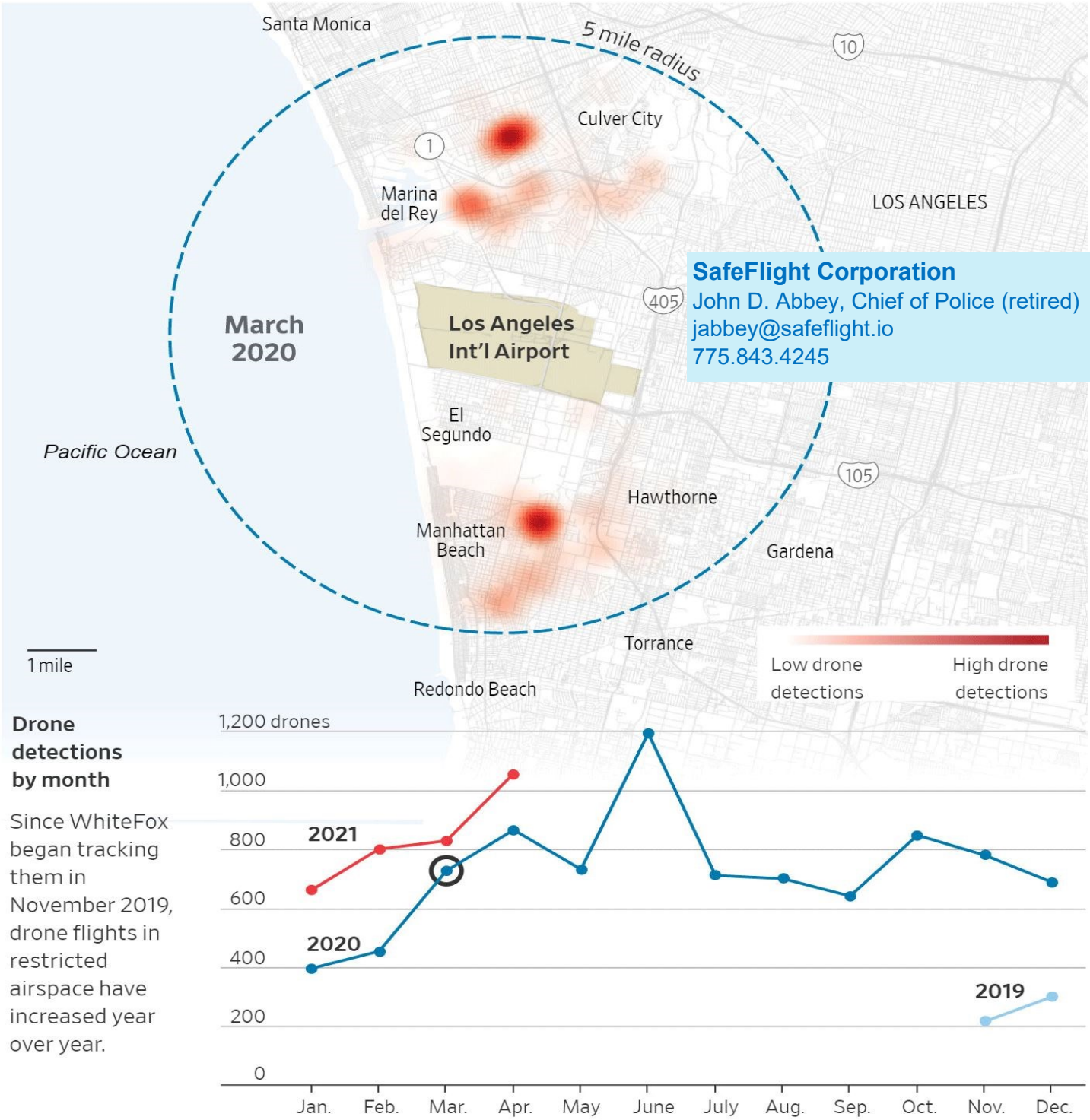
LOW ALTITUDE AIRSPACE LAW ENFORCEMENT RESPONSE, INVESTIGATION & REPORTING

SAFEFLIGHT
DRONE SAFETY THROUGH EDUCATION AND ENFORCEMENT



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Source WhiteFox Defense —Wall Street Journal

Low Altitude Airspace Threat Response

COUNTERING UAS & LASERS

While Unmanned Aircraft Systems (UAS), or drones, have gained broad commercial and public safety use in America, the vast majority of UAS are owned by hobbyists who are largely untrained and unaware of the rules, regulations, and safety precautions associated with low-altitude flight. Even with a steady stream of media reports of drones in airport approach and departure paths, close calls with aircraft, and collision incidents, UAS occurrences tend to be viewed by the public as unenforceable nuisances. However, the Federal Aviation Administration (FAA), Department of Homeland Security (DHS), Federal Bureau of Investigation (FBI), and other regulatory agencies have classified unlawful UAS operations as a serious threat to public safety and to national security.

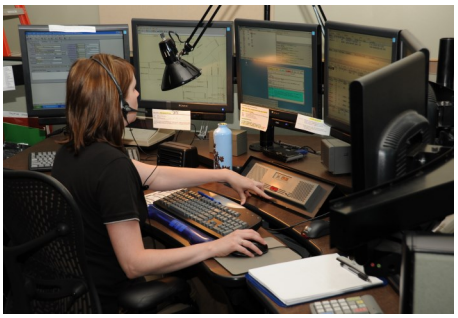
Particularly vulnerable are the 640 FAA and NFCT airports in the US. A recent Wall Street Journal reported the rate of drone sightings around airports are many more than the 100 per month federal estimate. Depending on pilot sightings is a gross underestimate when compared to the number of detections from automated systems. The WSJ article quoted C-UAS provider WhiteFox Defense Technologies that drone incursions into the Los Angeles airport's restricted airspace nearly tripled from 2019 to 2020, with a high of roughly 1,200 flights in June 2020.

"Drone incursions into the Los Angeles airport's restricted airspace nearly tripled from 2019 to 2020, with a high of roughly 1,200 flights last June" - Wall Street Journal WhiteFox

To address the problems of drone intrusions into controlled airspace, unsafe operations, and unauthorized flights over restricted sites, over 250 technology providers have developed and market countermeasure (C-UAS) systems for detecting, tracking, and in the case of national security sites, defeating rogue drone flights. Compounding the number of available solutions are the myriad of technologies they deploy, ranging from radio frequency, radar/lidar, and electro-optical, to miniature missiles and capture nets. For effective enforcement action, these detection alerts are conveyed to 911 and responders.

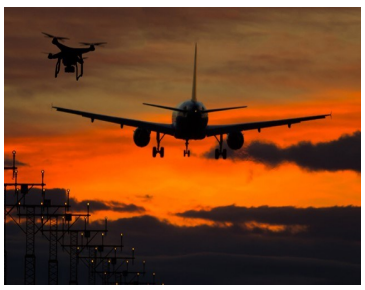
Perhaps more dangerous than rogue drone intrusions are the increasing number of laser illuminations of aircraft cockpits while in in flight. Particularly in the case of airport drone intrusions, lasers illuminations, and other low altitude threats likely occur well beyond the protected property in controlled approach and departure airspace. Defining the threat area is the radius in which approaching planes are at vulnerable altitudes. In our LAX example, there are more than 50 jurisdictions, dozens of 911 public safety answering points (PSAP's), and both state and local responders that serve that restricted airspace. For all sites, drone and laser enforcement is a multi-agency proposition.

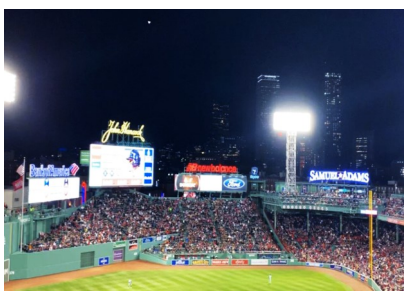
Effective mitigation of airborne threats incorporates both airspace and ground elements. Reports of drone incursions and other airspace violations or incidents begin with pilot's reports to air traffic control, the public calling 911, or C-UAS systems creating an automated signal of the intrusion. Whatever the input source, the process begins with a triage and validation protocol that supports the binary decision at the 911 PSAP to dispatch or not dispatch responders.



If a response is warranted, the data collected from 911 callers, ATC, and/or C-UAS must be conveyed to the first responders, most effectively through a combination of map displays and tabular data. Through the location data, the immediate mission for the responder is to locate the rogue operator and secure the offending drone or laser device.

Once law enforcement responders locate the operator and secure the drone or laser, the responding officers conduct an investigation, with victim, witness, and offender statements, forensic evidence, and officer observations. New Congressional mandates require all federal, state,





SafeFlight Low Altitude Enforcement Solution

TRIAGE, RESPONSE, INVESTIGATION, FORENSICS AND INCIDENT REPORTING

The SafeFlight software suite is a dual-use cloud-based, Software-as-a-Service enterprise application providing progressive web apps for air traffic control, C-UAS countermeasure systems, 911 public safety answering points (PSAP's), and public safety responders

The SafeFlight solution combines both software and services designed to assess risk, determine reasonable mitigations, and provide a universal integration and incident management system for incidents that occur in low altitude airspace.

At all levels the SafeFlight solution introduces actionable geospatial intelligence to aviation and public safety users in their routine daily responses to these incidents.

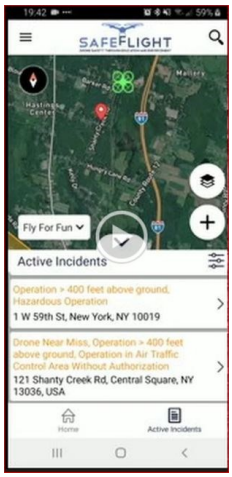
"Drone detection without response is just another statistic"

Although SafeFlight is a task-specific technology, it really serves as a model for the utilization of actionable geospatial analysis for the public safety responder. This is in contrast with the geospatial modeling in intelligence-led policing and the utilization of GEOINT data in wildfire operations, where the analysis and decision support typically is only seen by incident command staff.

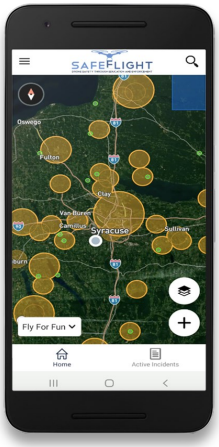
INPUT TIER

At the Input Tier, incident data is entered by air traffic controllers' reports from pilots, by 911 telecommunicators with reports from the public, and from automated countermeasure (C-UAS) systems that detect and track airspace intrusions. With the SafeFlight geospatial algorithms and existing GIS systems, in the SafeFlight ATC and 911 Modules data is converted into map displayed actionable data and the appropriate 911 public safety answering point and responding agency are identified and the data transferred.

TRIAGE C² TIER



At the Triage C² Tier, SafeFlight AI/ML technology combines the GEOINT and HUMINT observations into the binary decision of dispatch/ no dispatch. The 911 telecommunicator is guided by a "smart" system to match observations and geospcial data to any appropriate federal, state, or local violations. This analysis also utilizes API interfaces to any Low Altitude Authorization and Notification Capability system (LAANC), Remote-ID, and other air management systems displayed on the interactive map.



RESPONSE TIER

At the Response Tier all this data is presented to the responder on their web -enabled smart device. Progressive web apps allow the SafeFlight application to run on Windows, Android, or iOS operating systems. The responder is provided with the tools to respond, engage, investigate, collect forensic evidence, and report the incident.

Beginning with the ability to view the offending drone location on the SafeFlight interactive map, the responder is able to effectively locate the offender. Once located, the responding officer is guided through an AI/ML-based process that converts observations and data into actionable data, presenting the appropriate federal laws and regulations, state laws and local ordinances that apply. SafeFlight will be the only provider compliant with FAA Enforcement Guidelines and National mandatory reporting requirements.

SAFEFLIGHT CORPORATION

SafeFlight Corporation was founded by law enforcement professionals with over 50 years of experience in community policing, disruptive technology development, and the introduction of innovative technologies and practices. Working with FAA advisors, law enforcement practitioners, and UAS/ drone pioneers, the SafeFlight team set out to fill the gap between drone incidents, and responders. Safelight was cleared by the FAA's Airport Safety and Standards for implementation at all US airports.

Drone Countermeasures Testing and Integration

SAFEFLIGHT CONSULTING SERVICES

DRONE VULNERABILITY RISK ASSESSMENT

Threat Identification The Thornton Tomasetti SafeFlight team works in collaboration with project stakeholders to identify and document the overall threat environment, including historical incidents in proximity of the site, including likely drone launch sites, launch radius/ locations, approach routes, and flight patterns.

Vulnerability Assessment TT/SafeFlight will assess the protected site to identify and document mission-essential assets, areas and operations that are exposed and at risk to drone-related threats throughout the facility. Each asset, area, operation identified will be evaluated based on its overall risk (threat, vulnerability, and consequence of loss) to assist leadership in prioritizing protective efforts.

RISK MITIGATION PLAN

Risk Mitigation Solutions/ Enhancements

TT/SafeFlight will provide cost-effective risk mitigation options to enhance existing conditions in the form of physical, technical, and operational measures in compliance with current laws and regulations. This process will address both single mitigations and the integration of multiple technologies and protocols, including:

- Detection Zone Criteria
- Drone Detection Technology
- Interagency Agreements, coordination, response protocols, and training
- Emergency Response Preparedness Guidance

SOLUTION TESTING AND VALIDATION

Independent Solution Evaluation, Validation, and Selection Support

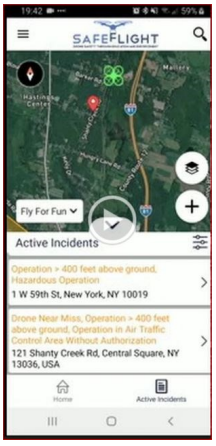
From the client-selected mitigation measures, TT/ SafeFlight will develop comprehensive requirements for procurement documents (FRQ/RFI/RFP) with concise and measurable project requirements and delivery executions. Ursa Actional Analytics, developed under US Air Force contracts, will provide vendor-agonistic telemetry analysis and visualization, including:

- **CUAS Visualization** with comparative graphics to demonstrate accuracy and efficacy.
- **CUAS Normalization** bringing a variety of data into a common frame of reference
- **Use of Time, Space and Position Information** (TSPI) for GPS Ground Truth
- **Collection, Organization, and Validation of Test Data**—URSA Analytics Model
- **Comparing Defining C-USA Track Data -** Ability to detect, classify, locate, and mitigate UAS targets

IMPLEMENTATION MANAGEMENT

Implementation and Integration plan

- Installation to client specifications
- Integration of C-UAS technology with ATC, 911 PSAP's, and field responders
- Universal Integration Platform



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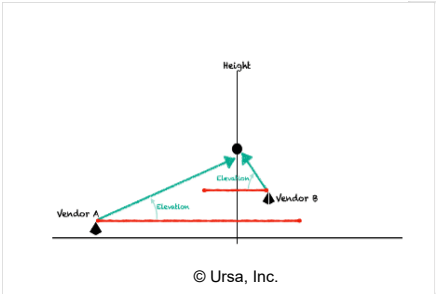

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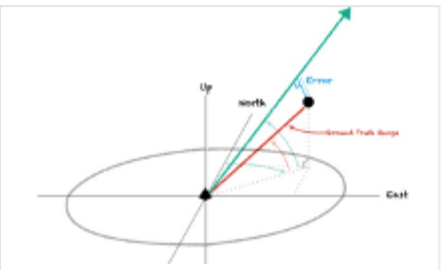

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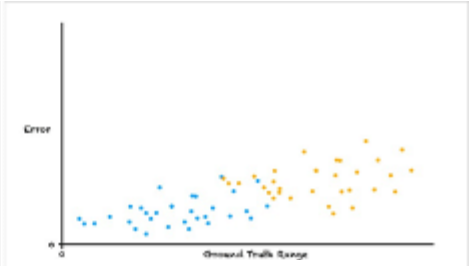

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