PRESTO!
Plan for Regional Sustainability Tomorrow

SESYNC Workshop #2
August, 2015
• **Driving forces**
  – *Impactful* on the future of the region
  – *Certain* in regional importance
  – *Uncertain* in strength and or direction
  – *Plausible* to occur in next 25 years
  – *Outside* the control of state, regional, and local leadership

• **Scenarios**
  – Scenarios should be very different from each other and push the envelope in order to emphasize the various impacts of different directions for the region
Scenario Development Process

1. Posters from SAC / SESYNC Meeting
   - Influence Diagrams
   - Identify Broad Driving Forces

2. One Sentence Stories
   - Determine Associated Uncertainties
   - Classify Uncertainties and Impacts

3. Scenarios
   - Scenario Inputs
   - Scenarios Narrative

4. SAC Feedback
<table>
<thead>
<tr>
<th>Scenarios</th>
<th>Blue Planet</th>
<th>Revenge of the Nerds</th>
<th>Last Call at the Oasis</th>
<th>Ashes and Diamonds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technological</td>
<td>Green technology development driven by high carbon prices</td>
<td>Underestimation of technology; Embrace of technology; Profit driven tech</td>
<td>Green technology embraced but does not advance significantly</td>
<td>Technological progresses at expected rate</td>
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<tr>
<td>Economic</td>
<td>Strong economy drives up fossil fuel demand; Aligns with green economy</td>
<td>Strong economy follows technological development</td>
<td>Resource scarcity raises prices of fuel, water, and food -&gt; impacts families</td>
<td>Inequality deepens; Economy eventually slows because of inequality</td>
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<tr>
<td>Political</td>
<td>Federal government surplus from strong economy</td>
<td>Tax receipts increase from strong economy; tech elites dominate</td>
<td>Acceptance of direct government intervention; Ecology &gt; economy</td>
<td>Deregulation, low taxes prevails; Economic elites dominate</td>
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<tr>
<td>Social</td>
<td>Spirit of disruption and innovation directed to environmental and social concerns.</td>
<td>Spirit of disruption and innovation directed to profits; Fast technological adoption</td>
<td>Localism; Sense of stewardship</td>
<td>Libertarian social thinking prominent</td>
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<tr>
<td>Environmental</td>
<td>Fossil fuel resources insufficient for demand</td>
<td>Delayed reaction to environmental concerns</td>
<td>Deep scarcity; particularly water and fossil fuel</td>
<td>Resources abundant; environment degrading</td>
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This is the future in which global development drives up demand for energy, and thus the price of fossil fuels. The high price of energy drives technological development, precipitating a dramatic drop in the price of renewable energy. New communications and renewable energy technology bolsters the US Economy and federal tax receipts. With new revenues, the federal government further encourages environmental and social sustainability through tax breaks, pricing mechanisms, and other incentives. State and local governments orient their policies to maximize the effectiveness of these programs and to capitalize on growth sectors in the new, green economy.
Solar Panel

Temperature Control System

Ground Source Heat Pump System

Transformer

Rainwater Collection

To irrigate plant

Flush the toilet after filtration
This is the future in which technological development drives strong international and national economies; however, abundant fossil fuel resources tamp down the price of carbon based energy. The new economic elites in the fields of communications, 3D printing, autonomous vehicles, and energy extraction encourage reinvestment in government R & D in as well as deregulation. The growing middle class demands tax breaks. Social and environmental sustainability are encouraged through tax breaks, pricing mechanisms, and other incentives, but the low price of fossil fuels makes goals difficult to achieve. The fast growing economy decreases inequality but technological job displacement challenges families.
This is the future in which fossil fuel prices remain low without substantial technological development. The current economic elites encourage increase deregulation and additional tax breaks. These efforts align with social values emphasizing autonomy, independence, and states rights values to achieve success at the federal level. Those concerned with sustainability outcomes invest in local government, public private partnership, and private foundation efforts to achieve targets. Some locations achieve progress through interested businesspeople, non-profits, limited federal block grants, and concerned state and local governments. Other jurisdictions fall behind in environmental and social outcomes.
Potential Road Network
This is the future in which shocks of resources scarcity dramatically alter the way that we relate to natural and social systems. Unforeseen fossil fuel and water scarcity events throughout the world and county encourage a greater tolerance for direct government intervention and an enhanced sense of stewardship for the natural environment and communities. The scarcity of resources, localism oriented behavior change, and government mandates move the region in the direction of sustainability. The regional reduces its environmental impact largely through the embrace of existing technologies. Increasingly people think of the economy as a subservient subsystem of the environment and society.
Potential Transit Network
Big Ideas Not Included

- Terrorism and the Security State
- Size and role of the federal govt.
- Changes in Social/Family Structures – monogamy, household size, co-housing
- Technology driven job displacement that leads to chronic high unemployment
- Loss of retail land use to on-line shopping
- Massive loss of privacy to techno-future
- Much increased longevity and its effects
• ‘Inputs for SESYNC’ lists the changes for model inputs and parameters under each scenario.

• Elements that are implemented currently are in **black**. Elements that we still intend to implement in future versions of the scenarios are in **red**.