



Overview

- 2010: Established by Bye Aerospace, Inc.
- 2011: Silent Falcon team formed
- 2015: System design, development and testing completed by 2015
- 2015: First system sale and service contract
- 2016: NASA Airworthiness Certificate / NASA UTM Project participant
- 2016-2018: Global Distribution Network established
- 2018: DOI/ BLM Call When Needed Contract

Key Partnerships

- Sandia National Laboratories
- Department of Interior/BLM Wildfire Fighting Team
- Defense Advanced Research Projects Agency (DARPA)
- New Mexico Department of Homeland Security and Emergency Management
- New Mexico Department of Transportation
- Wildflower International (US Government Prime Contractor)

Certifications and Accomplishments

- FAA COA (2015)
- DOE Office of Aviation Management Accepted Operator List (2016)
- Flight operations/demonstrations in eleven countries (2014-2018)
- FAA 333 Exemption and Blanket FAA COA (2016)
- NASA Airworthiness Certificate / NASA UTM Project participant (2016)
- Transport Canada Special Flight Operating Certificate (2016)
- Transport Canada Compliant UAV Listing (2017)
- Department of Interior/ Bureau of Land Management Certification (2018)
- Inmarsat Pop Up Lab – 2019 (www.inmarsat.com/uav)

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Silent Falcon Unmanned Aircraft System

- Solar electric propulsion—*Silent, undetectable, non-intrusive during flight*
 - Reliability, lower O&M costs
 - Stability in flight/less vibration (for most advanced/sophisticated sensors)
- Long endurance—*up to 8 hours in daylight/ 5 hours at night @ 50 km/h*
 - Most military and commercial operations are ≤ 4 hours
- Long range—*45-100km (communications)*
 - ...and with mobile GCS long *distance* (up to 400 km / 250 miles)
- Open interface payload platform: *easily accommodates various payloads/sensors*
- Portable—*entire system fits in a standard bed pickup truck or Humvee*
- Cost-effective—*typical system costs ~\$450,000*
 - Aircraft/ground station/launch-recovery system/integrated sensors

Bye UAS, Inc. d/b/a Silent Falcon UAS Technologies
8411 Firestone Lane-NE
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Applications and Services

- Wildland Fire Operations
- Search & Rescue
- Emergency Response/Management/Assessment
- Land and Wildlife Management
- Mapping/Surveying
- Critical Infrastructure Inspection
- Intelligence Surveillance & Reconnaissance (ISR)
 - Military/Law Enforcement
 - Border Patrol/Drug Interdiction
 - Anti-Poaching/Smuggling

DARPA Project: Stand-Off Ubiquitous Power/Energy Replenishment

- Power Beaming Demo (SUPER PBD) Innovative project designed to prove the feasibility of remote recharging of an electric powered UAS while in flight using a high energy laser power source
- Partnered with SolAero for development
- Testing is scheduled to take place in New Mexico

New Mexico Department of Transportation

- Silent Falcon partnered with Bohannon Huston's Space Data Services Division to perform high-definition large scale mapping for highway interchange, to survey with high grade accuracy to support the design of a new highway interchange
- Uniformly distributed Ground Control Points (GCPs) provided high accuracy geospatial data, then analyzed and processed to create highly accurate 2D, 3D maps and digital elevation models
- In partnership with Bohannon Huston, SF mapped an intersection on I-40
- Silent Falcon: a proven and effective solution for large scale mapping and surveying projects to produce highly accurate models

DOI/ BLM Call When Needed Contract

- 2018 First Contract of its Kind for the DOI – New Contract Awarded 2019
- Wildland Fire Operations, Search & Rescue, Emergency Management, Other Resource Missions

2018 Season | SFUAS

- First to be called up and first to fly in a National Park
- Six Weeks — Nevada, Washington, Idaho, and Montana
- Operations — Wildland firefighting
- Integrated air operations: flying above manned aircraft to deliver situational awareness
- Operational Altitude (MSL) — 9,000-15,000 feet / 2,700-4,500 meters

Six Companies Selected for 2019

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- Silent Falcon was the first to be called: Miller Fire, AZ

New Mexico Department of Homeland Security and Emergency Management

- **April 2019:** Silent Falcon supports law enforcement operation with NMDHSEM, CBP and local law enforcement agencies for border patrol and drug interdiction
- **SGI (Special Government Interest) Waiver** granted by FAA to **Silent Falcon** to fly multi day operation in a 14 by 1-mile corridor along New Mexico/Mexico border
- FAA granted **Silent Falcon** a TFR for the operation, giving Silent Falcon control of this airspace, believed to be a **first for a commercial UAS**
- Flying exclusively at night, **Silent Falcon** was able to identify illegal border crossing, drug smuggling and numerous law enforcement operations, and support the team members in successfully resolving the issues
- NMDHSEM placed an initial order for one Silent Falcon system
- **Silent Falcon continues to support NMDHSEM operations at the New Mexico/ Mexico boarder**

Opportunities:

Silent Falcon continues its mission to **innovate** and **perfect** the capabilities of the Silent Falcon UAS by creating a growing environment for careers in production, manufacturing, and STEM oriented applications

The expansion in UAS Services market lead to **more opportunities** for being part of our:

- Manufacturing team
- Research and Development, such as AI, LM, GIS
- Flight Crew
- UAS Service and Maintenance team

Silent Falcon is committed continue to partner and work with local companies, research institutions, educational organizations and state departments

Challenges:

- Workforce: qualified pilots with FAA Part 107 license- working with local universities and colleges
- Local companies to provide tools and parts: limited support
 - o Working with Fusion Make
- 107 restrictions: overcome by FAA waivers and using the system
- Local visibility: global company with NM team on board