

## NBAA RESOURCE

### Integrated Operational Management and Oversight for sUAS

May 13, 2016

**Disclaimer:** This NBAA publication is intended to provide members with an introduction into relevant considerations for flight departments looking to incorporate small unmanned aircraft systems (sUAS) into their operations, as well as potential benefits of doing so. Readers are cautioned that this publication is not intended to provide more than an illustrative introduction to the subject matter, and since the materials are necessarily general in nature, they are no substitute for the advice of regulatory and operational advisors addressing a specific set of facts that readers may face. Additionally, this version of the publication is dated May 13, 2016, and does not incorporate any statutes, regulations or guidance released after that date.

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A growing number of businesses are exploring the use of small unmanned aircraft systems across their enterprise. This technology has the potential to offer substantial safety, efficiency and effectiveness gains, which can translate to improved service, increased profitability, decreased risk and enhanced response to customer needs. However, use is also governed by complex regulatory and operational requirements, such as federal approval and oversight, registration, operational provisions and prohibitions, and insurance. With the recent advancement and accessibility of sUAS as tools to support business pursuits and services, desire for use by engineers, technicians, marketing personnel and other company employees continues to increase. However, such individuals may not have received the appropriate aviation training, certification or practical experience development to safely and effectively operate these platforms, in accordance with operational requirements.

As experienced professionals within aviation, flight departments are well-versed in ensuring compliance with such requirements, while also offering a wealth of knowledge, skills and abilities (KSAs) garnered from their extensive training and experience in this safety critical field. Integrating the responsibility for management and oversight of all sUAS operations in a company under a flight department can provide improved compliance, operational safety and effectiveness, standardization, economies of scale and collaborative benefit.

### BENEFITS OF INTEGRATING sUAS INTO FLIGHT DEPARTMENTS

**Improved Regulatory Compliance** – With sUAS defined as “aircraft” by the FAA, they fall under federal regulations and guidelines (e.g., CFRs, FARs and Advisory Circulars). Experienced aviation professionals understand and are experienced with interpreting, assessing and confirming compliance with such requirements. When a unit

within an organization fails to meet requirements, whether intentionally or inadvertently, it has the potential to adversely affect all current and future aviation operations within the organization.

**Increased Safety and Effectiveness** – Involving flight departments in proposed operations improves the potential for successful task completion and continued operational safety. As aviation professionals, these flight departments are well-versed in best practices and potential implications of operating aircraft in specific environments and conditions (e.g., precipitation, degraded visual, wind and performance limitations). They can assist engineers and subject matter experts (SMEs), well-versed in the technology or infrastructure, to apply aviation assets, such as sUAS, in a manner that ensures requirements beyond technical implementation alone are met, which can help prevent fines or prohibition of aviation operations.

**Standardization Across Enterprise** – sUAS offer many technological capabilities that differ from manned aircraft, but they still must conform to a number of operational and support requirements (e.g., insurance, internal company policies and federal/state/local regulations). Integration into the flight department ensures use cases from across the enterprise can be managed, in a consistent and reliable manner, in accordance with such requirements, further improving safety, efficiency and effectiveness of application.

**Economies of Scale** – Managing all assets under the flight department will support expanded capability and sustainment. A nationwide Section 333 grant of exemption can be obtained for all operations of a specific platform across the organization; insurance can be purchased for a fleet, rather than individual platforms; observations from across the field can be captured and used to generate lessons learned and improved policy for all operations (or unique exemptions); captured data can be managed and stored for the entire enterprise, supporting wider analysis and discovery; platforms, maintenance and other service contracts can be acquired for the fleet, rather than individual units (improved pricing and coverage).

**Collaborative Gains** – By working together, SMEs and flight departments can better understand the potential for applying UAS technology to safely meet evolving needs of the organization. The unique perspective each can provide as UAS stakeholders will help to address challenges, risks and cost-effectiveness concerns, while identifying new and novel ways UAS can be used in the future. Achievable benefits will be applied beyond a single site to the entire operation, while ensuring risks and issues are identified early and communicated out to all potential users.

## **sUAS SERVICE PROVIDER CHECKLIST**

The following checklist is designed to assist flight departments when considering relevant qualities of potential sUAS services providers. This will not be comprehensive for all individual flight departments’ needs, which can vary depending on organization objectives, institutional culture and mission parameters, but rather a starting point for analysis of a prospective services provider.

### **General**

Company Legal Name and/or DBA:

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Name of Legal Parent Company: (if applicable)

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Year Established:

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Number of Permanent/Part-time Employees:

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Physical Address:

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Mailing Address: (if different)

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Point of Contact: (work phone/email)

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**sUAS Qualifications and Certificates**

YES/NO Received one or more FAA 333 Exemptions authorizing company to operate each sUAS aircraft for commercial purposes to execute the mission(s) they intend to perform (Examples of "mission" are inspection, data collection and crisis response)

YES/NO Received one or more "FAA FORM 7711-1 UAS COA Attachment, Certificate of Waiver or Authorization," or a COA issued by another Air Traffic Organization (ATO) authorizing operation of each sUAS aircraft to execute the mission(s) they intend to perform

YES/NO Registered each sUAS aircraft in accordance with 14 CFR Part 47, received an identification number (N-Number) for each and placed the N-number on each aircraft

**sUAS Pilot in Command (PIC) Information**

YES/NO Each sUAS pilot possesses a current pilot certificate of one of the types specified in company's FAA 333 Exemption

YES/NO Each sUAS pilots possesses a current FAA airman medical certificate or a valid U.S. driver's license issued by one of the issuing authorities specified in company's FAA 333 Exemption

sUAS services offered and recent experience (e.g. COA # and/or 333 Work for Hire).

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

Sensors used for sUAS services. (EO, IR, LiDAR, Multi-Spectral, Collections, other)

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YES/NO Company has a Random Substance Abuse Program

YES/NO All PICs and Visual Observers are on the Random Substance Abuse Program

YES/NO Company has any state or local sUAS licensing (if applicable)

### **Operations**

YES/NO Company has a written flight operations manual (FOM) or standard operating procedure (SOP) covering the operation of sUAS

YES/NO Company has a written aircraft maintenance manual (AMM) or standard maintenance procedure (SMP) covering the maintenance program for sUAS

YES/NO Company has a written procedure for staying current with new or changed sUAS usage requirements and restrictions issued by the FAA, state and municipal authorities

YES/NO Company has cyber security safeguards in place for secure data collection and storage

### **Training and Safety**

YES/NO Company has trained sUAS staff and operating personnel in the specified conditions, requirements and limitations in the FAA 333 exemptions and COAs that must be complied with at all times

YES/NO All company pilots have completed training and been certified in the safe operation of the sUAS aircraft each will operate

YES/NO All PICs are within their biannual review periodicity for the manned aircraft they are licensed to operate

YES/NO Company has a fatigue management policy

YES/NO Company has a written safety plan or formal Safety Management System (SMS) covering operations of sUAS

YES/NO Company or anyone associated with company's sUAS operations has ever been cited or fined for improper use of sUAS

**Insurance**

YES/NO Company has or will provide aviation liability coverage of at least \$2 million for each occurrence

YES/NO Company's insurance carrier names company as an additional insured to the aviation liability policy on a primary and non-contributory basis

YES/NO Company has or will provide professional liability/errors and omissions insurance with limits of at least \$1 million for each claim or wrongful act

**Miscellaneous**

YES/NO Company has a written privacy policy to assure that privacy rights of the public are not violated

List any safety licensing (OSHA-10, OSHA-30) and CPR/First Aid qualifications the company possesses

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To the best of your knowledge, please check all that apply to the company:

- Certified small business\*
- HUBZone, 8(a) or disadvantaged
- Service-disabled/veteran-owned business
- Minority-owned business
- Women-owned small business
- Not a small business

\*As defined by the Small Business Administration (SBA): [www.sba.gov](http://www.sba.gov)

**Learn More**

NBAA believes that unmanned aircraft systems (UAS) offer great promise for a variety of applications in many areas of life and commerce, including opportunities for use by entrepreneurs and companies that rely on aviation as part of doing business. Learn more at [www.nbaa.org/uas](http://www.nbaa.org/uas).

**About NBAA**

Founded in 1947 and based in Washington, DC, the National Business Aviation Association (NBAA) is the leading organization for companies that rely on general aviation aircraft to help make their businesses more efficient, productive and successful. Contact NBAA at (800) FYI-NBAA or [info@nbaa.org](mailto:info@nbaa.org). Not a Member? Join today by visiting [www.nbaa.org/join](http://www.nbaa.org/join).