



GBN Global Business Network

a member of the Monitor Group

Advanced Methods for Participatory Scenario Planning

June 19-21, 2012

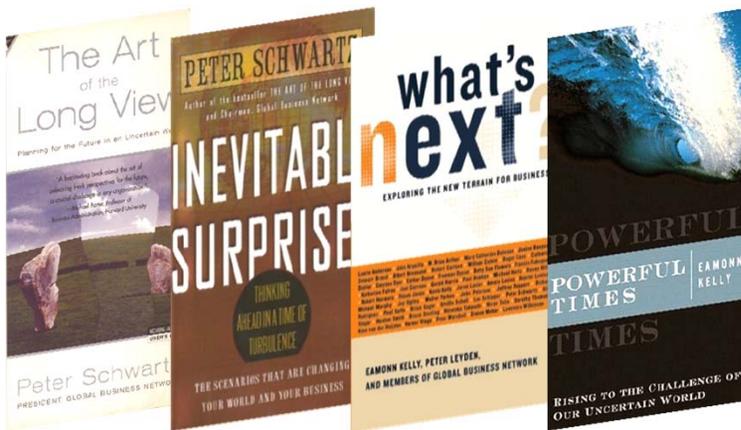
Fort Collins, CO

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COMPANY CONFIDENTIAL

Introducing GBN

- Founded in 1987 by former members of Shell Oil's famous scenario team; a member of Monitor Group since 2000
- The most significant source of thought leadership and process innovation to help clients identify and adapt to the forces shaping the future
- The world's largest consultancy integrating scenarios and strategy, delivering more than 1,000 engagements and trainings over the last decade



Select Client Organizations*



25 years of experience across a wide range of organizations, including:

- Fortune 100 companies
- Municipal, national, and regional government agencies
- Leading private foundations and NGOs

* Organizations that have acknowledged our collaborations publicly

Course Objectives

- To build on the insights and learning from previous scenario training seminars on participatory approaches
- To explore and address some of the challenges that are leveled at the use of some approaches (in relation to connecting with climate science)
- To introduce and use a number of additional approaches and frameworks that offer promise
- To apply these approaches and create scenarios and insights for two main case study areas
- To reflect on the value that these additional dimensions can bring for participatory scenarios

Approach

- Case-study based
 - More emphasis on describing case study areas using **system models and relationships**
 - Focus on a “**least change**” **scenario** as the initial platform for further scenario creation
 - Exploration of the value of scenarios describing **state changes / threshold effects / system vulnerabilities**
 - Introduction of an interactive approach to creating **multi-dimensional scenarios**
- Connection back to decision-makers and the actions and strategies they should follow

Course Overview

Day 1 (Tue)

- Introductions, goals and agenda
- Introduction to case studies:
 - Rocky Mountain Continental Divide
 - Greater New York City
- Case study groups review drivers, impacts and models
- Least Change scenario building, implications and actions

Day 2 (Wed)

- Overnight Thoughts
- Case study groups generate alternative scenarios using:
 - Fast Forward approach
 - Vulnerable systems approach
- Implications and actions
- Communication of scenarios

Day 3 (Thur)

- Using scenarios to set strategy and implications for resource management
- Review of various scenario creation approaches
- Final discussion

Morning

Afternoon

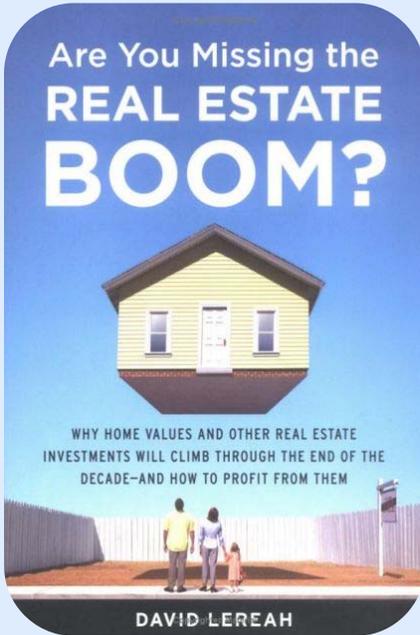
Introducing Scenarios

Scenarios are...

- Rich, data-driven stories about tomorrow that can drive better decisions today
- Hypotheses that describe a range of possibilities for the future—not predictions
- Imaginative narratives that stretch thinking but are always plausible and logical
- A framework for recognizing and adapting to change over time—ahead of time



We're not good at thinking about the future...



2006

“An invaluable book.”

- Dewey Daane, Former Governor of the Federal Reserve Board of Governors

“David Lereah lays out a compelling vision of housing.”

- David Berson, Chief Economist, Fannie Mae

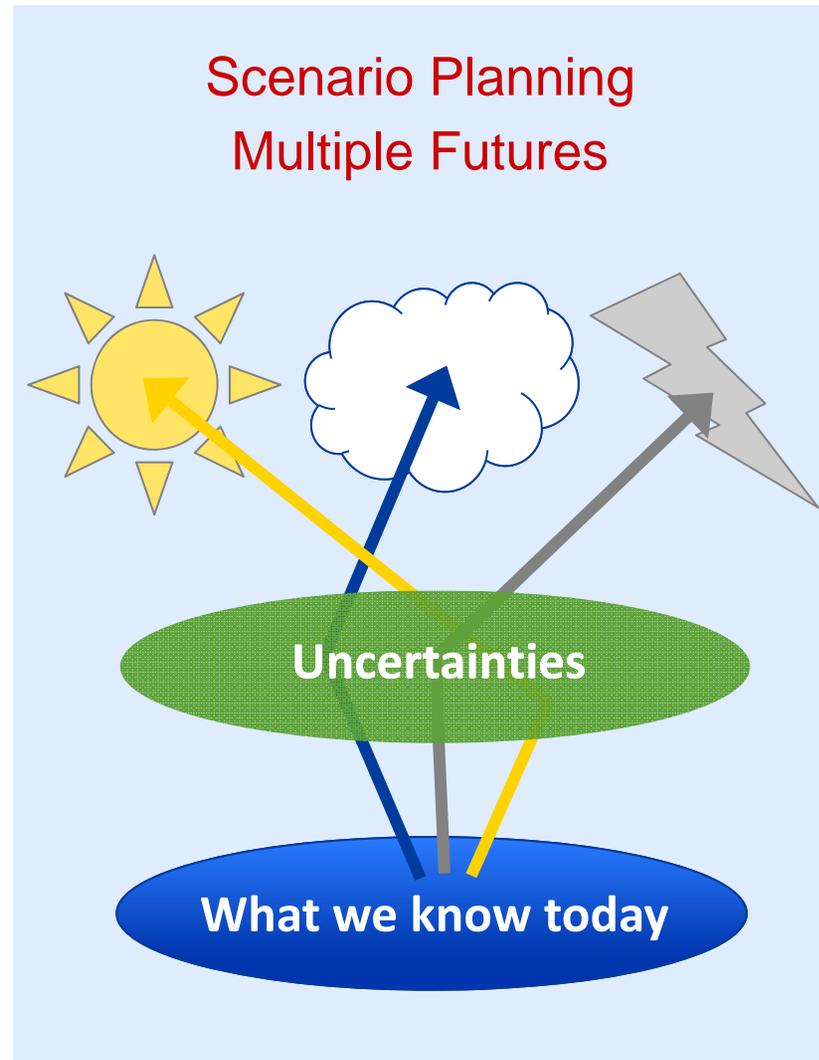
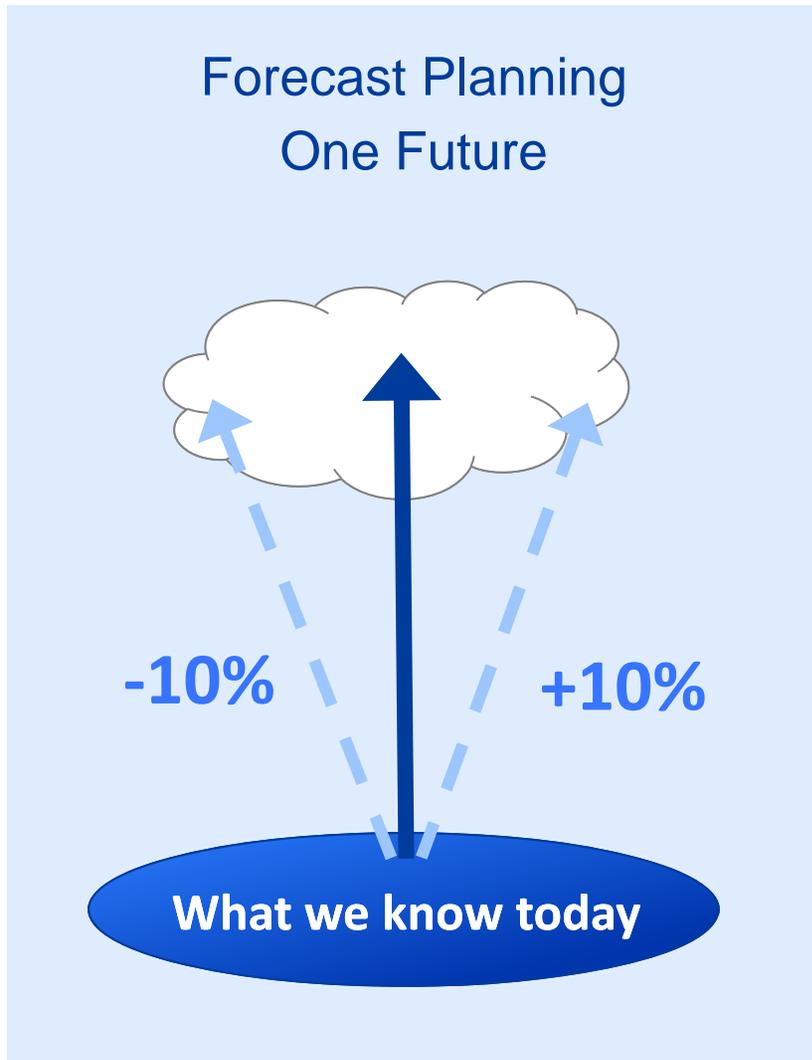
“They couldn’t hit an elephant at that dist . . .”

- Last words of General Sedgwick, 1864

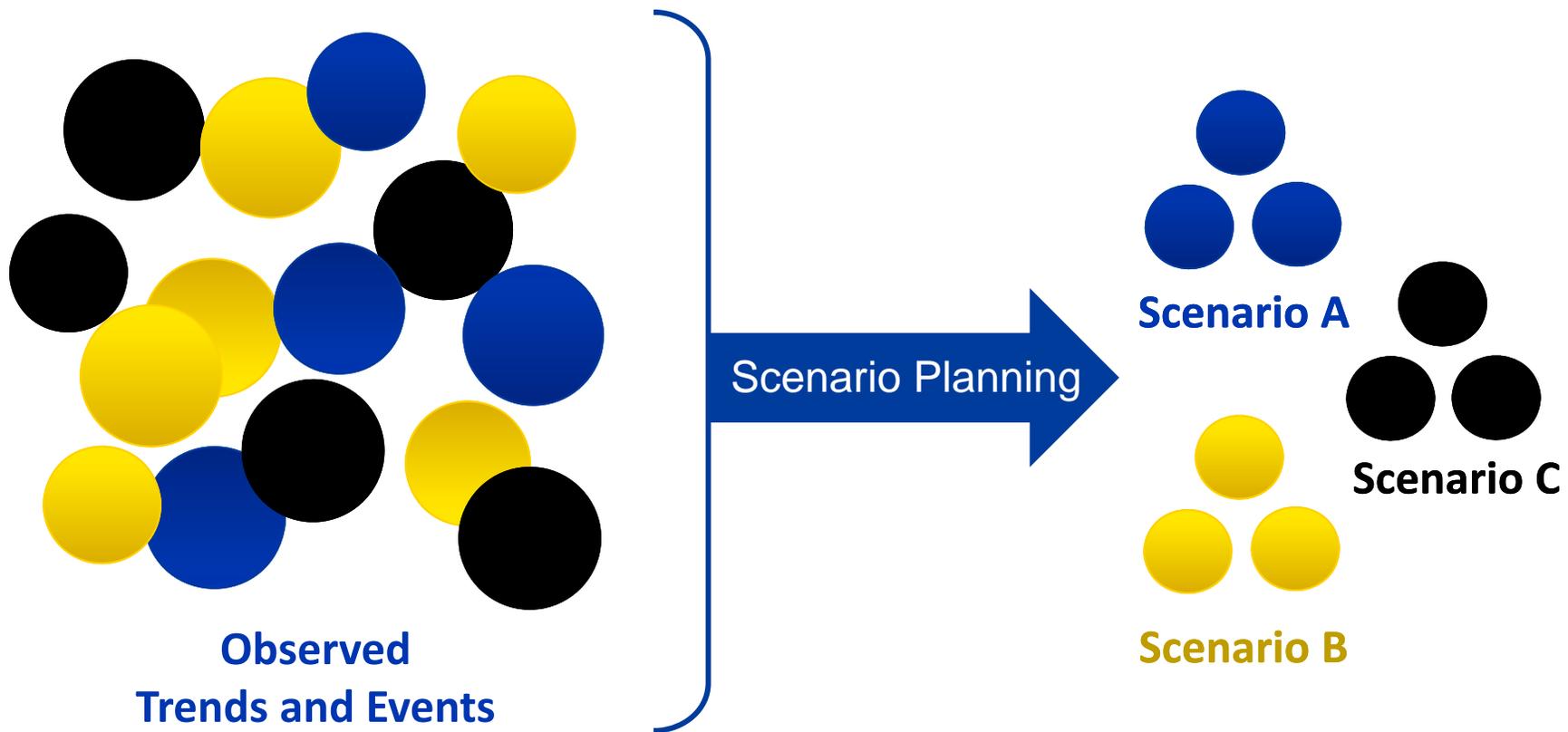


Scenario Planning vs. Forecasting

Scenarios overcome the tendency to predict with precision, allowing us to see multiple possibilities for the future



Scenario Planning Makes Sense of Complexity



“Scenarios are a tool for helping us take a long view in a world of great uncertainty. They are stories about the ways the world might turn out tomorrow that can help us recognize and adapt to changing aspects of our current environment”

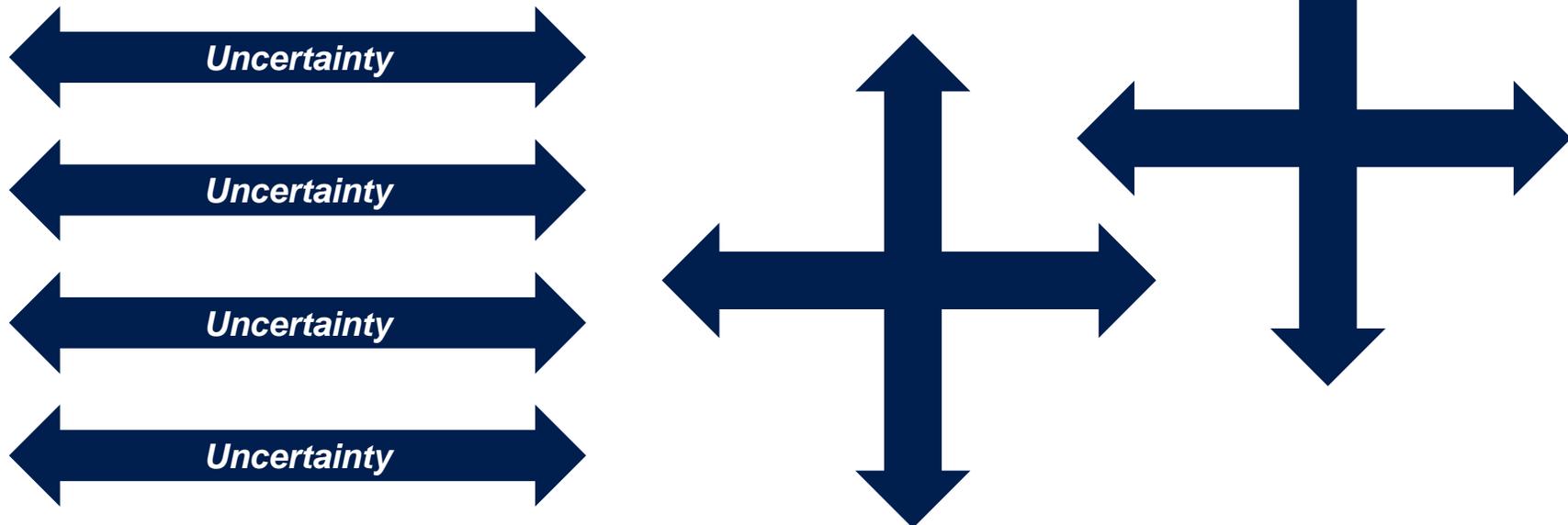
—Peter Schwartz: The Art of the Long View

“The greatest utility [of scenarios] is in creating a wedge into a discussion to overcome initial hurdles to get people talking about climate change. There is a tendency for resource managers or others I work with to be paralyzed by the uncertainty. But framing things in scenarios helps them get over that mental hurdle”

“I think it helps to get people thinking broadly and collaboratively without having to possess every fact”

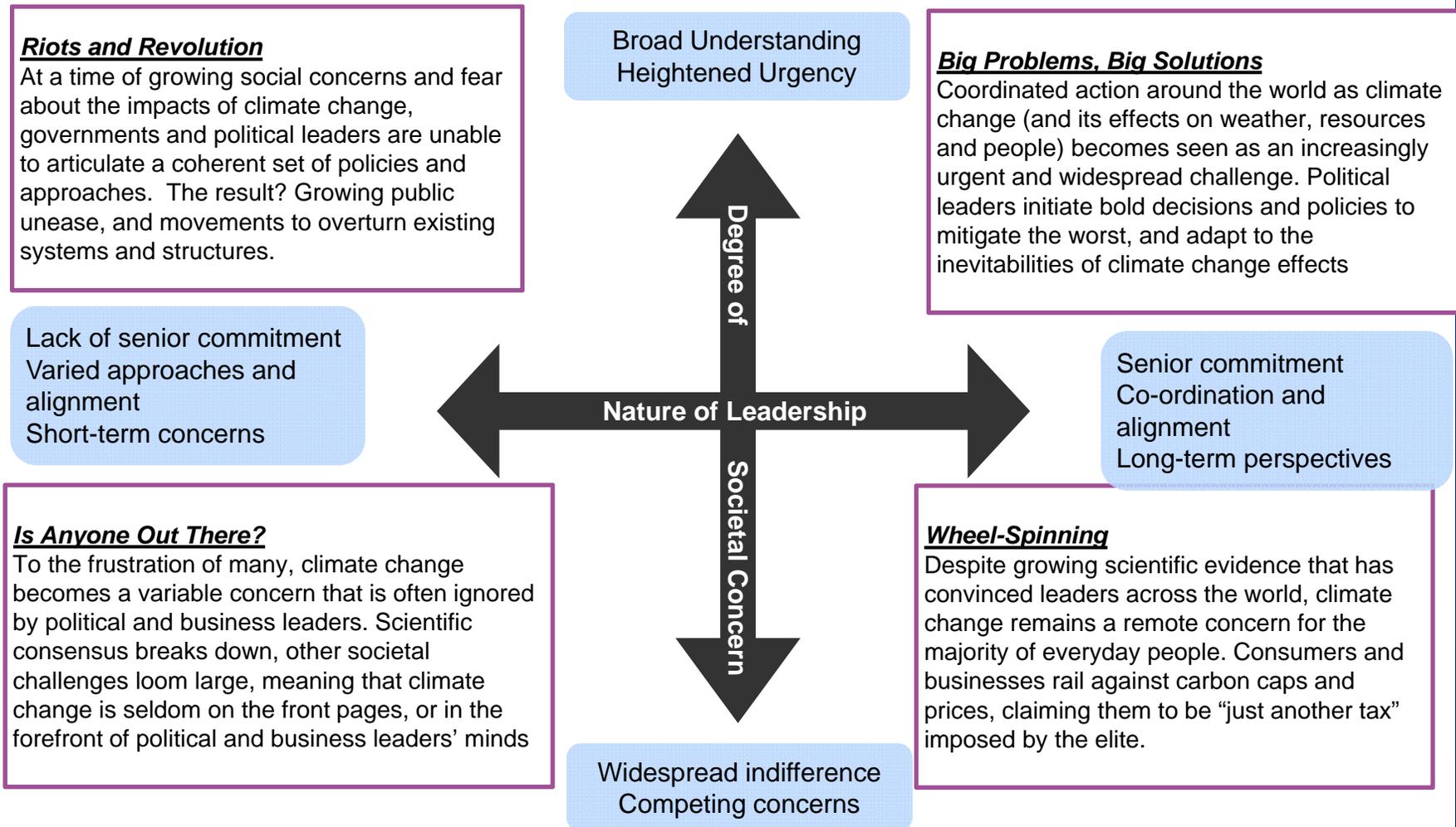
Deductive Approach

- Construct a matrix by combining two critical uncertainties
- Use the quadrants of the matrix to deduce four scenario logics
- Test several combinations
- Can you see 'high concepts' in each scenario?
- Is each quadrant distinctive, challenging, relevant?



Socio-Political Framework

➤ The next step involved considering some of the sociopolitical factors and issues that are associated with climate change. Workshop participants combined their climate matrix with a pre-prepared “socio-political” matrix.



Western Mountains: Scenario Framework

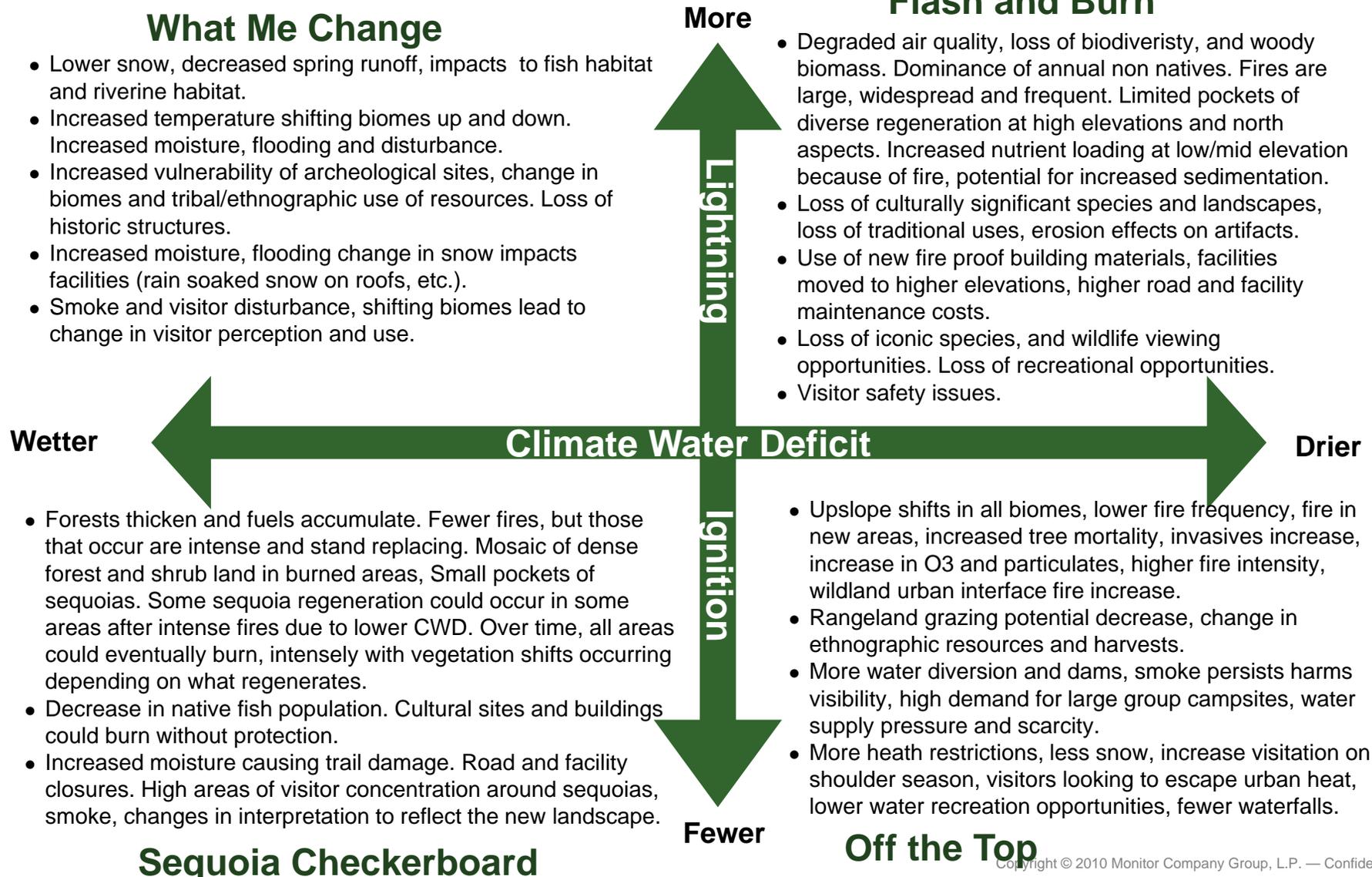
The Western Mountains bioregion identified Lightning Ignition and Climate Water Deficit as the most compelling combination of critical uncertainties. Temperature was held to increase in all scenarios. This created 4 distinct scenarios, as described below:

What Me Change

- Lower snow, decreased spring runoff, impacts to fish habitat and riverine habitat.
- Increased temperature shifting biomes up and down. Increased moisture, flooding and disturbance.
- Increased vulnerability of archeological sites, change in biomes and tribal/ethnographic use of resources. Loss of historic structures.
- Increased moisture, flooding change in snow impacts facilities (rain soaked snow on roofs, etc.).
- Smoke and visitor disturbance, shifting biomes lead to change in visitor perception and use.

Flash and Burn

- Degraded air quality, loss of biodiversity, and woody biomass. Dominance of annual non natives. Fires are large, widespread and frequent. Limited pockets of diverse regeneration at high elevations and north aspects. Increased nutrient loading at low/mid elevation because of fire, potential for increased sedimentation.
- Loss of culturally significant species and landscapes, loss of traditional uses, erosion effects on artifacts.
- Use of new fire proof building materials, facilities moved to higher elevations, higher road and facility maintenance costs.
- Loss of iconic species, and wildlife viewing opportunities. Loss of recreational opportunities.
- Visitor safety issues.

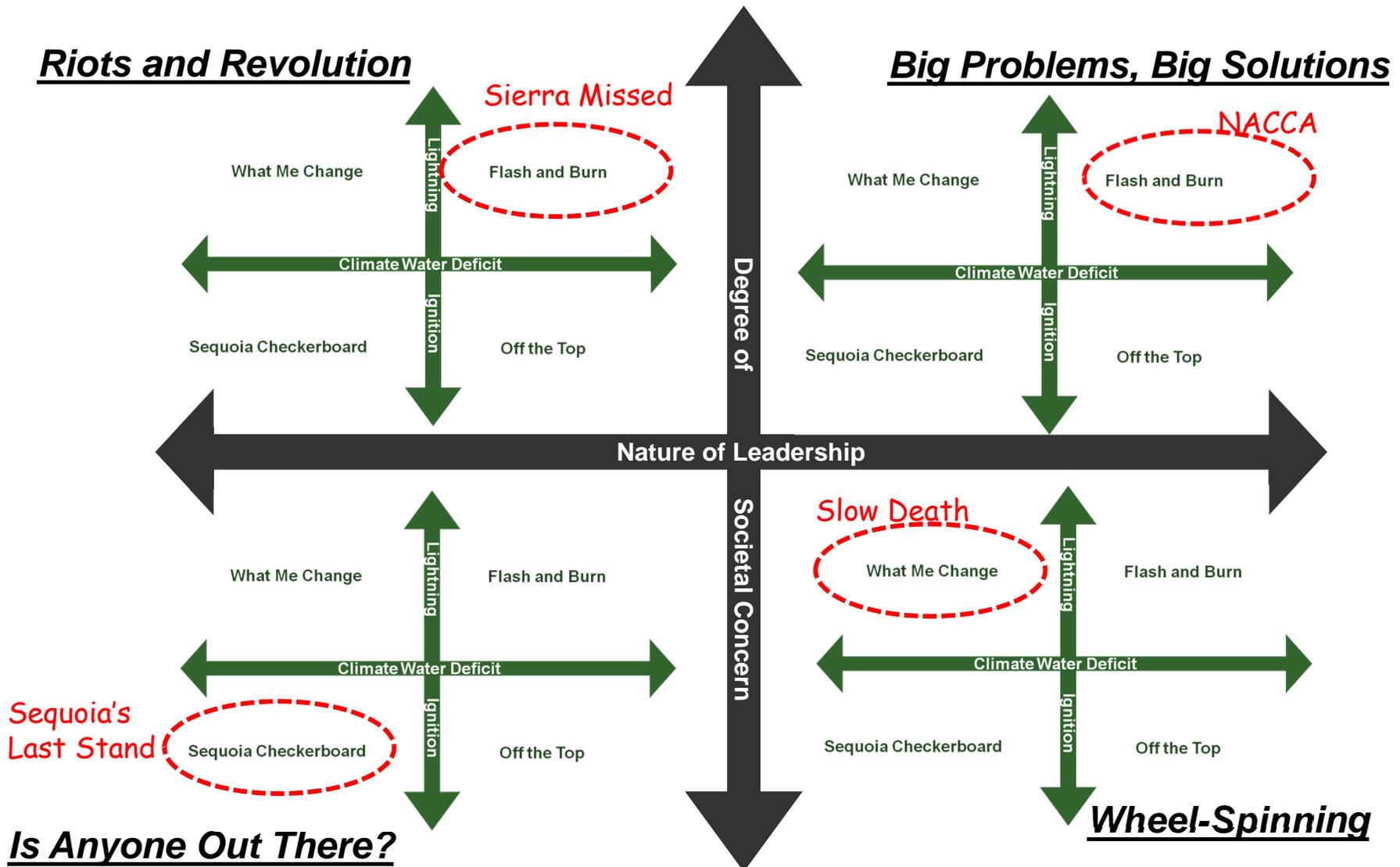


- Forests thicken and fuels accumulate. Fewer fires, but those that occur are intense and stand replacing. Mosaic of dense forest and shrub land in burned areas, Small pockets of sequoias. Some sequoia regeneration could occur in some areas after intense fires due to lower CWD. Over time, all areas could eventually burn, intensely with vegetation shifts occurring depending on what regenerates.
- Decrease in native fish population. Cultural sites and buildings could burn without protection.
- Increased moisture causing trail damage. Road and facility closures. High areas of visitor concentration around sequoias, smoke, changes in interpretation to reflect the new landscape.

- Upslope shifts in all biomes, lower fire frequency, fire in new areas, increased tree mortality, invasives increase, increase in O3 and particulates, higher fire intensity, wildland urban interface fire increase.
- Rangeland grazing potential decrease, change in ethnographic resources and harvests.
- More water diversion and dams, smoke persists harms visibility, high demand for large group campsites, water supply pressure and scarcity.
- More heath restrictions, less snow, increase visitation on shoulder season, visitors looking to escape urban heat, lower water recreation opportunities, fewer waterfalls.

Western Mountains: Nested Scenarios

➤ After nesting the climate matrix into the socio-political matrix, the Western Mountains team chose four scenarios to focus on in detail



Implications and Actions

“Riots and Revolution”

“Big Problems, Big Solutions”

• *What is happening today that reminds you of each scenario?*

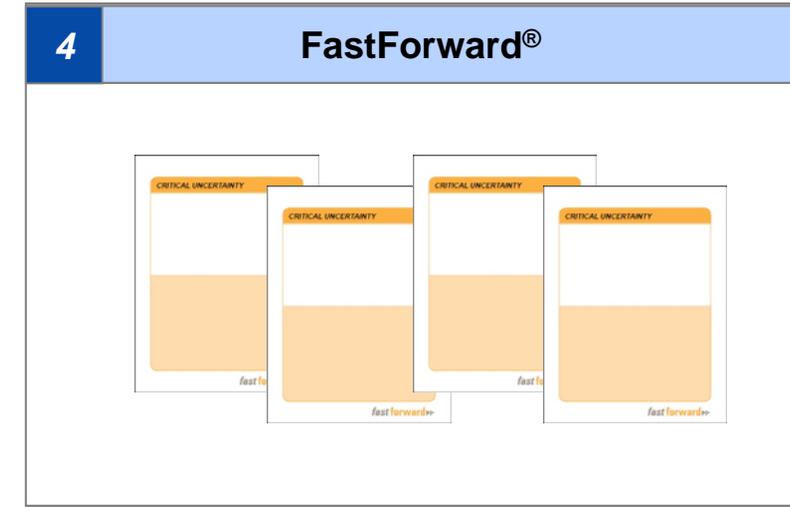
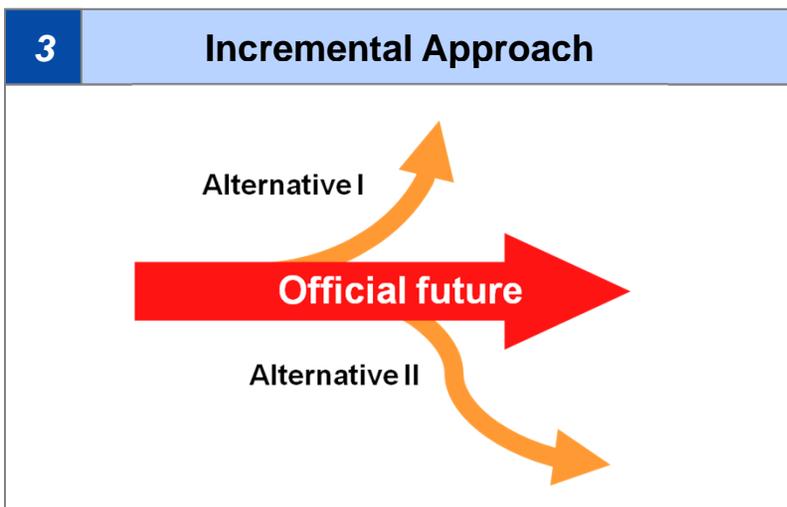
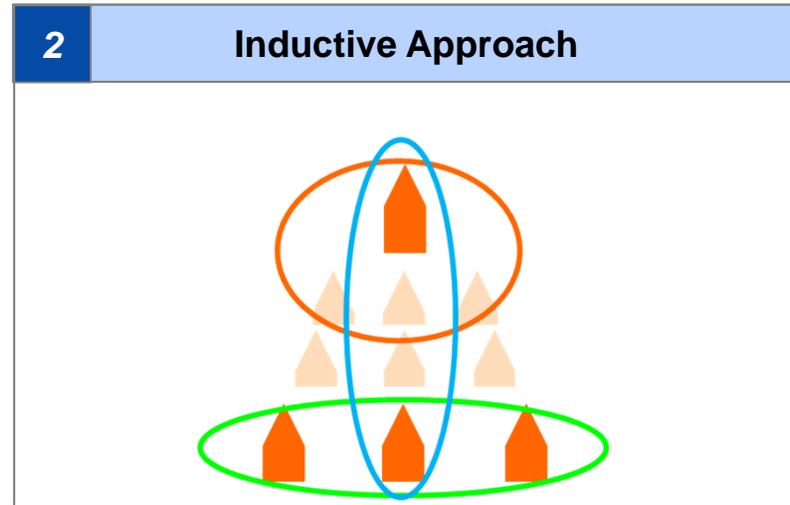
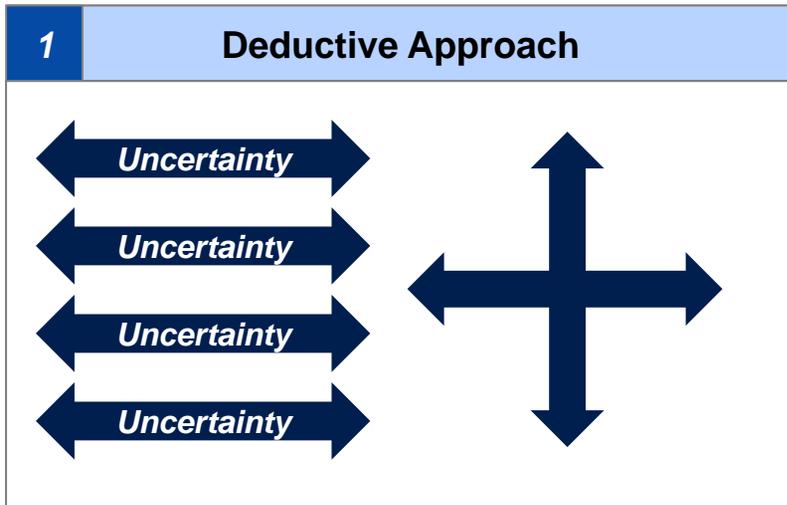
• *What new opportunities or challenges would this scenario create?*

• *How would your Park / organization need to change if this was your future?*

“Is Anyone Out There?”

“Wheel-Spinning”

Participatory Scenario Creation Approaches



Working Agreements

- Be open to new ideas: challenge your own assumptions and ask clarifying
- Stay future-oriented: “Suspend disbelief”, be creative, and have fun
- Participate fully: Actively listen, contribute, and leave “room” for others
- Stay with us: No multi-tasking, be on time...
- Be open and honest: share your thoughts even if they diverge from the rest of the group

Case Study Overviews



Elements of Case Exercises

- 

Review Drivers / Impacts tables and Conceptual Models
Identify high uncertainty and high consequence variables
Identify social / political drivers
Generate list of vulnerable systems
- 

Introduction of Least Change climate future
Highlight values and plausible impacts
- 

Least Change scenario building
Additional impacts, system interactions
Introduce socio-political aspects
- 

Identify implications of Least Change scenario
Suggest actions if this scenario were to occur
- 

Report-out and synthesis across exercise groups

Definitions

Drivers: first-order changes to physical systems

Effects: results of changes to physical systems : e.g. flooding starts to increase

Impacts: the effects of the driver(s) on something that we care specifically about

Implications: problems or opportunities that are presented to protected area management and our role as a result of the impact

Actions: what protected area management should do in response to (or in anticipation of) the implication

Overnight Thoughts

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Using Fast Forward to create scenarios



What Is FastForward® ?

FastForward® is a proprietary game-based approach to creating sketch scenarios. GBN created the approach in the early 2000s in response to a number of trends in the ‘scenario marketplace’:

- Organizations had less time available to spend in meetings creating scenarios
- More demand for ‘scenaric-thinking’ as a means to other ends (i.e. less demand for full scenarios)
- Demand for scenario conversations without requiring an experienced scenario facilitator
- Requirements for scenario conversations that could involve more than 25-30 people

FastForward® relies on these key steps:

- A set of critical uncertainties are created in advance of a workshop
- The uncertainties are represented as two-sided cards
- Participants create numerous scenarios by arranging different combinations of cards (i.e. using multiple dimensions of uncertainty)
- They record their scenario ideas on templates

Identifying and Defining Critical Uncertainties

A critical uncertainty is an issue/force/trend that we cannot accurately predict, control or influence, but could shape the future in important ways

Beware of (and avoid) “uncertainties” that are actually choices under the control of the decision-making group – e.g.

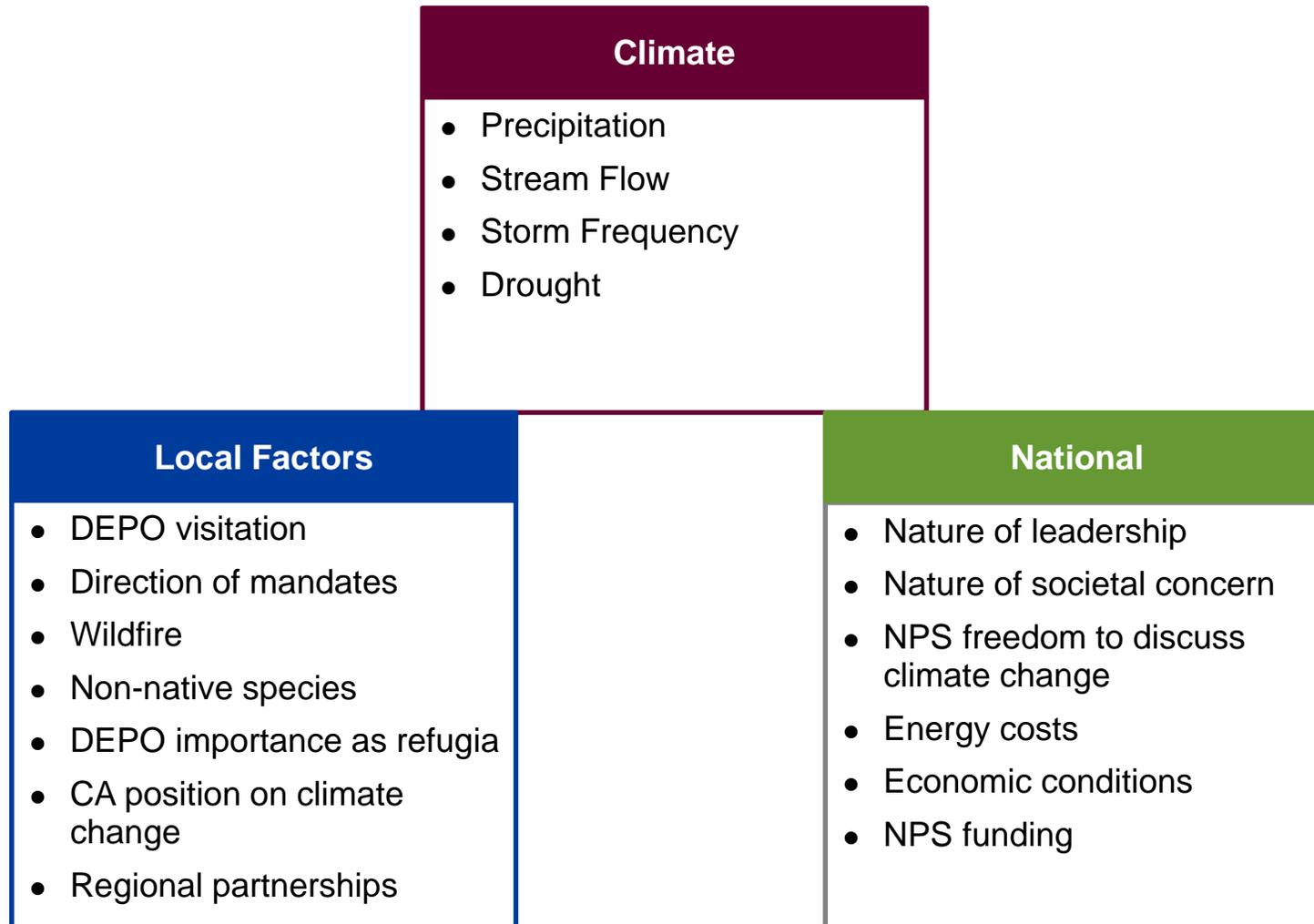


Beware of (and avoid) “uncertainties” that are actually performance outcomes of the decision-making group or organization – e.g.

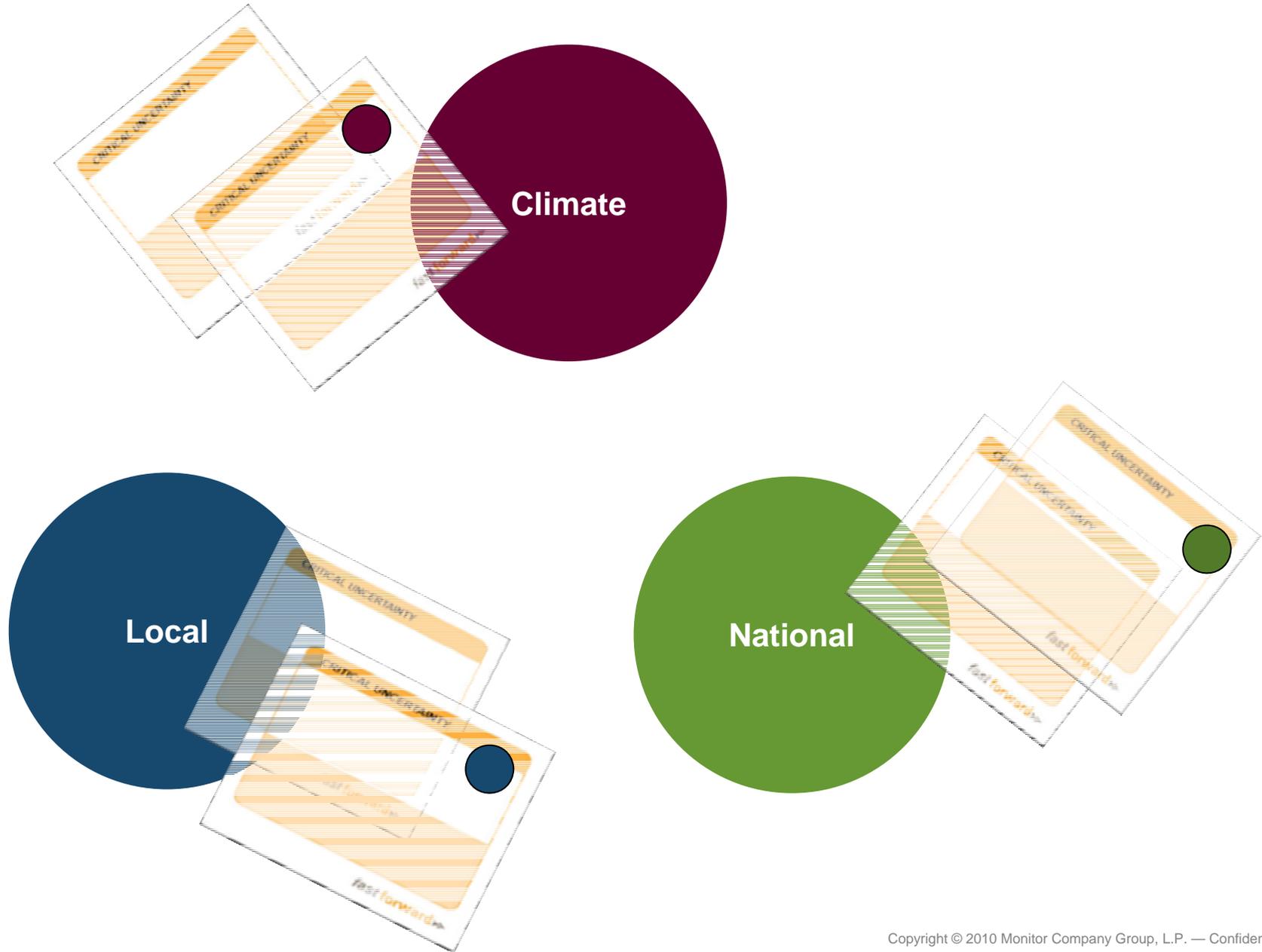


Critical Uncertainties

Critical Uncertainties are those that have the highest potential impact on the future of the Park, and about which the organization is most uncertain about the outcome



Critical Uncertainty Cards for Each Category



Exploring the Future

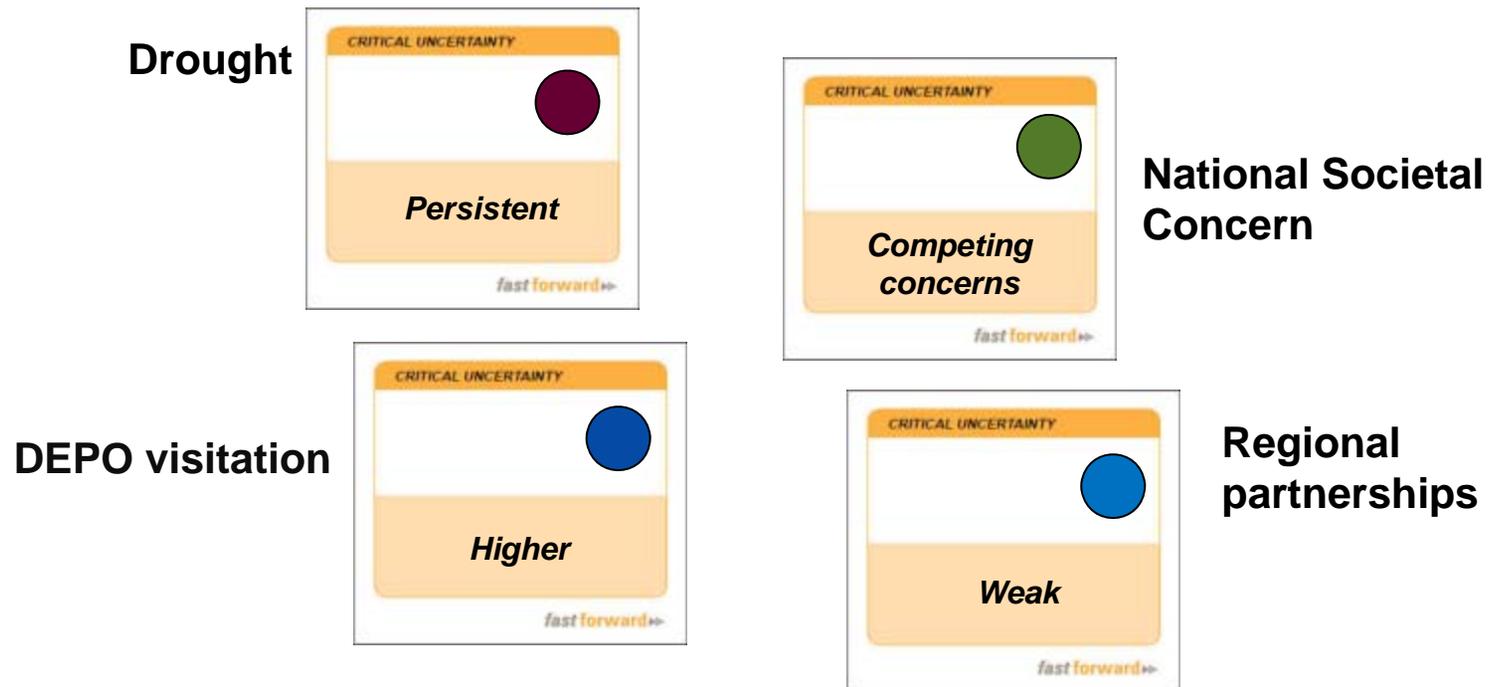
Each scenario combination consists of 4 critical uncertainty cards

The interactions between these uncertainties should be interesting—even provocative

Each scenario combination should create a potential future that is plausible, relevant, challenging, and different from other futures that we have already considered

There are no “right” answers or “perfect” scenarios. Try juxtaposing interesting combinations to get started. Play with the possibilities. You’ll know a good scenario combination when you see it...

Exploring the Future: An Example



Describe the world this creates:

The Sierra region suffers from extensive droughts – which pushes up fire danger. Despite this, visitation increases as developments at Mammoth Lakes encourage new property owners and visitors to the region. Most visitors are skeptical about climate change and its effects. Resources to protect people and resources from fire and overuse are limited – as neighboring Parks focus their resources on their own problems.

Name the scenario: “In the Firing Line”

Using an inductive / “state change” approach to create scenarios



CO₂ concentration
Ozone
Temperature
Precipitation

Fire
Drought mortality
Forest pests
Disease

Regional atmospheric
resources & conditions

Disturbance
regime

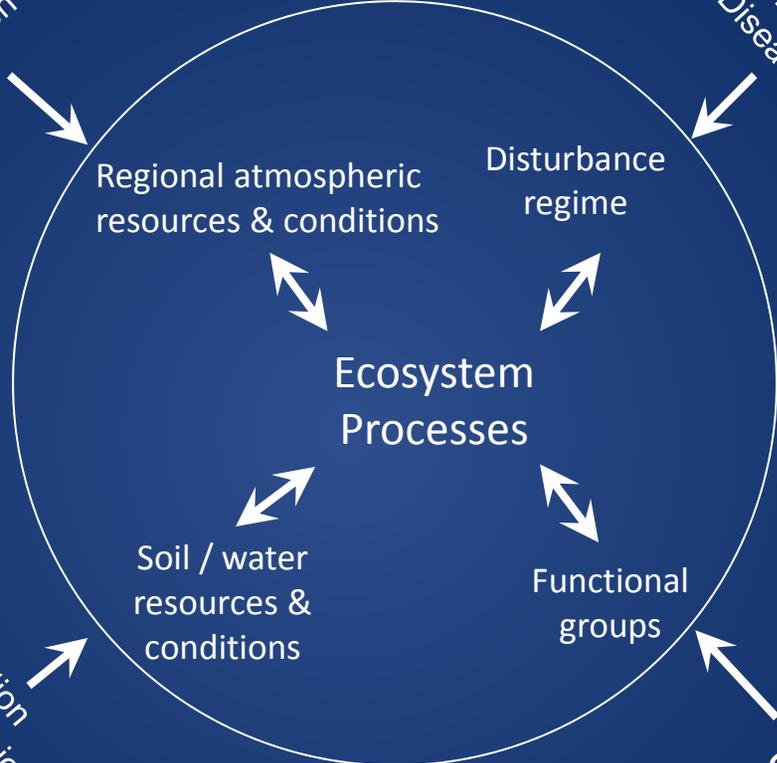
Ecosystem
Processes

Soil / water
resources & conditions

Functional
groups

N saturation
Water diversion
Land use intensification
Altered hydrology

Regional species pool
Invasive species
Species additions
Species removals



CO₂ concentration
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**STATE CHANGE/
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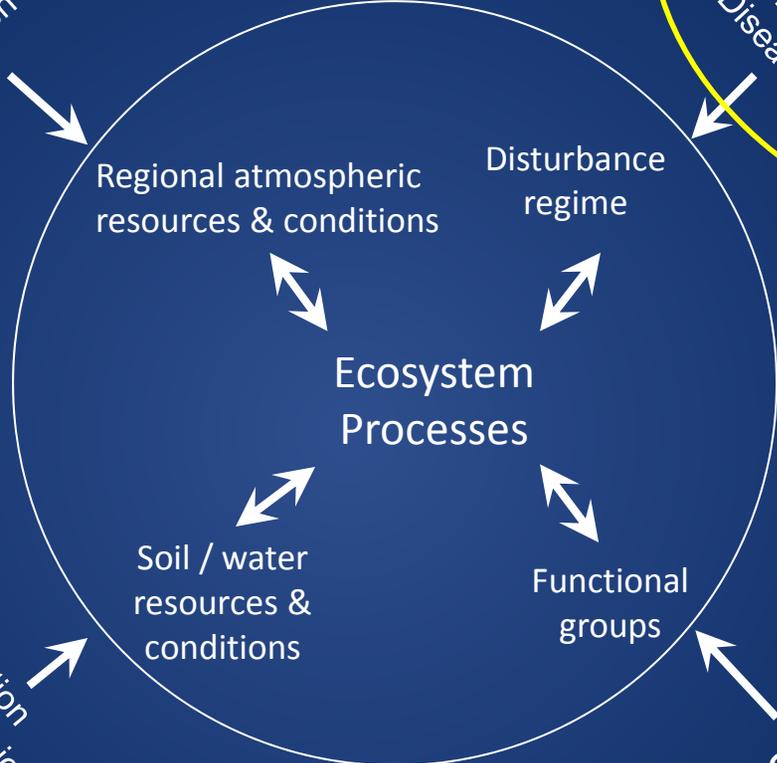
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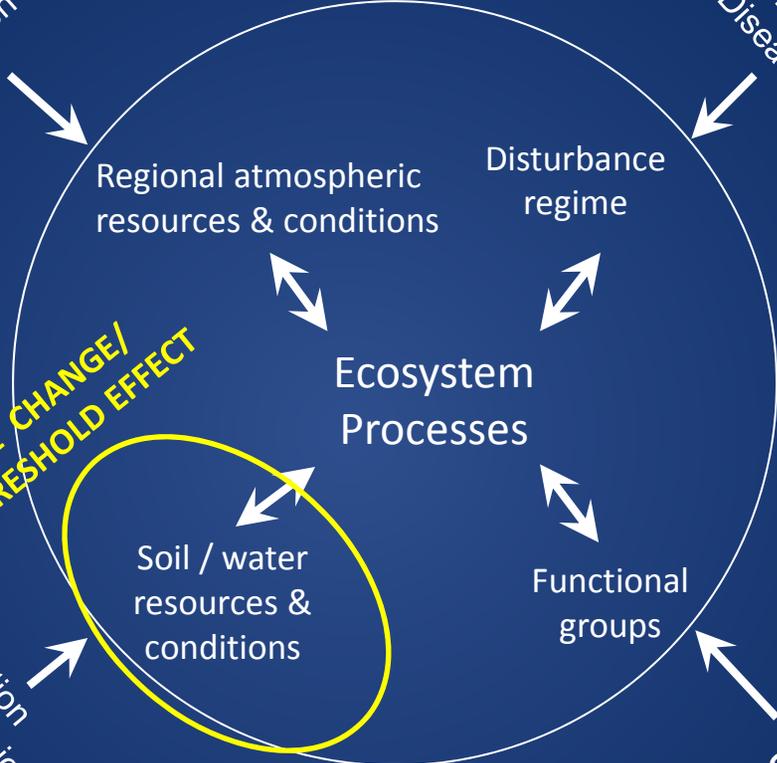
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Invasive species
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Species removals



Inductive / “State Change” Scenarios

Which state change/vulnerable systems are most meaningful / challenging / relevant / important for management to consider?

Describe the state change / threshold shift that characterizes this scenario

What combination of climate conditions would lead to such a state change?

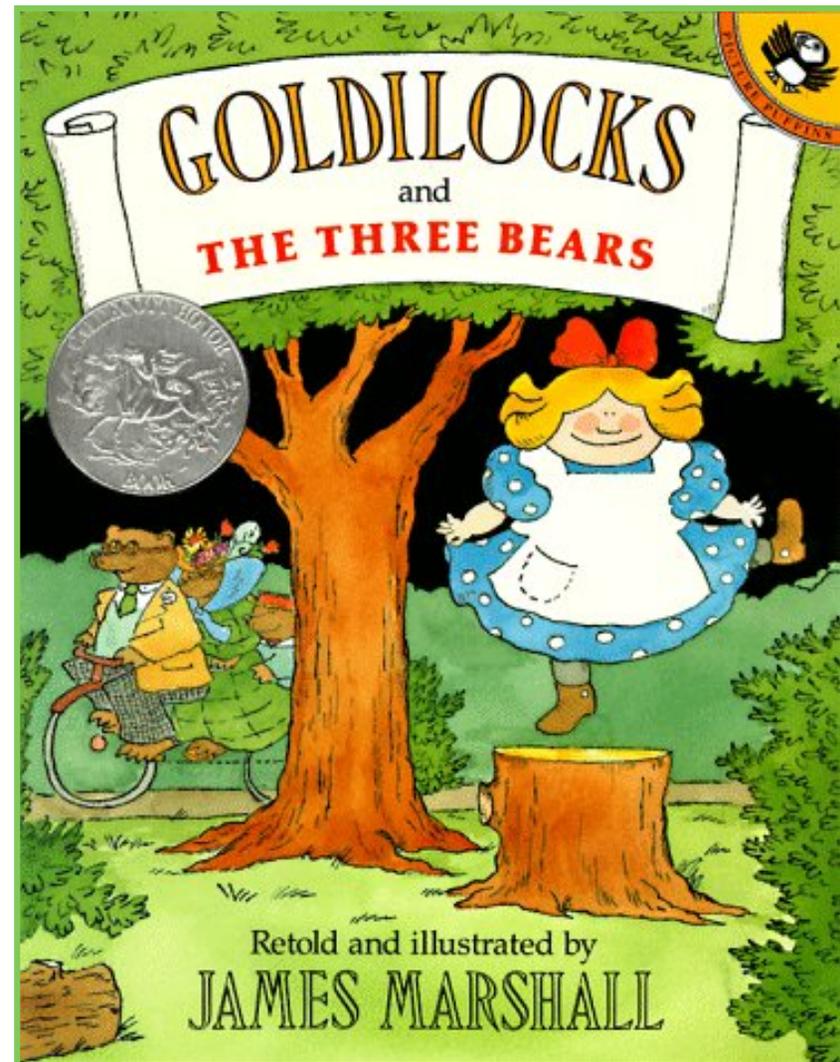
Describe the additional effects that would happen in this scenario

Storytelling and Communication of Scenarios

What Makes a Story?

Once upon a time, there was a little girl named Goldilocks. She went for a walk in the forest. Pretty soon, she came upon a house. She knocked and, when no one answered, she walked right in. At the table in the kitchen, there were three bowls of porridge. Goldilocks was hungry. She tasted the porridge from the first bowl.

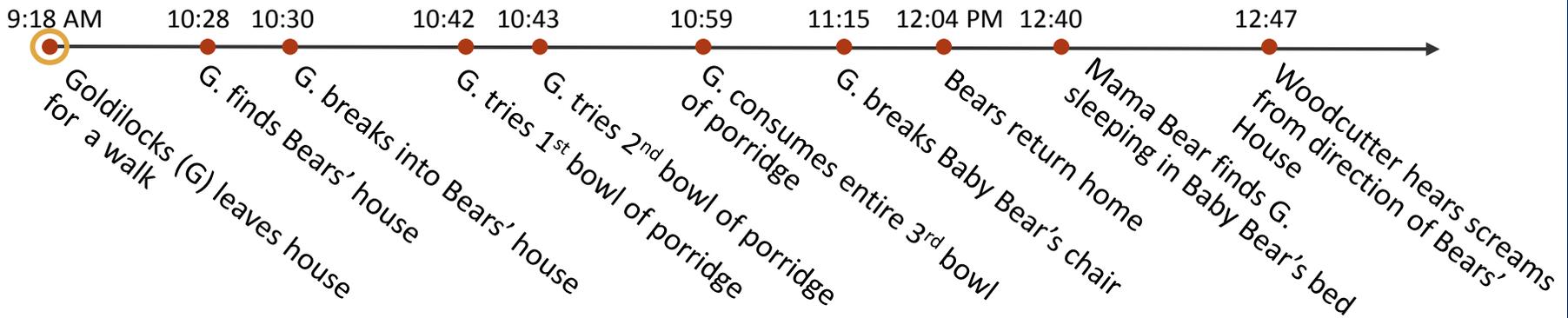
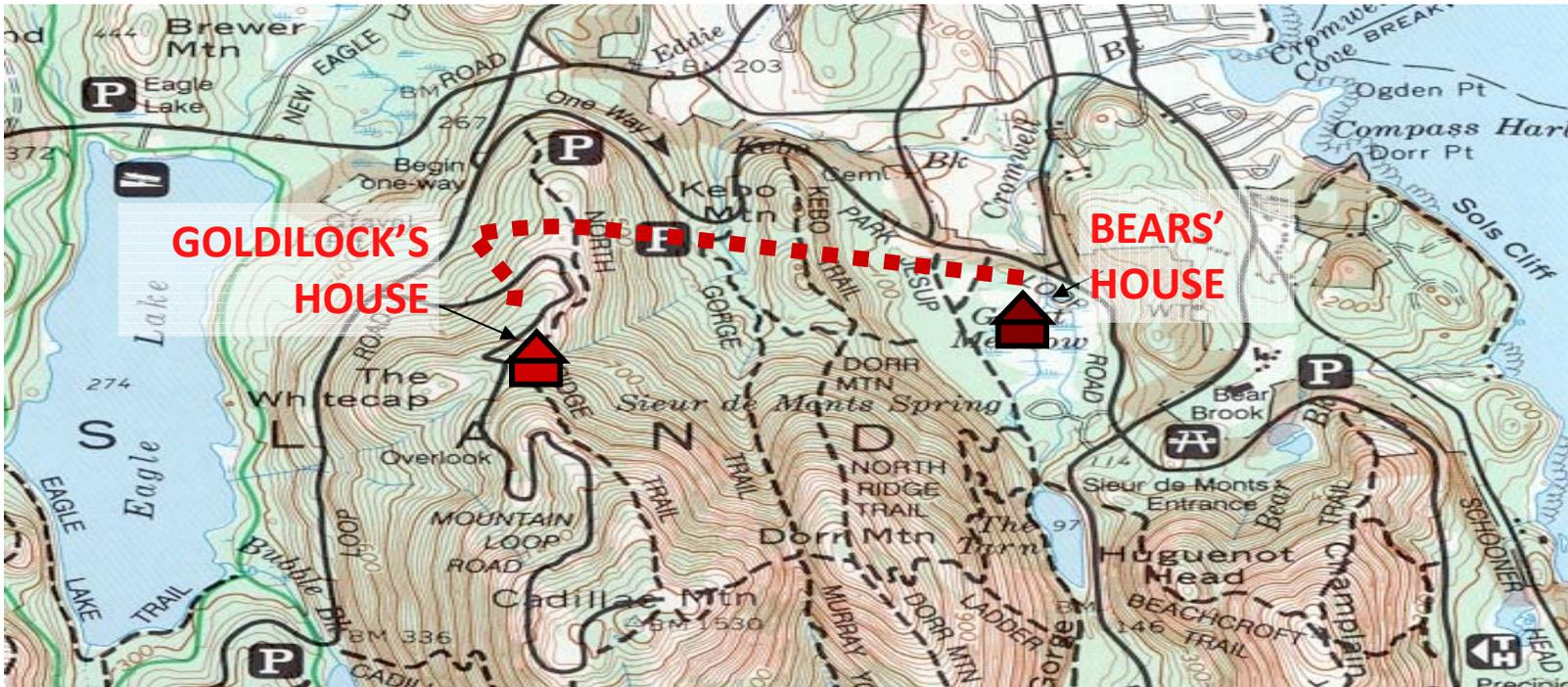
“This porridge is too hot!” she exclaimed...



Storytelling

Name	Species	Hair/Fur	Age	Appetite Level	Size	Preliminary Porridge Assessment	Preliminary Mattress Assessment
Goldilocks	Human	Blonde	8	Moderate	Petite	N/A	N/A
Papa	Bear	Brown	12	High	Big	Too Hot	Too Hard
Mama	Bear	Tawny	11	Moderate	Medium	Too Cold	Too Soft
Baby	Bear	Red-Brown	3	Low	Small	Just Right	Just Right

Storytelling



Communicating Scenario Messages

- Who specifically will be in the room?
- Why do they care?
- What is at stake for them in the futures you've developed?
- What will make them more or less receptive?
- How much do they know already?



Choices About Media and Tone

Mostly Conventional

- Written reports
- Slide decks
- One-page summaries

Alternative Media

- Flash animations
- Video dramatizations
- Audio summaries

Live Performance

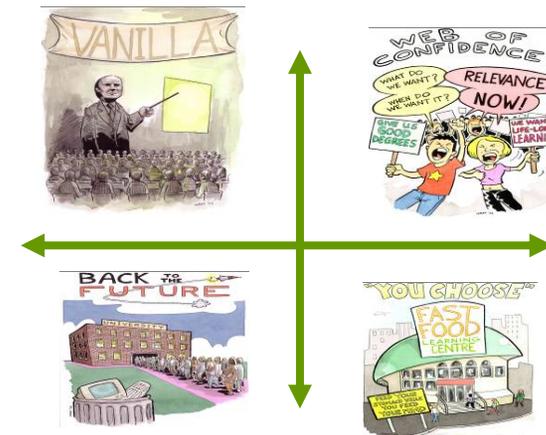
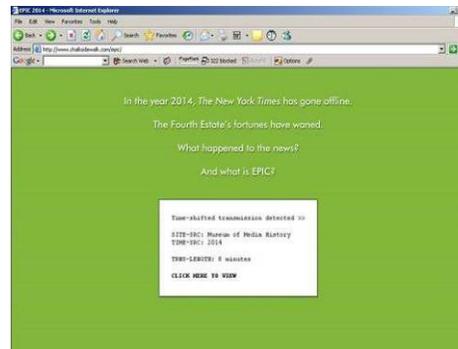
- Physical Exhibits
- Live dramatizations
- Speeches

A Little Creativity

- Graphic recording
- Image-rich presentations

Interactivity

- Web sites
- Blogs



Implications and Actions: Group Instructions

For each scenario, identify a series of potential management actions

What are your general / robust findings across scenarios?

PROPOSED MANAGEMENT ACTIONS

Scenario	If we knew this scenario represented the future, what would we do today to prepare?
What is Robust?	

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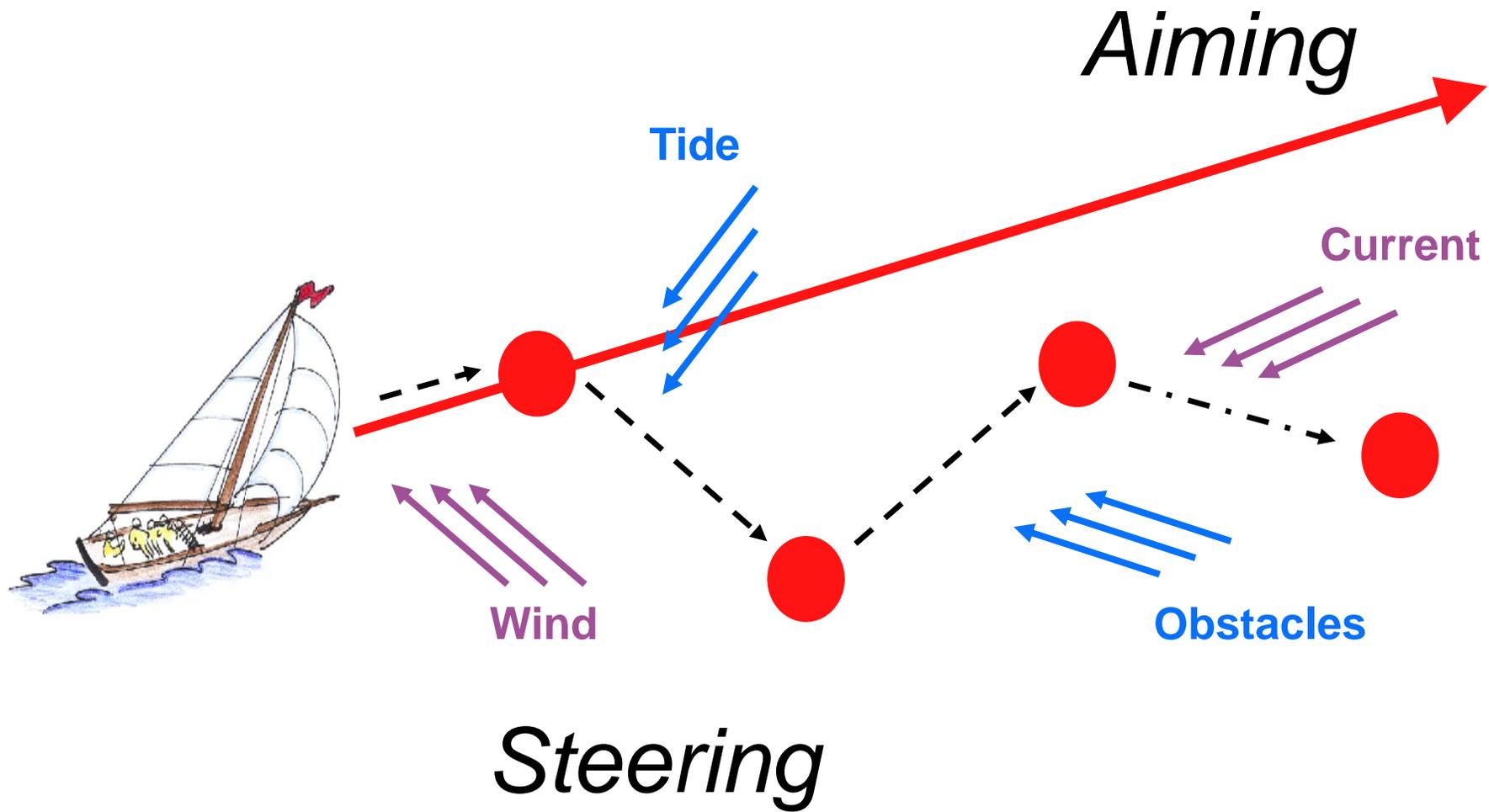
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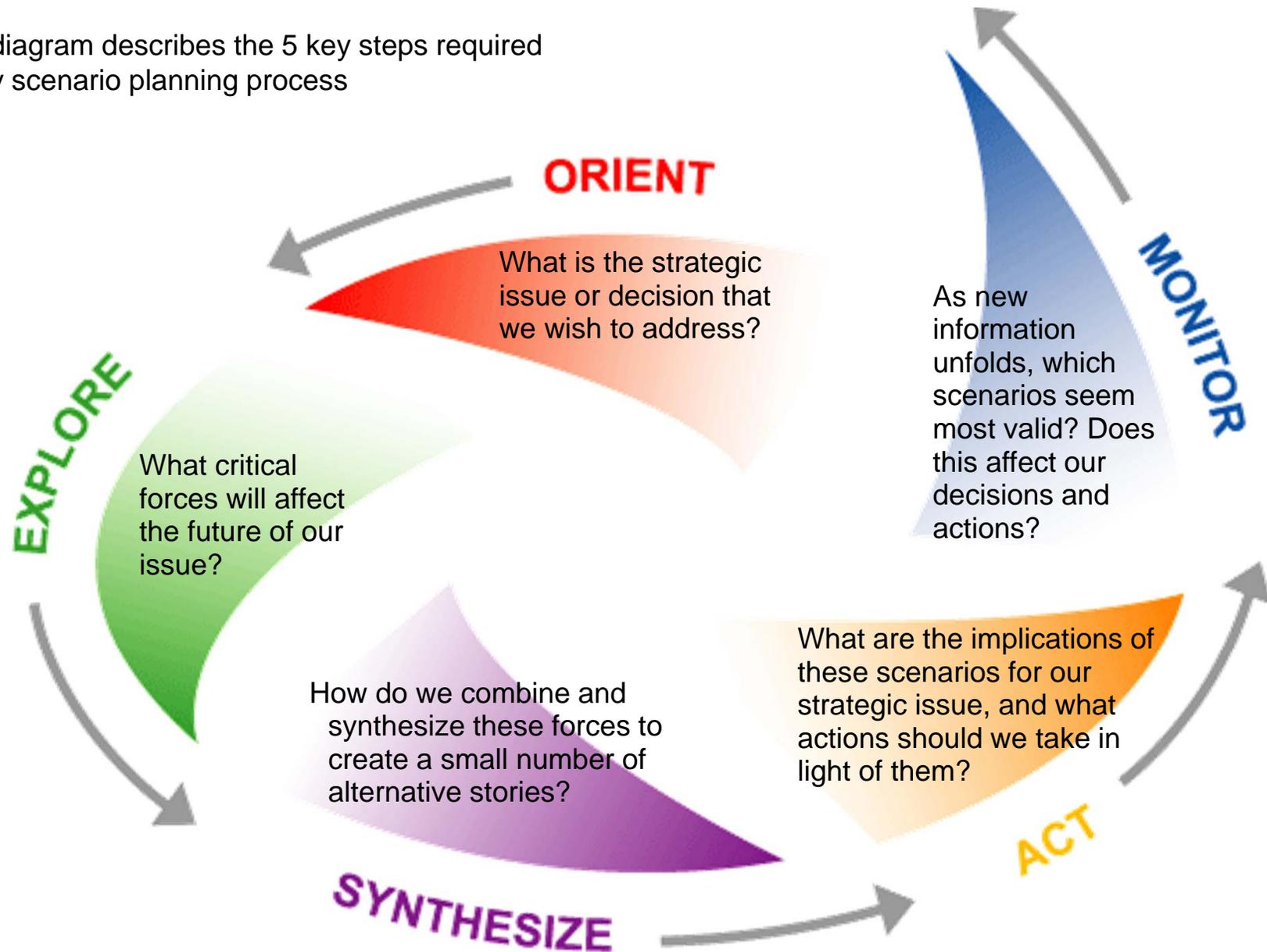
Scenarios and Strategy

Strategy as steering vs. aiming

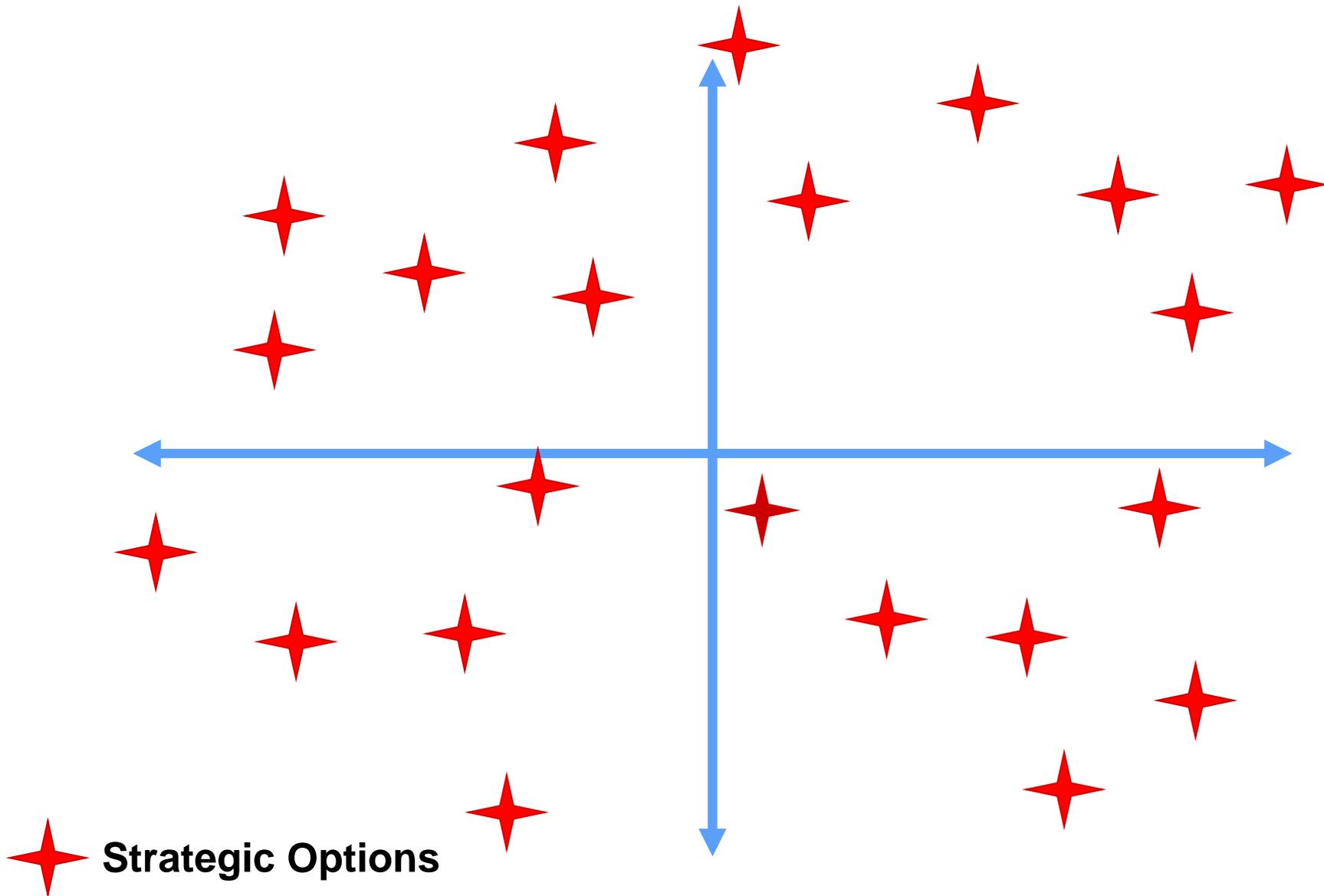


Explaining Scenarios: A Basic GBN Scenario Creation Process

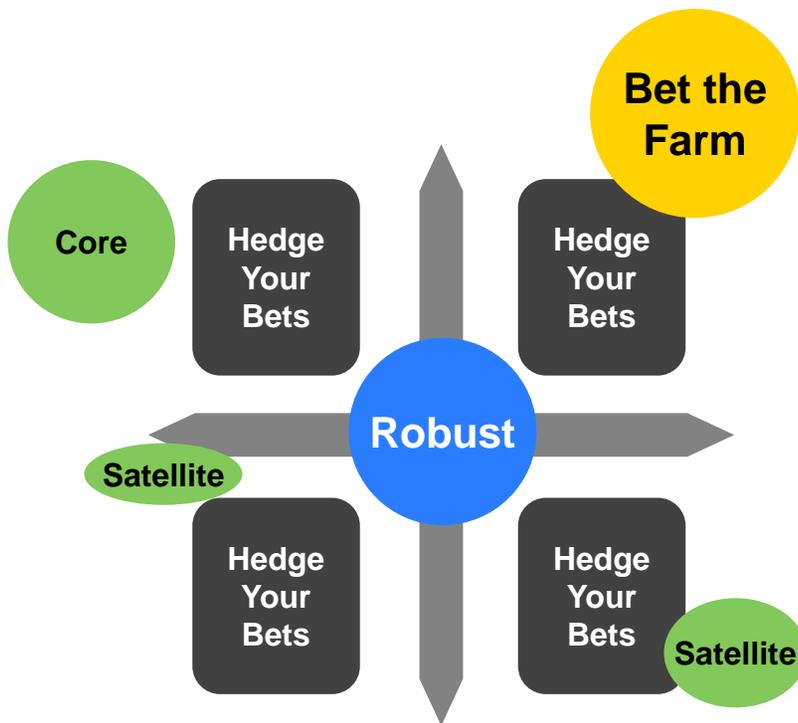
This diagram describes the 5 key steps required in any scenario planning process



Strategy as the Management of Options



Categorizing Options to Help Set Strategy



Robust/No Regrets: Pursue only those options that would work out well (or at least not hurt you too much) in any of the four scenarios

OR

Bet the Farm / Shaping: Make one clear bet that a certain future will happen — and then do everything you can to help make that scenario a reality

OR

Hedge Your Bets / Wait and See: Make several distinct bets of relatively equal size; or hold off from any commitments

OR

Core / Satellite: Place one major bet, with one or more small bets as hedges, experiments, and real options

Management Decisions

Using scenarios sets up the following types of conversations

- Should we gamble on what appears to be the most probable outcome?
- Should we take a robust route and try to have a strategic initiative in place to deal with every contingency?
- Should we delay taking action until further clarity emerges?
- Should we commit to a certain course of action for now, but have back-ups, just in case?
- Or are things so open that we can try to shape the future — can we define what takes place next to our liking?

Strategic Foresight: Alfred Marcus

Tracking “signposts” and indicators

- Helps decision makers discern whether a scenario is beginning to emerge
 - Weak signals suggesting emerging shift → *adjust allocation over time*
 - Strong signals demanding immediate response → *activate contingency plan*
- Provides guiderails for steering the strategy



Strategic Direction Setting

Your final choice of actions should depend upon a range of considerations

Ambition

- Does the proposed direction help us achieve our aspirations?

Robustness

- Is there a robust / no regrets direction?

Fit

- Is the proposed direction achievable (and sensible) given current capabilities, culture, risk posture and approach?

Flexibility

- Does the direction allow us sufficient flexibility to change course if the environment changes?

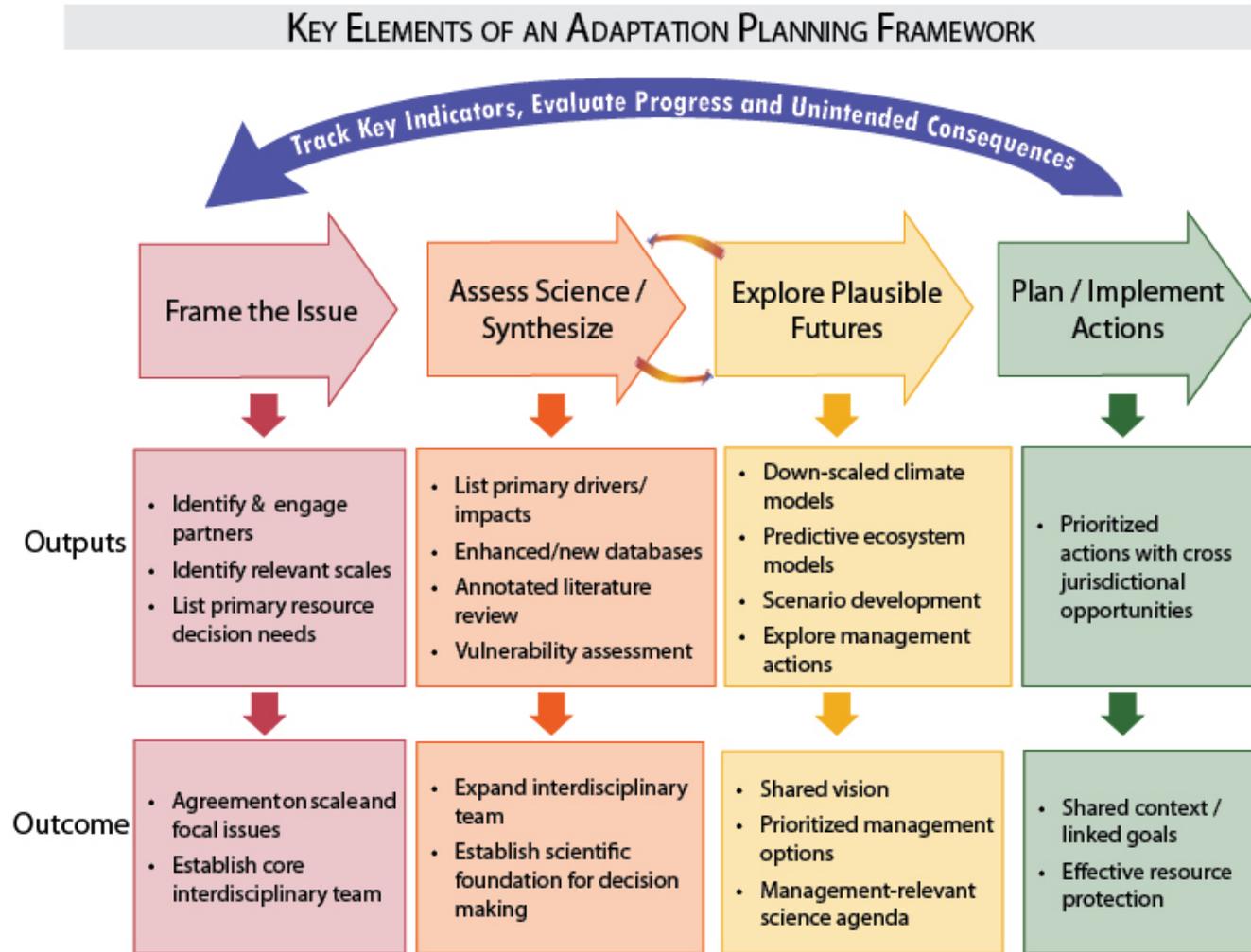
Confident Point-of-View

- Do we have a strong and confident PoV on the trajectory of the future?

Desired Future

- Is there a scenario that is extremely compelling and we can shape towards?

A Framework for Adaptation Planning



Source: Leigh Welling

Summary Discussion

- What value might scenario planning bring to how we collaborate at landscape scale?
- What are the biggest challenges / obstacles that managers face in working outside their jurisdiction?
- What actions are needed to make further progress? What specific things can the people in this room do?