Fast and Furious - Geospatial Damage Assessments
What?
• Categorize damage impact for “structures” in event area

How?
• Integrate geospatial data
• Use technology to automate process

Where?
• Anywhere data exists

When?
• As fast as possible

Why?
• Understand event magnitude
• Assist with recovery and mitigation efforts

Geospatial Damage Assessments
Inputs & Output

Structure + Ground Elevation + Flood Impacts + Imagery

Damage Assessments
Damage Classifications

- Affected (>0 to <=2 ft)
- Minor (>2 to <=5 ft)
- Major (>5 to <=8 ft)
- Destroyed (>8 ft)
Our Process

1. Determine AOI
2. Obtain Data
3. Create Flood Depth Grid
4. Create Damage Assessments
5. Validate with Imagery
6. Produce Reports/Updates
Our Process

1. EVENT
2. Determine AOI
3. Obtain Data
4. Create Flood Depth Grid
5. Create Damage Assessments
6. Validate with Imagery
7. Produce Reports/Updates
Our Process

1. EVENT
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Event Impact Data

- Integrate multiple sources
- Check distribution
- Validate attributes
Elevation Data
- Determine best available source
- Obtain bare earth
- Process to optimal resolution
- Translate datums
Our Process

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5. Create Damage Assessments
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7. Produce Reports/Updates
Water Surface Elevation

Bare Earth Elevation

Flood Depth Grid

Water Surface

Bare Earth

Flood Depth Elevation
Data Manipulation
- Remove "vacant" structures
- Normalize schema
- Generalize attributes
- Visual review
Geospatial Damage Assessments were completed within 5 days while traditional housing inspections took 73 days to complete.
Our Process

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Our Process

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<table>
<thead>
<tr>
<th>Parish</th>
<th># Affected Structures (2' splash)</th>
<th># Minor Structures (12' splash)</th>
<th># Major Structure (18' depth)</th>
<th>Total Impacted Structures</th>
<th>Total Structures</th>
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</thead>
<tbody>
<tr>
<td>Acadia</td>
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<tr>
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<td>95</td>
<td>10,016</td>
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<td><strong>Total</strong></td>
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<td><strong>51,732</strong></td>
<td><strong>13,608</strong></td>
<td><strong>168,885</strong></td>
<td><strong>578,192</strong></td>
</tr>
</tbody>
</table>
More than $10.5 MILLION in EXPEDITED RENTAL ASSISTANCE GRANTS provided to more than 12,500 DISASTER SURVIVORS
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