



**VIGILANT
AEROSPACE SYSTEMS**

**UAS Tech Forum 2019
Vigilant Aerospace Systems Pitch**



www.VigilantAerospace.com

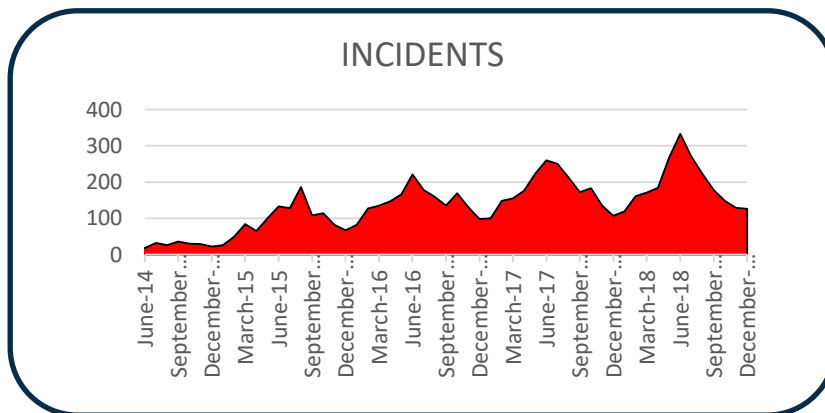
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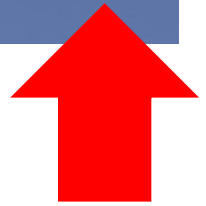
1.844.SafeSky

Problem

- Integration of drones into manned airspace is difficult and risky but needed for beyond visual line-of-sight
- Airspace management systems for unmanned aircraft are complicated and expensive
- Standards and regulations compliance is demanding and ever-changing



118%



Increase in daily encounter average from 2015 to 2018

- **6.32 encounters per day on average**

Solution: FlightHorizon



Integrated airspace management and detect-and-avoid



Out-of-the-box standards compliance



Reduced risk and complexity

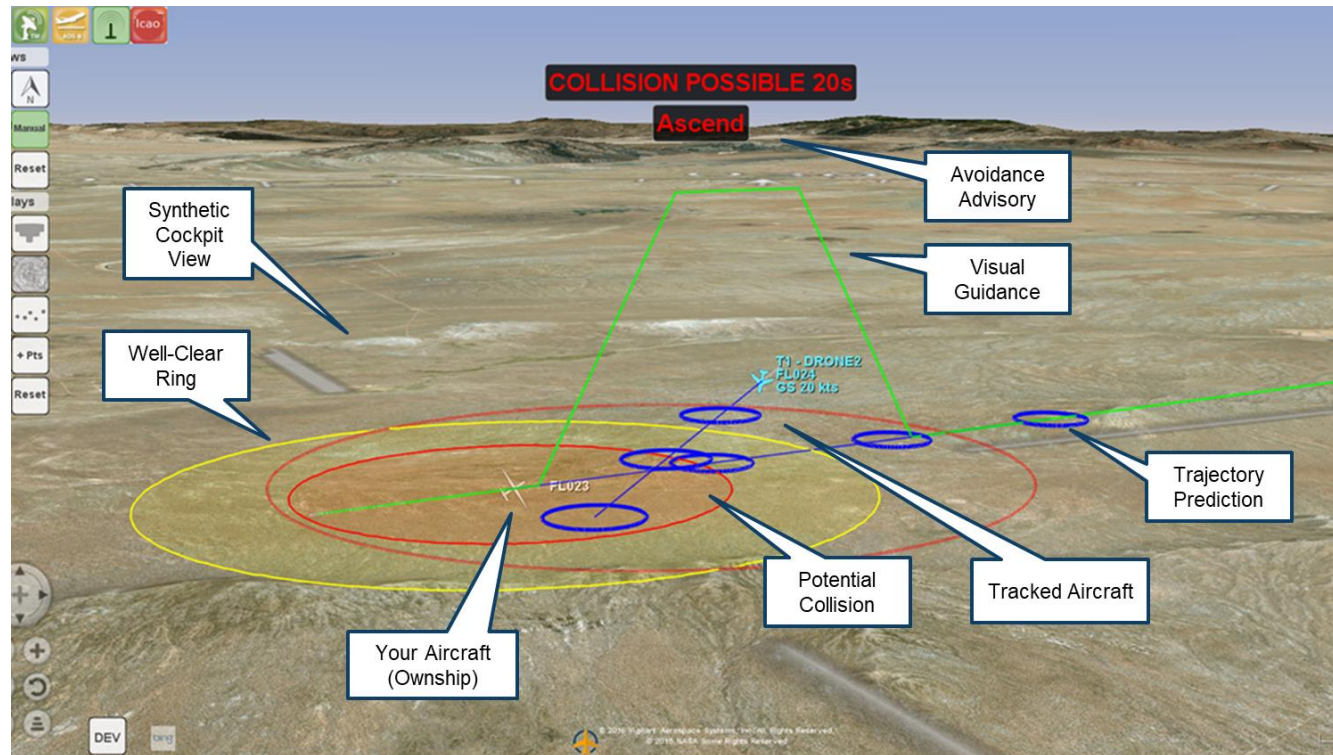


Test flights at NASA Armstrong



Test flights at Okla. State Univ. Unmanned Aircraft Flight Station

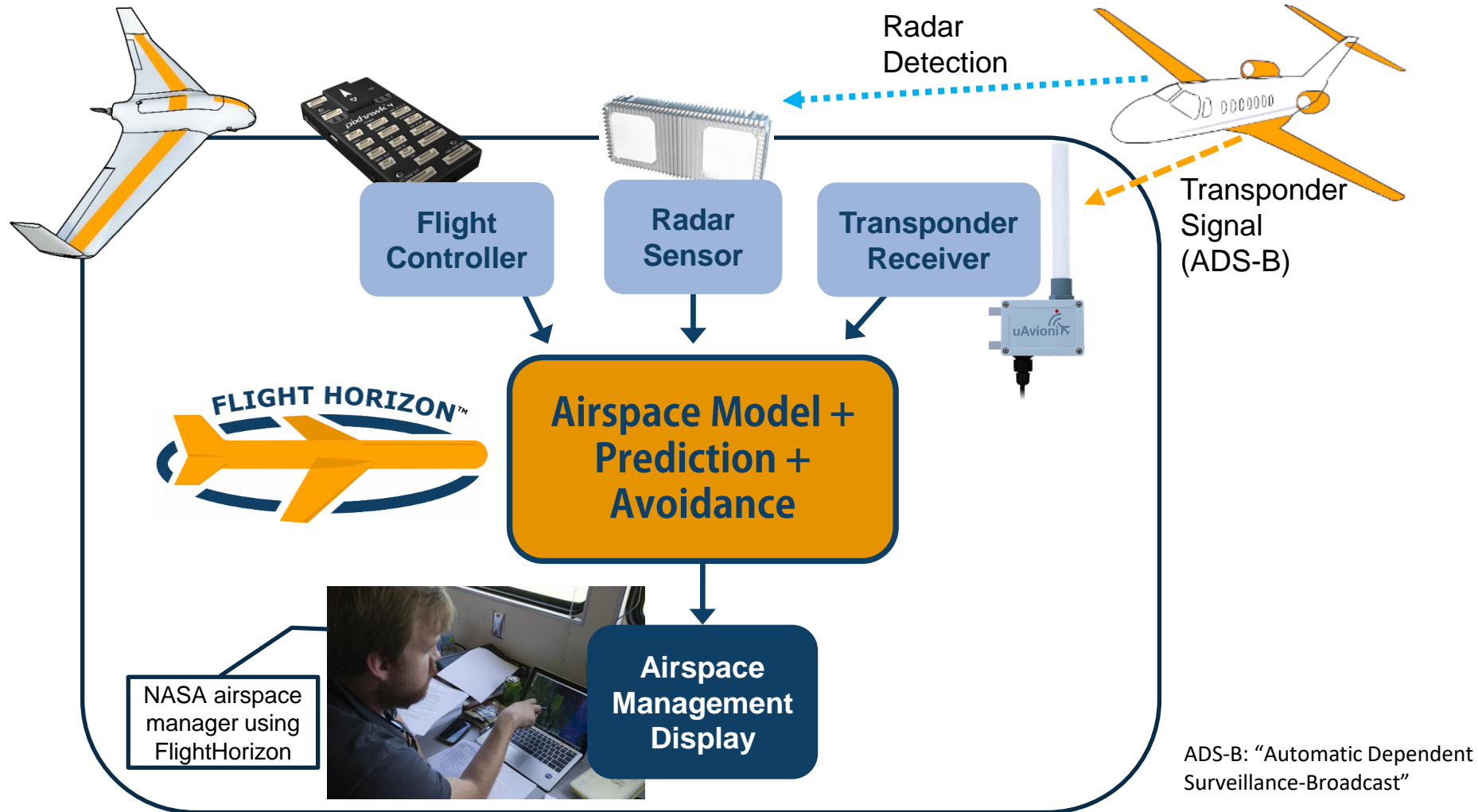
What is FlightHorizon?



- Software for individual unmanned aircraft pilots or airspace managers
- Flight safety system based on exclusively-licensed NASA patent
- Situational awareness and active avoidance of other aircraft
- Integrates with essential hardware and data sources

FlightHorizon - How it Works

Unmanned Aircraft - Ownship



FlightHorizon Fills Critical Market Gap

- Established solutions exist for detection and navigation
- FlightHorizon provides unique “automatic Detect-And-Avoid” (aDAA) capability, filling critical market gap



Aircraft detection devices



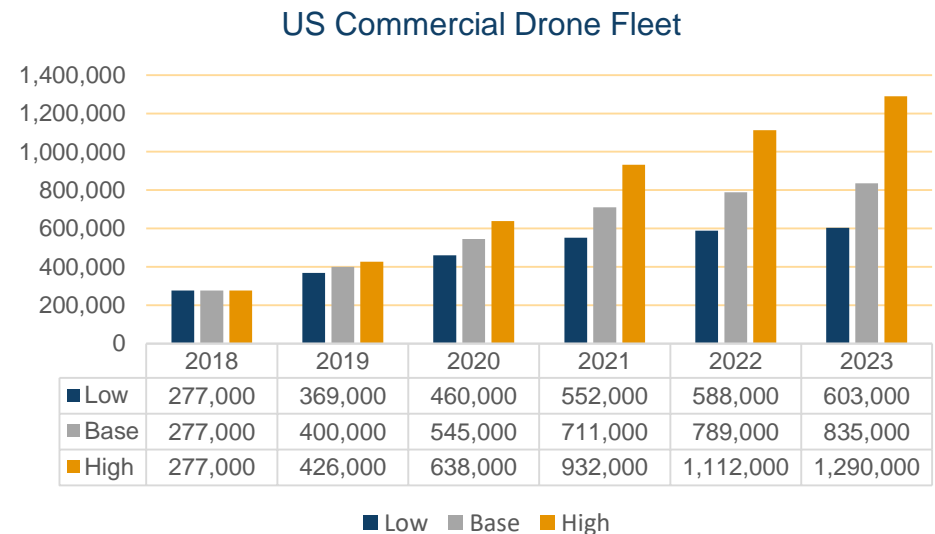
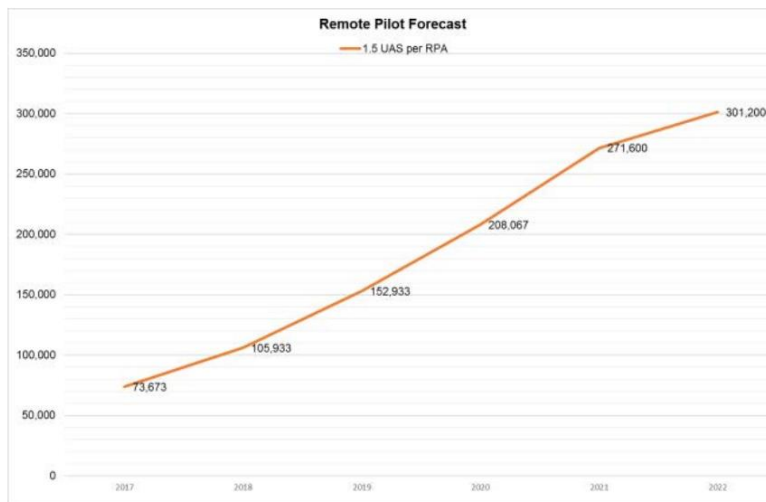
Active tracking and avoidance



Flight controllers

The Opportunity - Getting a Lot Bigger

- Between 600,000 and 1.2M US commercial drones by 2023 – FAA
- 277,000 registered commercial unmanned aircraft (avg. price \$25K) and ~13,000 long-range unmanned aircraft (price \$100K+) at end of 2018 – FAA
- 116,000 commercial unmanned pilots at end of 2018 – FAA
- 350,000 UAS pilots required to meet demand by 2024 – FAA



Business Model



Annual subscription for aircraft, fleets, flight programs, airfields



Online delivery and support



Feature and data updates online



Hardware and software bundle



Drone inspecting high voltage lines

Competitive Advantages



Complete turn-key system



Portable and self-contained



Not network dependent



Affordability



Any aircraft, sensor or data source



Exclusively-licensed NASA patents



Revenue share for service providers



FAA IPP Flights in Fargo, ND.



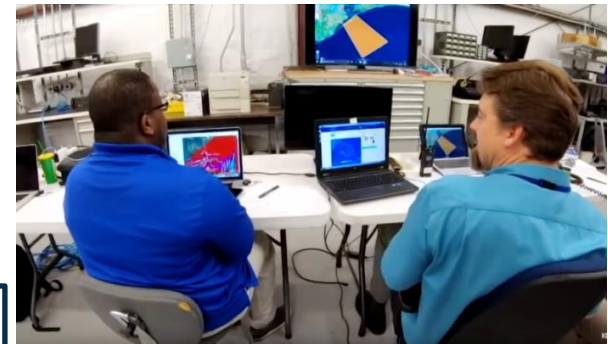
Offshore patrols with
law enforcement in Florida

Traction & Validation

- NASA SonicBAT Supersonic Program 2017-2018
- Support for Humanitarian-Drones.org/FEMA during Hurricane Harvey relief flights – 5 eCOAs - 2017
- NASA-DLR NDMAX Program 2018 (Germany)
- NASA QSF Program 2018 (US Gulf Coast)
- FAA Integration Pilot Program (IPP) 2018-2020
- FlightHorizon for 13-Mile Beyond Visual Line-of-Sight flights with FAA Authorization @ OSU
- Agreement to implement FlightHorizon COMMANDER for 3 regional droneports currently awaiting federal funding
- FlightHorizon COMMANDER with radar for airspace management R&D project @ OSU
- NASA Resilient Autonomy Program 2019-2020



Hurricane Harvey disaster response support work



NASA using FlightHorizon at Ellington AFB for supersonic flights



Management Team

Co-Founder & CEO Kraettli L. Epperson

- Experienced entrepreneur, technologist and investor
- Founder, Investor & CEO of R7 Solutions
 - Geospatial & Workflow Software for Fortune 500 Co's
- Founder, Investor & Chairman of HyperAlert
 - Used by 5 of top 20 US transit agencies
- Managing Director, VentureSpur Fund I, VentureSpur Fund II
- Houston Angel Network BOD, 2001-2004



Robert Heard
Co-Founder & Chairman



Mike Tharp
Co-Founder & CFO



Ricardo Arteaga
Inventor, NASA Scientist



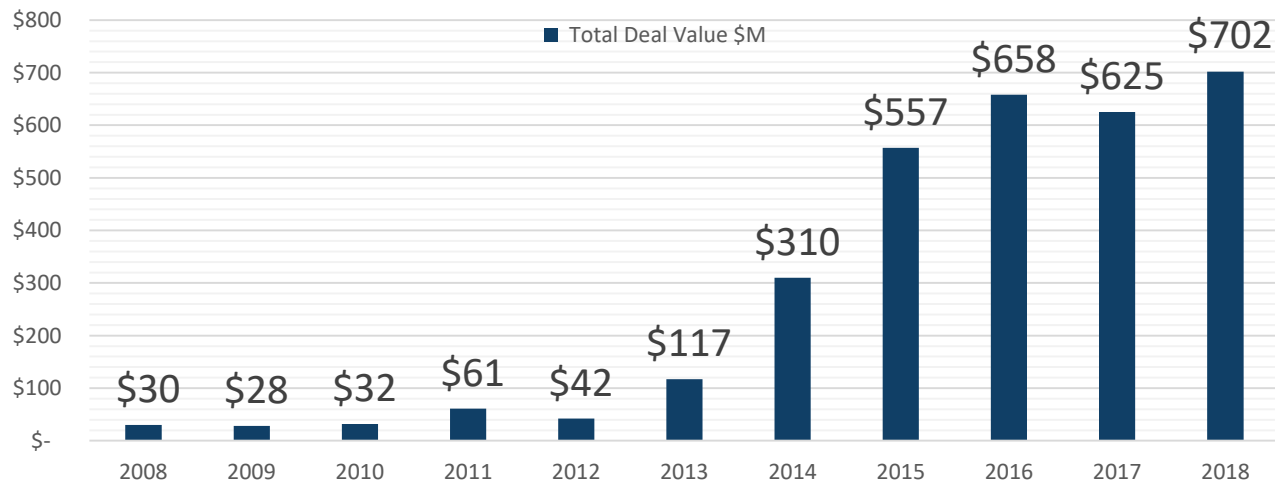
Ways to Get Involved

- Droneport Developers, Fleet Operators, Service Providers
- Integrators & Manufacturers
- Investors



Drone inspecting bridge and road infrastructure

VC Drone Investments (2008-2018)



<https://dronelife.com/2019/02/26/droneii-money-talks-drone-investment-trends-update/>

Questions?

➤ **Contact:**

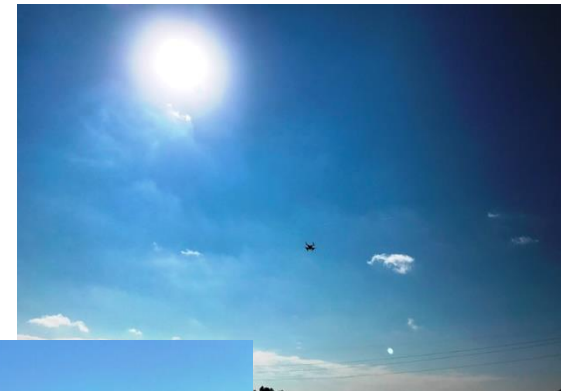
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➤ **Website:** www.VigilantAerospace.com

➤ **Videos:** [YouTube Channel](#)

➤ **Available upon request:**

- Financial Projections
- Technical Documents
- Technical Diagrams
- Technology Demonstration
- Patent Details



FlightHorizon test flights in Oklahoma