Paying Attention: Embracing Uncertainty in Regional Transportation Planning

Lane Transit District’s Case Study in Scenario Planning

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Everything Changes;
Everything is Connected;
Pay Attention

- Jane Hirshfield
But Are We Paying Attention?
Fuel Cost Increases – Transit’s Two-Edged Sword
Growing Demand – Shrinking Supply

- Passenger Boardings
- Service Hours
- Population

Yearly data from 2001-2011 showing trends in passenger boardings, service hours, and population.
Minnow Catching Endowment
Whale Catching Expectations
Flaws in Current Approach

- No real conversation about the uncertainty embedded in our ‘Official Future’
- Limited understanding of how these uncertainties might play out in ways that affect our plans
- Reliance on a single forecast of population and employment to drive decisions on significant regional investments in public infrastructure
- Real potential of being caught ‘flat footed’ in responding to deviations from the official future
Scenarios Present a New Paradigm

The purpose of scenario thinking is not to identify the most likely future, but to create a map of uncertainty – to acknowledge and examine the visible and hidden forces that are driving us toward the unknown future ... weigh our choices more carefully when making short-term and long-term strategic decisions.

- “Why Scenarios”, Global Business Network
The Focal Question –
What are we thinking hard about these days?

How might service costs, funding levels, public policy, and community support play out in ways that affect LTDs ability to provide effective and efficient transportation services to meet community needs over the next 20 to 30 years?
Driving Forces –
What are the key trends that challenge LTD’s ability to provide effective and efficient service?

- Rising Fuel Cost
- Federal Funding Uncertainty
- Rising Pension and Health Costs
- Variable Local Economic Trends
- Agency and Community Support for Transit
- Changing Technology
- Shortage of Critical Skill sets in available Labor Force
Critical Uncertainties –  
What are the factors that are both highly uncertain and have the biggest impact on LTD?

More Predictable Outcome

Rising Pension and Health Costs
Rising Fuel Cost
Changing Technology
Agency and Community Support for Transit
Shortage of Critical Skill sets in available Labor Force

Less Predictable Outcome

Ducks win BCS

Driving Force Ranking Space
From Van Der Heijden “Scenarios”
The Scenario Framework –
The Basis for establishing Scenarios that reflect the key uncertainties facing LTD

• Different approaches can be used to develop a scenario framework - most simple is to select 2 critical uncertainties as two axes that frame 4 scenarios
• Define ends points strategically (in support of the Focal Question)
• Criteria for good scenarios:
  1. Plausible
  2. Relevant
  3. Divergent
  4. Challenging
  5. Balanced
Key Uncertainty: Mobility Markets
Key Uncertainty: Adaptive Capacity

- Adaptive capacity is the region’s ability to respond to change
  - High adaptive capacity: Nimble, collaborative, public support
  - Low adaptive capacity: Reactive, disjointed, public disillusionment
LTD Scenario Framework

Rapid development and adoption of new technology transforms people’s travel behavior.

Climate change paves the way for unprecedented international cooperation and government flexibility.

Without clear leadership or other outside factors, the world moves along essentially as forecasts predict.

Government is unable to cope with energy price spikes and resource scarcity, resulting in economic and political turmoil.
Scenario Narratives –
Intended to provide participants with a shared set of stories about the future and its impacts on LTD

- Well developed scenario stories provide compelling reasons why the future might unfold in a particular way (per the criteria for good scenarios)
- Narratives written to convey plausible answers to “why does that happen?”, and “what happens next?”
- Brainstorming possible headlines helps derive the dynamics of how a given scenario plays out over time.
Implications and Options –
This is the “So What?” step. What happens in the context of the focal question if a particular scenario plays out?

• In each scenario, how do the issues in the focal question (service costs, funding levels, public policy, and community support) affect LTD’s efficiency and effectiveness?
• Look for vulnerabilities; what adaptations can we anticipate having to make?
• What are the robust strategies? What do more risky strategies look like?
## Capturing Implications

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<tbody>
<tr>
<td><strong>The World</strong></td>
<td>• Fuel prices steadily rise</td>
<td>• Fuel prices spike and are unstable</td>
<td>• Technology advances rapidly</td>
<td>• Rapid pace of global warming</td>
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<td>• BRIC nations outpace West in economic growth</td>
<td>• Resource wars common</td>
<td>• More use of e-commerce</td>
<td>• International cooperation</td>
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<td>• Population ages</td>
<td>• Rapid inflation</td>
<td>• Government more flexible in use of funds</td>
<td>• Popular acceptance of government intervention</td>
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<td>• Expected technology changes occur</td>
<td>• Political turmoil results in inaction</td>
<td>• PPPs abound</td>
<td>• Denser urban form</td>
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<td><strong>Regional Transportation</strong></td>
<td>• Predominately car-oriented</td>
<td>• Wide use of cars becomes untenable</td>
<td>• Government increases support for carsharing</td>
<td>• Greater resources for alternative transportation</td>
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<td><strong>LTD Operations</strong></td>
<td>• Ridership growth remains flat</td>
<td>• Unable to accommodate skyrocketing demand</td>
<td>• Federal funds are more flexible in their use</td>
<td>• Inter-jurisdictional planning easier</td>
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Getting to Robust Options

Attractive Options Scenario 1

Attractive Options Scenario 2

Attractive Options Scenario 3

Attractive Options Scenario 4

Zone of greatest initial interest
Four Approaches to Placing Bets

- BRT System
- BRT-Light
- All-Electric System
- BRT-Light
- BRT-Light
- Hybrid Buses
- Bike Sharing
- Car Sharing

Increase Intermodal Connectivity
Implications and Options –

Which scenario is closest to the actual course of history? How will we know?

• It is important to know which scenario best reflects the unfolding of reality
• Identify and monitor measures that provide an indication of what the underlying dynamics of reality are relative to the scenarios.
• How might we have to adapt our strategies to make them more ‘future proof’?
Lessons Learned

• Make sure that adequate preparation and meeting time is provided for participating decision makers.
  – The essence of a scenario process is to support a conversation about the future

• Organizational culture can represent a significant momentum to overcome in breaking out of the ‘official future’

• The tool is applicable to different levels of strategy development
  – Next application may be a fuel-focused scenario process

• Like other planning processes, scenario planning should be seen as iterative – multiple cycles yield the most learning
Sources of Inspiration and Reference

• "The Art of the Longview" - Peter Schwartz
• "Learnings from the Longview" - Peter Schwartz
• "Inevitable Surprises" - Peter Schwartz
• "Scenarios - The Art of Strategic Conversation" - Kees Van der Heijden
• "Solving Tough Problems" - Adam Kahane
• "Powerful Times" - Eamonn Kelly
• "The Necessary Revolution" - Peter Senge
• "The Art of Quantum Planning" - Gerald Harris
• "Scenarios: An Explorer's Guide" - Shell Oil
• "Scenarios for the Future of Technology and International Development" - Rockefeller Foundation and Global Business Network
• "SALT Talks" (Seminars About Long-Term Thinking) - hosted by Stewart Brand, Longnow.org
• GBN.com - Global Business Network's website
Wouldn’t That Be Nice?

"The hell with the past—I'd like to put the future behind us."
...if there is one thing I have learned repeatedly in the past 20-plus years, it is this: The world may be uncertain and unpredictable but that’s no excuse for being unprepared. We have more access than ever to the data, knowledge, ideas, and tools that we need to shape a better future for us all.

-- Peter Schwartz