**EMERGING RISK to INFRASTRUCTURE FROM UNMANNED AERIAL VEHICLES (UAVs)**

**UAV Capability Versus Policy**

**ALTITUDE**
- Current FAA regulations prescribe a 400 ft. ceiling that is far below the true capability of these devices.
- Current technology devices available through retail, can reach an altitude of 1,600 ft.
- Cutting-edge technology devices available through retail, can climb to an altitude exceeding 15,000 ft.

**RANGE**
- FAA regulations require UAV operators keep the device within line of sight—typically within 1,000 ft. of the operator.
- Current technology allows an operator to control a UAV device up to 6 miles.
- Cutting-edge technology allows an operator to control a UAV device up to 13,000 miles.

**GROSS WEIGHT OF DEVICE**
- FAA regulations address up to 55 lb. devices.
- Current technology devices weigh approximately 2–8 lbs.
- Cutting-edge technology can weigh 440 lbs.
- 440 lb. devices have a significantly larger payload capacity.

**FIRST-PERSON VIEW FLIGHT**
The capability to fly the device based on the view from the UAV itself.
- FAA rulings prohibit this capability.
- The capability is installed on a large number of devices available through retail.

**AUTONOMOUS FLIGHT**
The capability for the device to fly itself based on GPS coordinates and preinstalled flight paths.
- FAA rulings do not address this capability.
- Available in many current technology devices.

**Exposed infrastructure systems and public gathering areas are vulnerable to UAV devices.**
- UAVs provide adversaries with the ability to circumvent traditional physical security measures such as gates, surveillance equipment, and security guards.
- Exposed infrastructure systems (such as electrical transmission facilities, pipelines, roads, and bridges) and public gathering areas (such as stadiums and public assembly sites) are vulnerable to UAV devices.

**Number of commercial and hobbyist sales is projected to nearly triple by 2020.**

**UAV aviation incidents have increased since 2012.**

- UAV devices have the capability to collide with aviation conveyances or disrupt aviation operations.

<table>
<thead>
<tr>
<th>Year</th>
<th>Sales (Million)</th>
<th>Incidents</th>
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<tbody>
<tr>
<td>2012</td>
<td>2.5M</td>
<td>7</td>
</tr>
<tr>
<td>2013</td>
<td>4.8M</td>
<td>25</td>
</tr>
<tr>
<td>2014</td>
<td>5.5M</td>
<td>543</td>
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<tr>
<td>2015</td>
<td>6.1M</td>
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