Teal Alert
Problem and Solution

- Falls followed by unconsciousness is a leading cause of elderly injuries and death in America.

- Getting timely help could mean the difference between life and death, retention of mobility and or other basic life functions.

- Teal Alert seeks to provide timely assistance through the utilization of sensor technology.
Existing Solutions

- Athena – need to press a button
- Fall apps – for the purpose of construction workers. Works only with phone, does not utilize sensor technology
- Smartervision – works by installing cameras in every room of the home
Systems Design Flow Chart

- Wearable Device
- Bluetooth Signal
- Mobile Application
- Twilio API
- SMS Alert
Methodology

First round of data gathering:
- 39 different kinds of falls

Second round of data gathering:
- 2 different kind of falls (forward and backward)

Overall:
- 150 falls over 20 different subjects
- Age 22-40 years
- Across gender
Data analysis

Peak Values - All Initial Positions

<table>
<thead>
<tr>
<th>Initial Position</th>
<th>Backward</th>
<th>Fall Position / Initial Position</th>
<th>Side</th>
</tr>
</thead>
<tbody>
<tr>
<td>Running</td>
<td>12</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Sitting</td>
<td>12</td>
<td>12</td>
<td>12</td>
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<tr>
<td>Standing</td>
<td>10</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>Walking</td>
<td>8</td>
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<tr>
<td>Side</td>
<td>12</td>
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<td>12</td>
</tr>
<tr>
<td>Peak Magnitude</td>
<td>7</td>
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Survey Results/Product Design

- According to our survey research, the most appropriate application of our device appears to be for the elderly population.

- Our greatest concern had to do with false positive or false negatives.
Future Enhancements

- Turn on camera and mic as alert is being sent out
- Continue improving our algorithm
  - Broader population & other sensors
- Multiple emergency contacts
  - Integration with nearby taxi drivers or hospitals
- Expand to other applications & tailored features
  - Women’s safety
  - Hikers
THANK YOU!!!