where is the ‘E’ in risk?
The case of Louisiana Speaks

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Presentation Structure

1) Louisiana Speaks Case Study
2) Implications of Case Study for Interdisciplinary Projects
3) Next Steps

Integrating Planning for Recovery and Growth….

Coast-wide Social, Economic + Infrastructure Planning
Coast-wide Coastal Protection + Restoration Planning
Parish Recovery Plans
Unified New Orleans Plan

To Address Challenges Across South Louisiana
The Planning Process

- Demographic Analysis and Initial Public Outreach
- Digital Base Mapping of Post-Storm Landscape
- Recovery and Growth Scenarios Development
- Scenarios Modeling
- Public “Voting” on Scenarios
- Louisiana Speaks Regional Plan:
  A Vision and Strategies for a Sustainable Recovery and Smarter Growth

Defining the Challenge
Demographic Analysis: Storm Impacts

Southern Louisiana Population 2005

Digital Base Mapping
Louisiana’s First Comprehensive Spatial Database

Existing Land Use
- Residential
- Commercial
- Open Space
- Industrial

Scenarios Development and Modeling

INPUTS
- Coastal Restoration & Protection Investments
- Transport Network
- Development Pattern
- Population and Employment Projection

ALTERNATIVES
- SCENARIO A
- SCENARIO B
- SCENARIO C

OUTPUTS
- Jobs & Housing Profile
- Infrastructure Cost
- Land Consumption
- Equity Consequences
- Pop and Emp Distribution
- Transport System Impacts
- Hazard Probability and Impact

Creating Scenarios
Development Types: Scenario Inputs Based on Real Places

District Center

Visualizing Development Types in South Louisiana

Town Center
Small Lot Residential
Creating Scenarios
Quantifying Development Types

Creating Scenarios
Design in the Digital Environment

Creating Scenarios
Transportation Investments

Creating Scenarios
Allocating Development Types to Simulate Future Growth

Modeling the Scenarios to Provide Options
A Keep Building and Developing As We Are

Open Land Developed: 460 Square Miles

Modeling the Scenarios to Provide Options
B Modify Development Patterns

Open Land Developed: 260 Square Miles

Modeling the Scenarios to Provide Options
C Focus Development in Existing Cities & Towns

Open Land Developed: 130 Square Miles
New Population Located in Floodplain

<table>
<thead>
<tr>
<th>Option</th>
<th>Population</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>445,000</td>
</tr>
<tr>
<td>B</td>
<td>200,000</td>
</tr>
<tr>
<td>C</td>
<td>70,000</td>
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</table>

Automobile Emissions

<table>
<thead>
<tr>
<th>Option</th>
<th>Annual Tons of NOx, CO, and VOCs</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>386</td>
</tr>
<tr>
<td>B</td>
<td>328</td>
</tr>
<tr>
<td>C</td>
<td>280</td>
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</tbody>
</table>

Total Infrastructure Cost (2005-2050)

<table>
<thead>
<tr>
<th>Regional Infrastructure</th>
<th>Option A</th>
<th>Option B</th>
<th>Option C</th>
</tr>
</thead>
<tbody>
<tr>
<td>(local roads, storm water, electrical)</td>
<td>$58.2B</td>
<td>$42B</td>
<td>$34B</td>
</tr>
<tr>
<td>Regional Transit</td>
<td>$9</td>
<td>$4</td>
<td>$3</td>
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</tbody>
</table>

Total Infrastructure Cost per Household (2005-2050)

<table>
<thead>
<tr>
<th>Regional Infrastructure</th>
<th>Option A</th>
<th>Option B</th>
<th>Option C</th>
</tr>
</thead>
<tbody>
<tr>
<td>(2007 Dollars)</td>
<td>$25,500</td>
<td>$16,200</td>
<td>$10,000</td>
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<tr>
<td>Regional Transit</td>
<td>$4,800</td>
<td>$2,600</td>
<td>$1,300</td>
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</table>

Regional Plan Poll Results:

Changing Growth Patterns

- Option A: 18%
- Option B: 81%
- Option C: 30%

The Louisiana Speaks Regional Plan:

Restoration and Protection

(Regional Plan Map)
The Louisiana Speaks Regional Plan:
Integrated Restoration, Protection, Transportation and Land Use

Comprehensive Risk Management
Coastal Restoration and Protection Investments

The Louisiana Speaks Regional Vision:
Reinvestment Areas

The Louisiana Speaks Regional Vision:
New Growth Areas

A New Framework for Implementation

Challenges
• Fragmented planning process
• Breadth of knowledge of primary consultant
• Temporal disconnect between modeling processes
• The constant: institutional politics
Putting the ‘E’ in Risk

• Common timeline and policy-informing iteration
• Common valuation of risk
• Collaboration to build a robust, integrated modeling process
• Collaboration to create robust, integrated policy

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