SUMMARY for December 2015:
See below for a list of Root Causes for Unplanned Outages.
ITS Changes and outages continue to meet goal.

38.7% of all planned changes were documented in IT Request.

• Ratio of Unplanned to Total Outages & Maintenance Events:

<table>
<thead>
<tr>
<th>Month</th>
<th>Unplanned to Total Outages</th>
<th>Unplanned to Total Events</th>
</tr>
</thead>
<tbody>
<tr>
<td>October</td>
<td>19%</td>
<td>11%</td>
</tr>
<tr>
<td>November</td>
<td>17%</td>
<td>9%</td>
</tr>
<tr>
<td>December</td>
<td>15%</td>
<td>7%</td>
</tr>
</tbody>
</table>

• Goal for 2015-16: 100% of changes documented in IT Request.
  o October Planned: 38.7% Unplanned: 57.7%
  o November Planned: 40.2% Unplanned: 18.8%
  o December Planned: 28.8% Unplanned: 37.5%

• Goal: Outages due to failed changes: ≤ 9 per quarter (~5%) Fall Quarter: 7
  Note: Failed Changes include outages caused by unintended consequences of a change. This implies that we could have avoided the unplanned outage if we had planned or executed the change better.
  o October - 4
  o November - 3
  o December - 0

• December Unplanned Outages Summary = 8
  o 4 outage(s) were caused by hardware issues
  o 2 outage(s) was caused by a power failure
  o 1 outage(s) were caused by software issues
  o 1 outage(s) were caused by vendor issues
### ITS Outage Metrics
#### December 2015

<table>
<thead>
<tr>
<th>Month</th>
<th># Unplanned Outages</th>
<th># Planned Outages</th>
<th>Ratio of Unplanned Outages Caused by Failed Changes to Total Outages</th>
<th>Ratio of Unplanned to Total Outages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan - 15</td>
<td>22</td>
<td>27</td>
<td>12%</td>
<td>45%</td>
</tr>
<tr>
<td>Feb</td>
<td>12</td>
<td>44</td>
<td>2%</td>
<td>21%</td>
</tr>
<tr>
<td>Mar</td>
<td>12</td>
<td>52</td>
<td>0%</td>
<td>19%</td>
</tr>
<tr>
<td>Apr</td>
<td>11</td>
<td>47</td>
<td>7%</td>
<td>19%</td>
</tr>
<tr>
<td>May</td>
<td>12</td>
<td>51</td>
<td>3%</td>
<td>19%</td>
</tr>
<tr>
<td>June</td>
<td>21</td>
<td>36</td>
<td>11%</td>
<td>37%</td>
</tr>
<tr>
<td>July</td>
<td>21</td>
<td>54</td>
<td>3%</td>
<td>28%</td>
</tr>
<tr>
<td>Aug</td>
<td>9</td>
<td>74</td>
<td>1%</td>
<td>11%</td>
</tr>
<tr>
<td>Sept</td>
<td>14</td>
<td>58</td>
<td>7%</td>
<td>19%</td>
</tr>
<tr>
<td>Oct</td>
<td>16</td>
<td>67</td>
<td>5%</td>
<td>19%</td>
</tr>
<tr>
<td>Nov</td>
<td>13</td>
<td>64</td>
<td>4%</td>
<td>17%</td>
</tr>
<tr>
<td>Dec</td>
<td>8</td>
<td>46</td>
<td>0%</td>
<td>15%</td>
</tr>
</tbody>
</table>

**Ratio Unplanned to Total Events**

- **Ratio of Unplanned to Total Outages**
  - Jan - 15: 45%
  - Feb: 21%
  - Mar: 19%
  - Apr: 19%
  - May: 19%
  - June: 37%
  - July: 28%
  - Aug: 11%
  - Sept: 19%
  - Oct: 19%
  - Nov: 17%
  - Dec: 15%

- **Ratio of Unplanned to Total Events**
  - Jan - 15: 50%
  - Feb: 45%
  - Mar: 40%
  - Apr: 35%
  - May: 30%
  - June: 25%
  - July: 20%
  - Aug: 15%
  - Sept: 10%
  - Oct: 5%
  - Nov: 0%
  - Dec: 0%
December 2015
Causes of ITS

Total Outages = 54

Unplanned Outage: Hardware/Software related 9%
Unplanned Outage: External/Vendor related 6%
Planned Outages 85%