

# Navigating Uncertain Futures with Scenario Planning

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*Americans for the Arts Webinar, 10/7/20*



## Overview

- Competing Planning Approaches
- Scenario Planning Defined
- Urban Planning Examples
- Overview of Bridgespan Group's Scenario Planning Tool
- Questions/Discussion

## Why is an urban planner talking to arts groups?

### Part 1. Foundations

1 The Kind of Problem a City Is

2 Scenario Planning Defined

3 Competing Approaches

### Part 2. Urban Scenario Planning Practice

4 Scenarios in Urban Planning

5 Digital Scenario Tools

6 Effective Scenario Practice

### Part 3. Project Outcomes and Evaluation

7 Defining Scenario Project Outcomes

8 Scenario Outcomes Research

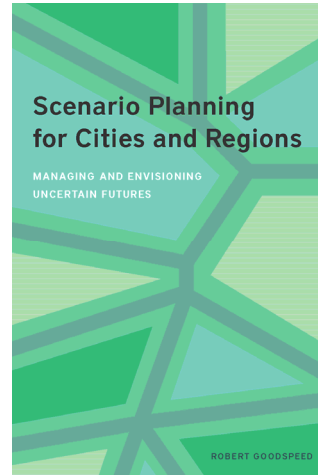
9 Urban Scenario Outcomes Evaluation Framework

### Part 4. Transformation and Conclusions

10 Toward Transformative Scenario Practice

11 Conclusions

Key: Chapters partly or mostly about  
scenario planning in general

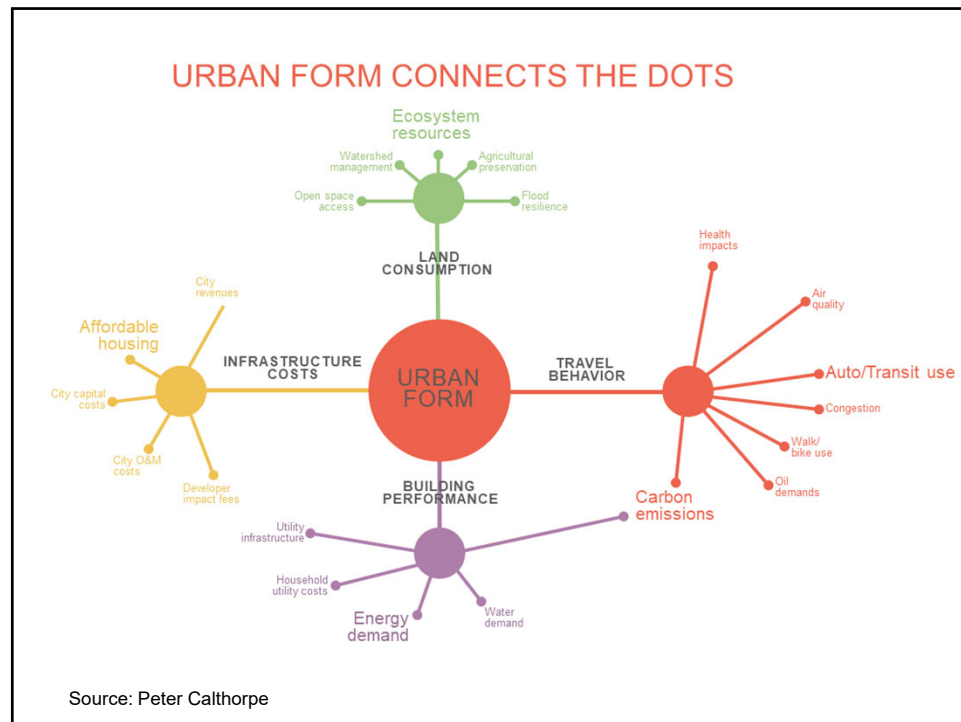


Now Available

## What is Scenario Planning and Why is it Used?

**Urban Scenario Planning** is a form of strategic planning that creates multiple representations of plausible urban futures in order to manage uncertainty and envision transformation. It can be used to:

- **Build consensus** and reframe issues among diverse stakeholders
- **Analyze connections** across functional domains (land use, trans., etc)
- **Synthesize** values and technical analysis



## Scenario Planning Helps Planners Respond to Contemporary Planning Challenges



**Transformation:** How can the physical and functional pattern of a city be changed to improve sustainability?



**Resilience:** How can cities be prepared for uncertain external forces, such as climate change impacts or new technologies?

## Addressing Racial Equity Through Transformative Scenario Practice

- **Two Types of Planning** (Sandberg, 1976):

- **Colonizing:** "today's powerful interests, organized in established institutions, prolong the prevailing situation into the future by anticipating and counteracting crises and threats, accomplishing this *inter alia* through future studies and planning"
- **Emancipatory:** "good futures research does not present any self-fulfilling prophecies. Conditional prognoses and conditional plans oppose reification of developments, and demonstrate alternative and possibilities for change through active measures (257)"

- **Strategies:**

- Participation & collaboration
- Analyze patterns with opportunity mapping
- Analyze equity impacts of plans, propose more emancipatory scenarios
- Analyze race and ethnicity within plan



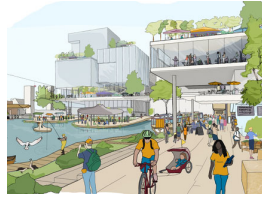
Supporters of the 6 Wins for Social Equity Network attending a San Francisco MTC meeting to advocate for the inclusion of the EEJ scenario (See Box 7 in Goodspeed 2020)

## Planning Approaches



Visioning

## Planning Approaches



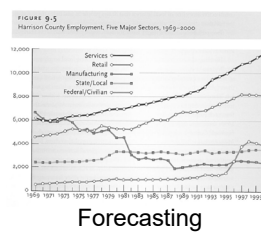
Visioning

- Whose vision?
- Data?
- Plausibility?

## Planning Approaches



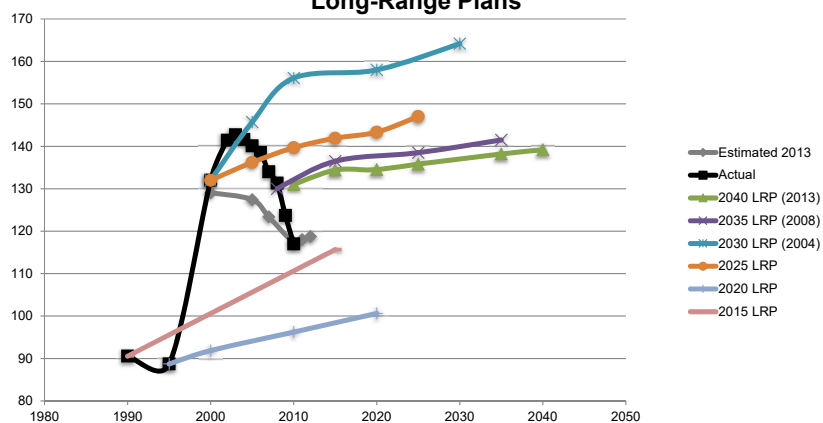
Visioning



Forecasting

## Quantitative Trends Are Difficult to Predict...

**Metro Detroit Average Daily VMT, Actual and Forecast in Long-Range Plans**



Note: VMT estimation methodology varies between studies. Data Sources: SEMCOG, Richard Murphy

## ... and Technological and Economic Trends Aren't Easier

"Heavier-than-air flying machines are impossible."

– Lord Kelvin

"I think there is a world market for about five computers"

– Thomas Watson, IBM Chairman, 1943

"With over fifty foreign cars already on sale here, the Japanese auto industry isn't likely to carve out a big slice of the U.S. market for itself."

– Business Week, 1968

"One year from now, we will have more than one million fully self-driving robotaxis on the road."

- Elon Musk, April 2019

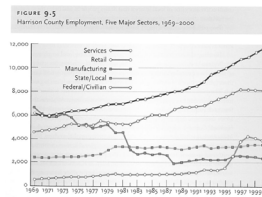
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First three: *The Experts Speak*, quoted in Schoemaker 1991, Musk: <https://www.theverge.com/2019/4/22/18510828/tesla-elon-musk-autonomy-day-investor-comments-self-driving-cars-predictions>

## Planning Approaches



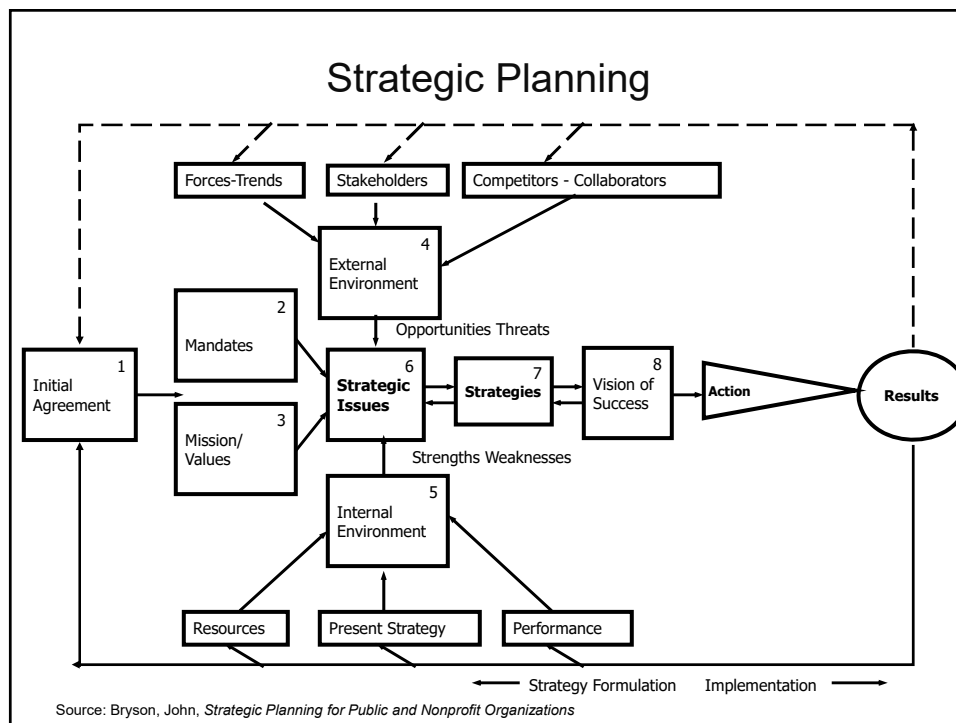
Visioning



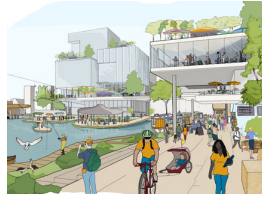
Forecasting



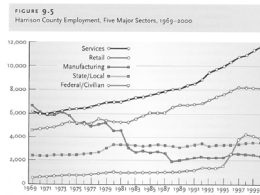
Strategic Planning



## Planning Approaches



Visioning



Forecasting



Consensus Building



Strategic Planning

## Planning Approaches

**Internal Project Focus**  
Mutual Understanding



**External Focus**  
Trends & Systems

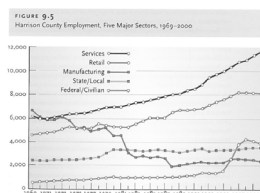
**Future Focus**  
Single Vision



**Present Focus**  
Anticipates Plural  
Viewpoints



Visioning



Forecasting



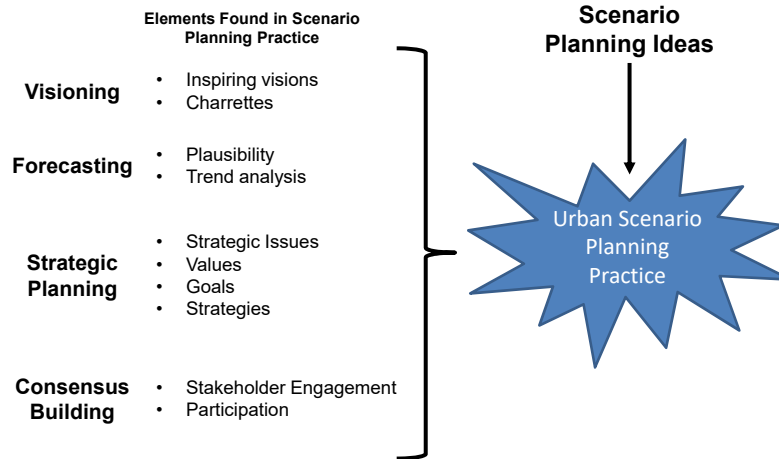
Consensus Building



Strategic Planning



## Scenario Planning in Urban Planning

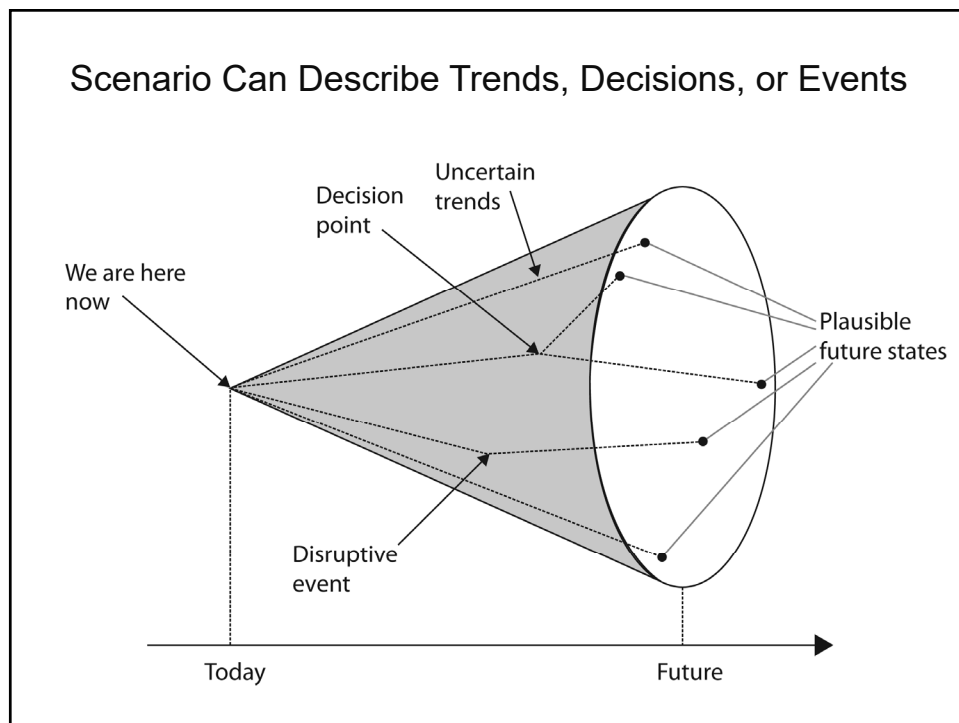
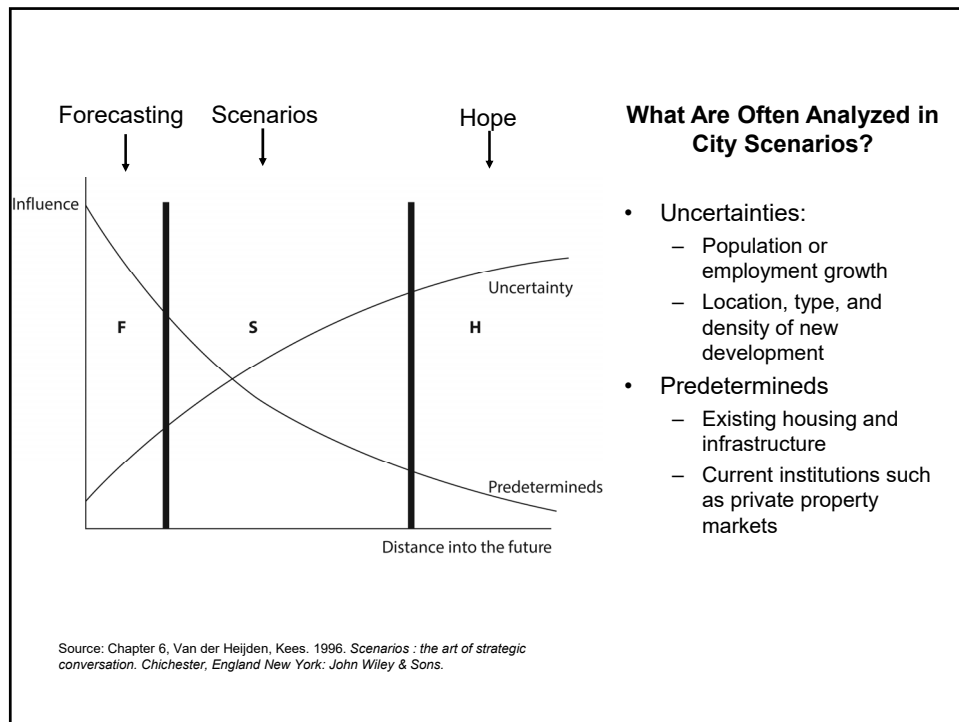


## A Forecasting Metaphor



How to anticipate the road ahead?  
Curvy or straight? Types of obstacles?

Source: Chapter 6, Van der Heijden, Kees. 1996. *Scenarios : the art of strategic conversation*. Chichester, England New York: John Wiley & Sons.



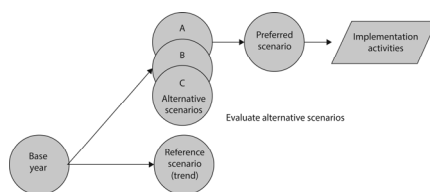
## Why create scenarios in urban planning?

Project Type	Goal	Measures of Success
Normative	<ul style="list-style-type: none"> <li>Create a shared vision through creating and comparing several scenarios</li> </ul>	<ul style="list-style-type: none"> <li>Consensus on vision, implementation strategies, goals, indicators, etc...</li> <li>Quality of vision(?)</li> </ul>
Exploratory - Focused on Decisions	<ul style="list-style-type: none"> <li>Make better decisions through creation of scenarios</li> </ul>	<ul style="list-style-type: none"> <li>Plans which allow for better decisions (robust, contingent strategies)</li> <li>Number, quality, analysis of strategies</li> </ul>
Exploratory Projects	<ul style="list-style-type: none"> <li>Improve understanding of uncertainty and future trends</li> </ul>	<ul style="list-style-type: none"> <li>Foresight?</li> <li>Enlightenment?</li> </ul>

In all cases, the goal is achieved through the comparison of a **set of scenarios**, designed to be *similar* in some ways and *different* in others.

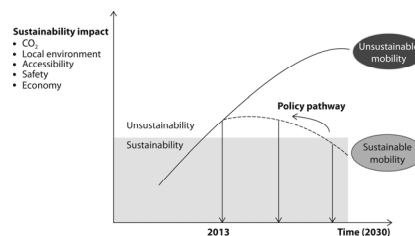
## Normative Scenario Projects

### Oregon Model for Normative Scenarios



Oregon Department of Transportation. Oregon Scenario Planning Guidelines. 2013.

### Backcasting



Hickman, Robin, and David Banister. *Transport, Climate Change and the City*. Routledge Advances in Climate Change Research. 2014.

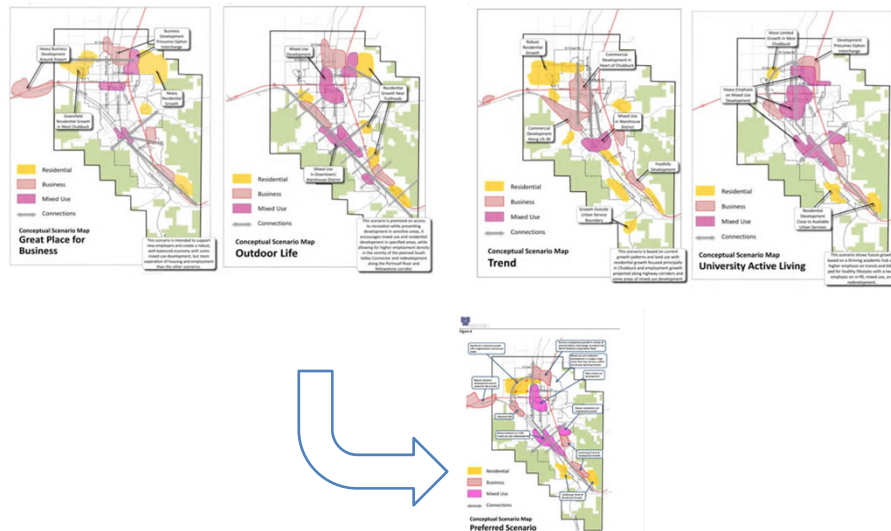
## Project Success Measures

Project Type	Goal	Measures of Success
Vision Projects	<ul style="list-style-type: none"> <li>• Create a shared vision through creating and comparing several scenarios</li> </ul>	<ul style="list-style-type: none"> <li>• Consensus on vision, implementation strategies, goals, indicators, etc...</li> <li>• Quality of vision(?)</li> </ul>
Decision Projects	<ul style="list-style-type: none"> <li>• Make better decisions through creation of scenarios</li> </ul>	<ul style="list-style-type: none"> <li>• Plans which allow for better decisions (robust, contingent strategies)</li> <li>• Number, quality, analysis of strategies</li> </ul>
Exploratory Projects	<ul style="list-style-type: none"> <li>• Improve understanding of uncertainty and future trends</li> </ul>	<ul style="list-style-type: none"> <li>• Foresight</li> </ul>

## Bannock, ID MTP 2040

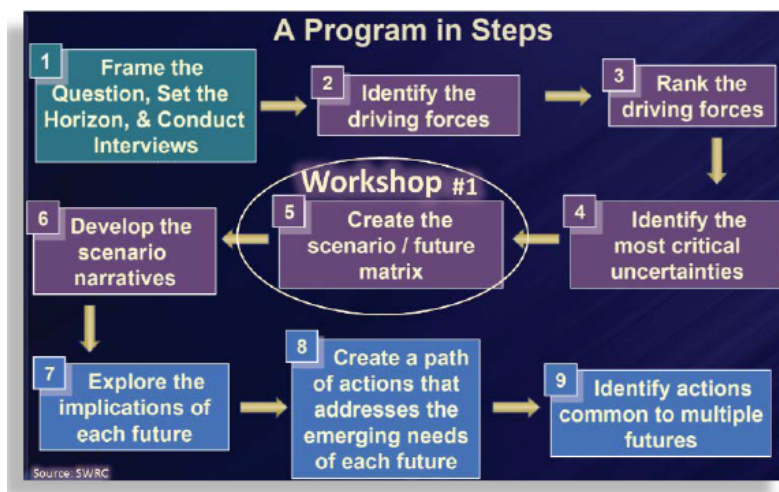
- Small regional agency, hired consultant with scenario expertise
- Created four conceptual scenarios to clarify vision
  - The Trend scenario
  - The University/Active Living scenario.
  - The Great Place for Business scenario
  - The Outdoor Life scenario

## Bannock, ID MTP 2040



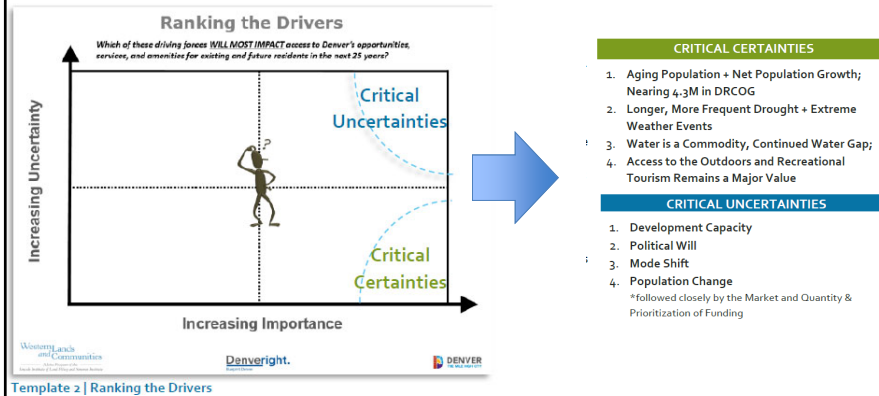
Goodspeed, R. and DeBoskey, D., 2020. Working Paper. *Scenario Planning for Smaller Places: Aligning Methods and Context*. [https://www.lincolnlust.edu/sites/default/files/pubfiles/goodspeed\\_wp20rg1.pdf](https://www.lincolnlust.edu/sites/default/files/pubfiles/goodspeed_wp20rg1.pdf)

## DenveRight Internal Scenario Workshop

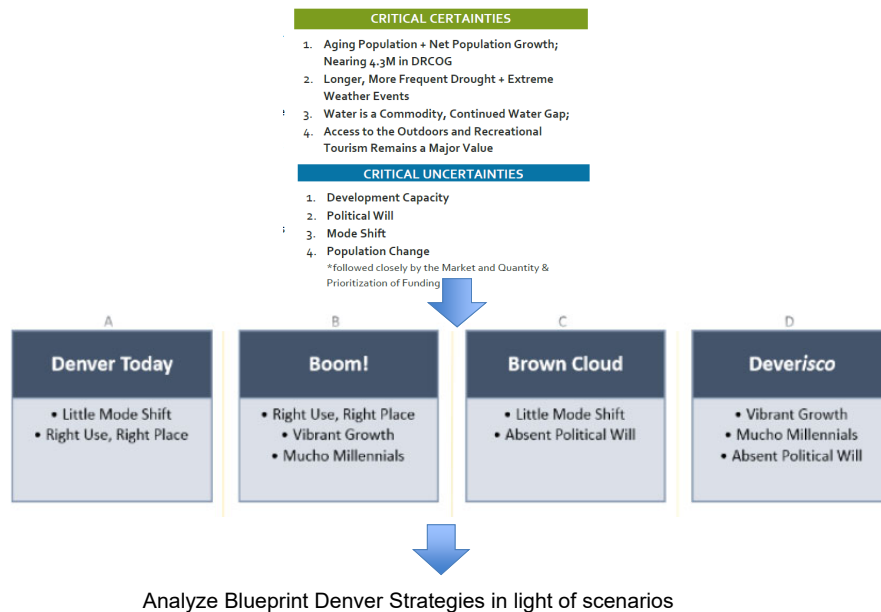


Roberts, Eric J. 2014. "Exploratory Scenario Planning: Lessons Learned in the Field." Lincoln Institute of Land Policy Working Paper, Cambridge, MA.

## DenveRight Internal Scenario Workshop



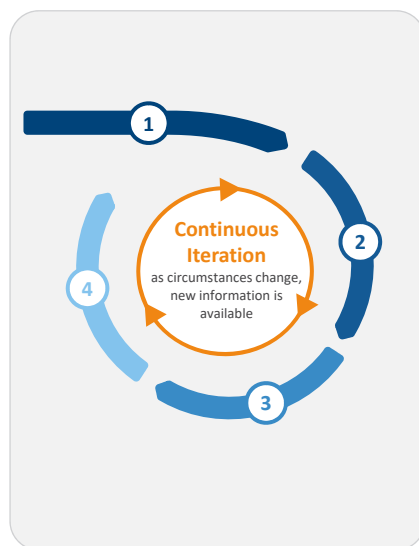
## DenveRight Internal Scenario Workshop



## Nonprofit Scenario Planning During a Pandemic

- Many different flavors of scenario planning
- The Bridgespan Group has proposed one version tailored to the needs of nonprofits during a pandemic
- Like any specific method, it has strengths and weaknesses (your mileage may vary)
- Article and tool: <https://www.bridgespan.org/insights/library/strategy-development/nonprofit-scenario-planning-covid-19>

## Scenario Planning Process



- 1 Identify key drivers at risk**
  - Identify the drivers (i.e., major elements) of your organization's economics and impact
  - Note which drivers are at both a high level of importance and a high level of risk—you will use these in step 2 to develop scenarios
- 2 Develop and model scenarios**
  - Construct best-, moderate-, and worst-case scenarios anchored in the key drivers highlighted in Step 1 and relevant external factors outside of your control
  - Translate scenarios to reflect their impact on your ~6-12 month revenue forecast
- 3 Create a portfolio of actions**
  - Develop a set of actions that would allow you to effectively manage against each scenario
  - Quantify the financial impact of these actions to understand total estimated savings achieved or costs incurred
- 4 Determine key trigger points**
  - Determine concrete and measurable trigger points that will help prompt your organization to act at the right time
  - Monitor them regularly to help your leadership team make and execute decisions quickly as circumstances evolve

## Guiding Principles

Guiding principles are critical in times of crisis...

...and must be tailored for each organization

- Before you begin the scenario planning process, consider aligning on a set of **guiding principles—values based criteria—with your leadership team** to inform decision making in the face of uncertainty
- Explicit principles to guide decision making can help in several ways:
  - Align **organization's leadership** to make tough decisions in the face of uncertainty
  - Ensure **equity-related considerations** receive proper attention
  - Allow leadership to **communicate rationale** behind key decisions to stakeholders
- There is no checklist of off-the-shelf guiding principles to use in a crisis; **each nonprofit must chart their own course**
- In general, principles should reflect an organization's **mission, values, unique circumstances and an equity lens**
- Examples include:
  - We will find ways to safely and effectively continue our most critical programs
  - We will prioritize the well-being of our people through the crisis
  - We will avoid programmatic or operational shifts that disproportionately harm people of color
  - We will preserve the long-term financial health of our org by maintaining X months of reserves

Related article: [A Compass for the Crisis: Nonprofit Decision Making in the COVID-19 Pandemic](#)

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## Step 1: Identify key drivers at risk

Nonprofit leaders face an unprecedented number of uncertainties and risks amid COVID-19 that span all aspects of their organizations—only a subset of these matter most and it is critical to prioritize among them in scenario planning. To complete this worksheet, first identify the drivers (i.e., major elements) of your organization's economics and impact across three categories: programs,\* operations, and funding. Next, assess the level of importance of each driver to your organization and the level of risk each faces. In evaluating levels of risk, consider three questions: (1) What is the nature of the risk? (2) What is the likelihood of the risk? (3) What is the level of impact of the risk? After completing the chart, note which drivers are at both a high level of importance (to organization economics and/or impact) and a high level of risk—you will use these in the next worksheet to develop scenarios.

Identify key drivers of organization economics and impact			Level of IMPORTANCE*	Level of RISK
Programs	List drivers of programmatic impact	• E.g., student enrollment, patient volume, etc.	Low / Med / High	Low / Med / High
		• ...	Low / Med / High	Low / Med / High
		• ...	Low / Med / High	Low / Med / High
		• ...	Low / Med / High	Low / Med / High
Operations	List drivers of organization operations	• E.g., facilities, operational staff capacity, etc.	Low / Med / High	Low / Med / High
		• ...	Low / Med / High	Low / Med / High
		• ...	Low / Med / High	Low / Med / High
Funding	List drivers of organization revenue	• E.g., fee-for-service revenue, government grants, etc.	Low / Med / High	Low / Med / High
		• ...	Low / Med / High	Low / Med / High
		• ...	Low / Med / High	Low / Med / High
		• ...	Low / Med / High	Low / Med / High

\*Level of importance in this context refers to the driver's contribution to your organization's economics (e.g., percentage of revenue or expenses) and/or your mission (e.g., role in achieving target outcomes)

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## Step 2: Develop and model scenarios

Consolidate the best data available to construct best-, moderate-, and worst-case scenarios that reflect the full spectrum of possible outcomes for your organization. First, elevate which external factors (factors outside of your control) will directly impact your organization—these may include shelter-in-place restrictions, unemployment rates, the pace of economic recovery, etc. Next, estimate the potential impact that these external factors could have on the key drivers of your organization's impact and economics prioritized in Step 1. Once you have developed these scenarios, translate them into their related impact on your organization's revenue forecast over a short- to medium-term time horizon relevant for your organization (e.g., ~6-12 months).

External factors that directly impact our organization		BEST CASE	MODERATE CASE	WORST CASE
E.g., shelter-in-place restrictions		June 30th release of restrictions	Aug 30th release of restrictions	Oct 30th release of restrictions
Prioritized key internal drivers from STEP 1		BEST CASE	MODERATE CASE	WORST CASE
Programs	E.g., program volume (patients served)	Slight decrease (e.g., 10-15%)	Moderate decrease (e.g., 15-30%)	Major decrease (e.g., 30-45%)
Operations	E.g., frontline staff capacity	Slight decrease (e.g., 10-15%)	Moderate decrease (e.g., 15-30%)	Major decrease (e.g., 30-45%)
Funding	E.g., fee-for-service revenue	Slight decrease (e.g., 10-15%)	Moderate decrease (e.g., 15-30%)	Major decrease (e.g., 30-45%)
Projected impact on our organization's revenue forecast		\$	\$	\$

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## Step 3: Create a portfolio of actions

Develop a set of potential actions that would enable your organization to successfully manage against each scenario, preserving both your financial viability and your ability to deliver impact. Actions typically fall into one of three categories: (1) appropriate for any scenario, (2) smaller-scale and more flexible, (3) larger and more permanent. As you identify potential actions, weigh the pros and cons of each and ensure they fall in line with any guiding decision principles agreed upon by your leadership team. Most of these actions will likely have some economic cost or benefit. Quantify the potential costs incurred and/or savings achieved for each action (over the time horizon the action would be implemented), and then calculate the total estimated costs incurred or savings achieved by each set of actions for your best-, moderate-, and worst-case scenarios.

Case Scenario (create one action plan for each scenario; 'appropriate for any scenario' will be the same in each)			
Category	Definition	Actions	Estimated cost (+ or -)
Appropriate for any scenario	Actions that will positively affect your organization's ability to deliver impact and financial position under any future scenario	• E.g., Eliminate discretionary budget expenses—travel, office supplies, etc.	\$
		•	\$
		•	\$
		•	\$
Smaller-scale and more flexible	Smaller-scale, flexible investments or cost reduction measures that can be executed quickly (and reversed) if various scenarios come to fruition	• E.g., Reduce executive-level salaries by XX%	\$
		•	\$
		•	\$
		•	\$
Larger and more permanent	Large-scale investments or cost reduction measures that may be more permanent in nature	• E.g., Layoff nonessential staff	\$
		•	\$
		•	\$
		•	\$
Total estimated costs incurred or savings achieved			\$

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## Step 4: Determine key trigger points

Many of the potential actions outlined for each scenario in Step 3 (with the exception of 'appropriate for any scenario') will only make sense under certain circumstances. Determine concrete and measurable trigger points for each action in the 'smaller-scale and more flexible' or 'larger and more permanent' categories. Some actions you outline may be relevant across different scenarios. Likewise, you may find that one trigger (e.g., extension of shelter-in-place restrictions) is the best gauge for multiple actions. This worksheet will help consolidate your list of potential actions and related trigger points, serving as a dashboard for your leadership team to support continuous monitoring and rapid decision making as circumstances evolve.

Actions	Scenarios			Key trigger points (to prompt action at the right time)
	Best case	Moderate case	Worst case	
<ul style="list-style-type: none"> <li>E.g., Reduce executive-level salaries XX%</li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> </ul>				<ul style="list-style-type: none"> <li>E.g., Total projected revenue falls XX% below budget</li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> </ul>

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## More Reading

- Ralston, Bill, and Ian Wilson. 2006. *The scenario-planning handbook : a practitioner's guide to developing and using scenarios to direct strategy in today's uncertain times*. Australia ; Mason, Ohio: Thomson/South-Western.
  - Very practical guidebook for qualitative scenarios, down to meeting agendas
- Chermack, Thomas J. 2011. *Scenario planning in organizations: How to create, use, and assess scenarios*. Berrett-Koehler Publishers.
  - Comprehensive book about qualitative scenarios by a leading consultant
- Van der Heijden, Kees. 2005. *Scenarios the art of strategic conversation, 2nd edition. 2nd ed.* Chichester, West Sussex, England ; Hoboken, N.J.: John Wiley & Sons Ltd. Text.
  - Theoretically sophisticated book about corporate scenario planning

## Discussion

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 @Rgoodspeed

For resources, see "Scenario  
 Planning" page  
<https://sites.google.com/umich.edu/rgoodspe/home>



<http://www.scenarioplanning.io/>

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