

sUAS “Drone” Program

SAMPLE

sUAS Program – Audit Checklist

Unique characteristics of UAS (or drones), as compared to manned aircraft require examination of special conditions, which may not be associate with manned aircraft.

Audit checklists have routinely been developed to provide a systematic approach to the audit of an organization’s operations. This checklist is designed to assist the auditor in the audit and assessment of an organization’s sUAS (or drone) operations through the audit of the air operator's (e.g., drone operations) various functional areas.

This checklist is designed to identify specific items within each functional area, with respect to the applicable Federal Aviation Administration (FAA) regulation or standard. An organization's failure to comply with the applicable regulation or standard should be considered a non-conformance. All non-conformances should be reported to the appropriate organization management via established company policies.

Assessing and Quantifying sUAS Program ROI

1. Does the organization have a payback period requirement for investment in new technologies?
 - New business solutions?
 - For programs such as Drones?
 - If so, what is this payback period?
2. Has a Business Case for Using Drones Been Developed?
3. What costs are you reducing or eliminating?
4. What new revenue opportunities are you creating?
5. What are the objectives of your drone program?

External Operation Considerations

1. How will you be interacting with everyone else in the operating environment in which you plan to fly/operate your drones?
2. Determine how the organization’s drone program will be “operationalized.”

Aircraft - Inspection

1. Is proof of liability insurance available for each of the organization's drones?
2. Is there a current Aircraft Flight Manual available for each of the organization's drones?
3. Does each drone have operational and emergency equipment (e.g., sense and avoid), which meets the requirements of the applicable regulation and/or insurance requirement?

Airworthiness

1. How has the organization's UAS been certified airworthy?
2. Through which means does the organization's UAS meet these established airworthiness standards?
3. How is this compliance substantiated?
4. Who conducted the certification review?

Manuals - General

1. Do operations manuals exist for critical processes e.g., night flights?
2. Are all drone pilots familiar with the procedures contained within these manuals?
3. Does a Flight Operations Procedures Manual (FOPM) exist for each waiver obtained by the company or will there be a "super-manual" which covers and addresses all operating waivers held by the company?

Facilities

1. Are the instructional facilities equipped with training aids appropriate to the training authorized in accordance with FAA regulation?
2. Does the organization have continuous use of operational dispatch facilities suitable for flight planning, pre-flight briefing and post-flight debriefing of pilots at the organization's main facilities or satellite office/base of operations?

Flight Safety Program

1. All the data that is being collected by and through the drone program, will it be integrated into a corporate-wide system or will you build an entirely new system to retain and analyze collected data?

2. Does the person responsible for running the flight safety program have extensive operational experience and training?
3. Does the person responsible for the flight safety program have direct access to the operations manager?

Emergency Recovery Capability

1. Is there evidence of a flight termination system (e.g. a whole aircraft recovery parachute) which aims to immediately end the flight and to reduce the kinetic energy at impact, but does not necessarily ensure the crash / impact point location?
2. Are emergency recovery procedures; functions that could be implemented through sUAS flight crew command or through an automatic preprogrammed course of action, that are intended to navigate the unmanned aircraft to a preselected emergency site and then to make a safe landing or terminate the flight:
 - Functional?
 - Implemented?
 - Up-to-date?
 - Evidence of procedures being practiced by sUAS flight crew?

Pilot/Operator Qualification

Scope:

UAS pilot in command (PIC)/operator training requires a different skill set from the set needed for flying manned aircraft due to differences such as the means of takeoff, cruising, and landing by visual remote, aided visual, or fully autonomous methods.

Objective:

Assess the degree that the PIC and UAS Crewmember (UASC) possess general aviation knowledge and UAS knowledge-based skills to operate UAS safely.

1. How has the organization determined that the UAS PIC is capable of safely conducting UAS operations, to include the precise and efficient response to emergency situations?
2. Describe how the organization's UAS training criteria has evaluated Crew Resource Management (CRM) techniques.
3. What specific CRM techniques are evaluated?
4. How is determined if further training is required to reinforce required protocols?
5. What procedures allow the UASC to communicate effectively among all UAS personnel to ensure safety of operations?

Flight and Operations Personnel Training Program

1. Does the organization have an approved training policy in place in regard to the following:
 - Ground and flight training facilities?
 - Properly qualified instructors?
 - Ground and flight training in the type(s) of sUAS operated by the organization?
 - Coordination & training in all types of emergency and abnormal situations or procedures caused by aircraft (e.g., drone) or operating systems malfunctions, fire or other abnormalities?
 - Knowledge and skills related to visual flight procedures for the intended area of operation?
 - Knowledge of all flight operations members on the functions for which they are responsible and the relation of these functions to the functions of other flight operation members, particularly to abnormal or emergency procedures?
 - Recurrent training and assessment of competence?
 - Human performance including threat & error management?
2. Review the company training program in regard to the following:
 - Recent experience for pilot in command & co-pilot?
 - Pilot experience on area, route & flight/operation regulations