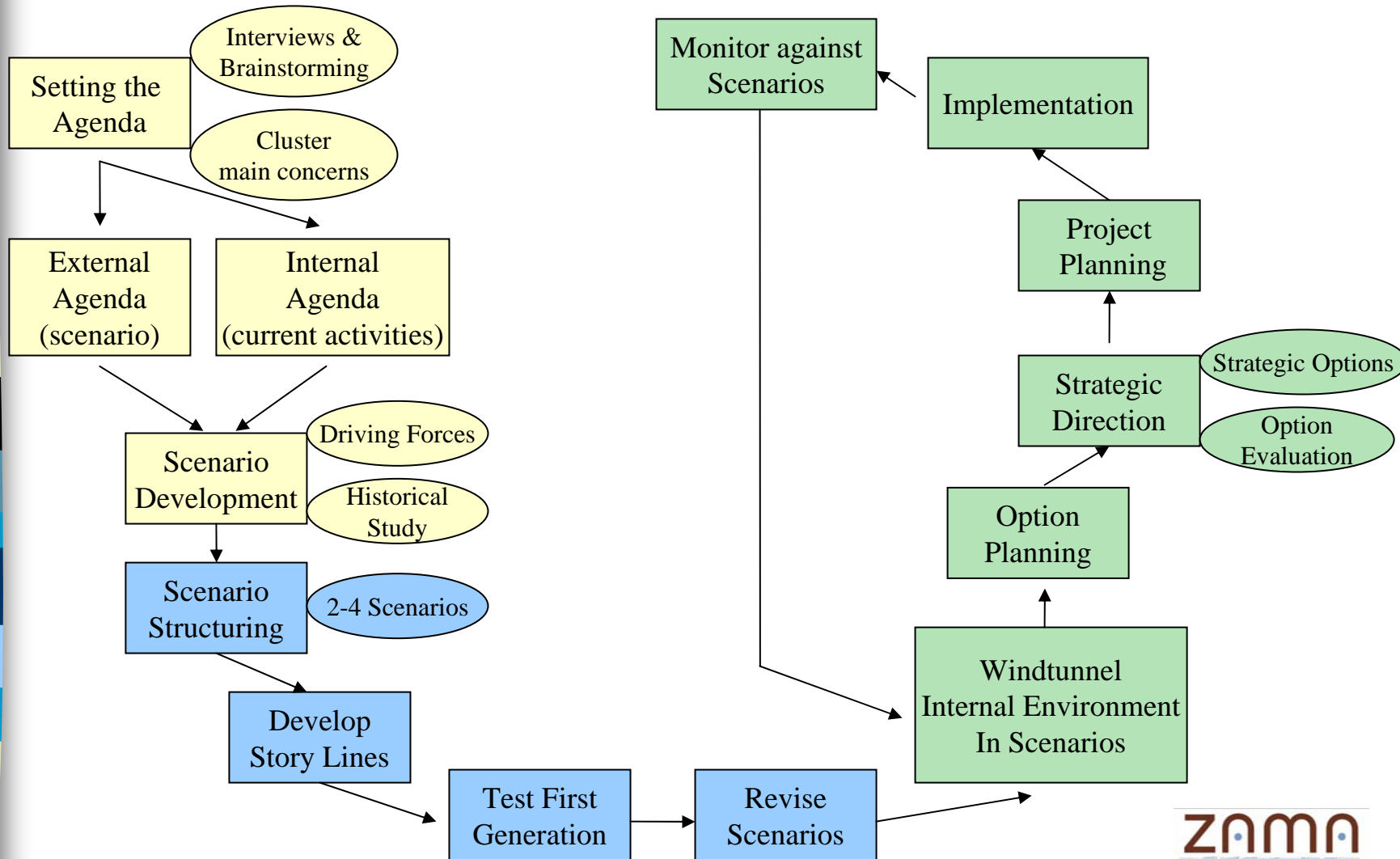
**Actor/Stakeholder Matrix**

# For Example: Windtunnel

	Government	Pressure groups	Employees	Fin. Markets	Customers
Withdraw	--	++	---		-
Continue as is					
Short-term Investments		-	+	+	
Long-term investments	+	--	++	-	+

Mont Fleur: Stakeholder/Option Matrix

# Overview of process





# Riskworld Scenarios

- Three scenarios:
  - Expert Rules
  - Common Sense
  - Kaleidoscope
- Depicting three paths society might follow as it copes with an environment characterized by increasing uncontrollable risks and awareness of risk
- Intended to help readers focus their exploration of the future risk on the assumptions, questions, dilemmas, and uncertainties that they may face
- “Sketch scenarios”
  - provide a context in which the reader can set his or her own decisions, issues, or dilemmas
  - not intended to lead directly to implications for crafting strategies



# Riskworld Scenarios: Key Factors

1. The philosophy of risk, including attitudes to precaution and uncertainty, and acceptance of reality
2. Decision-making, trust and legitimacy of knowledge
3. Attitudes to technology
4. The global and European contexts
5. Nature of society



# Ecological Vulnerability Scenarios

- Scenarios devised to explore the future of ecosystem services in the Northern Highland Lake District, Wisconsin:
  - Future consequences of settlement
  - Ecological vulnerability
- Three scenarios:
  - Walleye Commons: loss of ecosystem services important to tourism reduced the attractiveness of the region
  - Northwoods.com: the region's ecosystems were able to cope with population growth
  - Lake Mosaic: number of lake-front homes continue to increase, leaving few lakes undeveloped



# Ecological Vulnerability Scenarios

- Scenarios started a conversation among people in northern Wisconsin about alternative futures:
  - to begin a process of evaluating policies
  - to examine how policies will shape the ability of the district to respond to potential risks and to benefit from possible opportunities
- Team of scientists created an initial set of scenarios to begin a scenario-planning process amongst a broad set of stakeholders

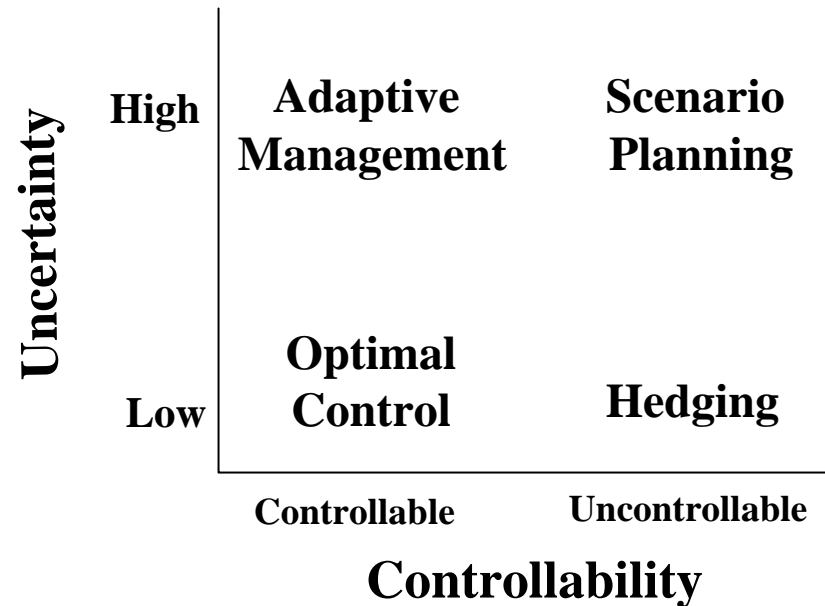


# Scenario planning is used for...

- Bridging the gap between scientists and policy makers and other stakeholders
- Facilitating conversation in conflict situations
- Exploring hypothesis, e.g. linkages between ecosystems and humans
- Scientific assessment
- Transfer of information or educational uses

# Scenario planning is useful ...

- When there is a lot of uncertainty that is not controllable
- In other cases, optimal control, hedging, or adaptive management may be appropriate
- Scenario planning can be modified in a multitude of ways to fit particular contexts



Source: Peterson, Cummings, and Carpenter (April 2003) Scenario Planning: A Tool for Conversation in an Uncertain World. *Conservation Biology*, Vol 17, No 2, pp 358-366.



# Scenarios develop perception

“Prescience is not possible. The only thing we can do in relation to unknowables is to become more skilful in reacting to the unexpected. We can do that by developing our perception skills. Scenarios can provide powerful help here. Indeed, many would argue that this is the most important use of scenarios.”

van der Heijden (1996) Scenarios: The Art of Strategic Conversation