Selling UAS Services to Federal Government

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The federal government is a major customer for products and services related to earth observation data collected from overhead platforms. While the Departments of Defense and Homeland Security and the Intelligence Community are the primary customers, many other government agencies, including the Departments of Interior, Agriculture and Transportation, also license and/or purchase a significant amount of earth observation products and services for surveillance, agriculture, emergency response, traffic monitoring, and a host of other applications.

Currently, most of the remote sensing data included in these services are acquired from sensors mounted on either manned aircraft or satellites. However, as the capabilities of unmanned aircraft systems (commonly known as drones) increase, and the regulatory framework for commercial drone operations becomes less onerous, the demand by civilian agencies for data collected from drones is expected to increase significantly. Businesses that wish to sell drone services to the federal government will need to consider several unique aspects of this emerging technology.

Operational Considerations

The Federal Aviation Administration (FAA) is responsible for the control of the national airspace. Since the FAA considers drones to be aircraft, commercial operations are subject to the FAA's regulatory authority. The primary focus of the FAA's Federal Aviation Regulations (the "Regulations") is safety, both in the air and on the ground.

There are two primary ways for a government contractor to operate a drone in the national airspace: under a Public Certificate of Waiver or Authorization ("Public COA") or pursuant to Part 107 of the Regulations.

Public COAs are issued for "public aircraft operations". Such operations are described in 9 USC §§ 40102(a)(41) and 40125, and with minor exceptions are limited to aircraft owned or exclusively leased by the Government. One requirement for a general contractor is to obtain "a written declaration of public aircraft status from the contracting government agency prior to conducting any PAO flights." The written declaration must be submitted to the FAA prior to the commencement of operations.

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Moreover, since operations are determined on a flight by flight basis, each flight must be evaluated separately to determine if it qualifies as a public aircraft operation.

Given the limitations on Public COAs, it is not a viable alternative for many types of drone services offered by government contractors. As a result, most businesses will need to rely upon Part 107 of the Regulations. Part 107 defines the requirements under which a drone can operate in the national airspace for commercial purposes. Key requirements include:

- Drone must weigh no more than 55 pounds, fully loaded;
- Operations must take place within the visual line of sight (VLOS) of the operator and occur during daylight hours, or within the hours of civil twilight (30 minutes before sunrise and after sunset);
- No operations over any person not directly participating in such operation;
- Approval by Air Traffic Control (ATC) is required before operating in controlled airspace (i.e. other than Class G airspace);
- Maximum groundspeed of 100 mph (87 knots);
- Drone must be registered with the FAA;
- UAS operations must remain below 400 feet above ground level (allowance for flight above 400 feet is permitted when operating within 400 feet of a structure).

Part 107 also provides a mechanism for an operator to obtain a waiver for certain limitations, including:

- BVLOS operations
- Nighttime operations
- Simultaneous operations of multiple drones
- Operations in controlled airspace
- Operating near people who are not participating in the activity
- Operating at higher than 400 feet

With some limited exceptions, applications for waivers must now be submitted through FAA's DroneZone Portal. In order to obtain any of these waivers, an operator will need to implement a number of additional safety requirements. The nature of these safety requirements will vary, depending upon the risk the FAA believes is associated with each activity. It is important to note that while there have been a number of waivers for nighttime operations, there have been very few for BVLOS operations or operations over people. The FAA has provided multiple webinars on obtaining waivers here.[1]

In addition, an operator also must comply with all other applicable FAA requirements. For example, operations around Washington, D.C. are restricted. The FAA also has temporary flight restrictions (TFRs) which are imposed around certain events, such as airshows, wildfires or the Super Bowl and restricted and special use airspace, which may pertain to military installations or critical infrastructure.

Another important consideration before beginning operations is obtaining insurance. General commercial liability insurance policies typically do not cover drone operations. As a result, most contractors will need to obtain specific drone insurance. However, many insurance companies do not yet have a good understanding of the underwriting risks associated with the commercial use of drones, and the policies can vary significantly in both coverage and price.

Government Contracting Considerations

There are also several key considerations from a government contracting standpoint. An area of particular importance is understanding the scope of your intellectual property rights when selling drone services to the federal government. Before entering into a contract, a contractor should identify all of potential intellectual property assets, such as image processing techniques or machine learning algorithms. This is particularly important when data products or services are being licensed to a federal customer.

Cybersecurity and data protection are two other important considerations. Homeland Security officials and law enforcement have voiced concerns over potential security threats associated with drone operations. These threats include bad actors, such as terrorists, hijacking commercial drones to conduct rogue operations and intercepting data as they are being downloaded from the air to the ground. As a result, even government contracts with civilian agencies will increasingly include cybersecurity provisions. Moreover, it is important to note that sensors on drones collect a wide range of metadata. Some of this metadata can be considered sensitive, such as the precise latitude/longitude of critical infrastructure. The Department of Defense has restricted the use of certain types of drones over military facilities due to concerns that the data collected were being transferred to manufacturers located in China.

Another unique aspect of drones involves privacy concerns. In 2015, the Obama Administration published "The Presidential Memorandum: Promoting Economic Competitiveness While Safeguarding Privacy, Civil Rights, and Civil Liberties in Domestic Use of Unmanned Aircraft Systems" in order to address potential privacy-related concerns associated with drones. The memorandum contains several provisions that affect federal contractors.

One bright spot from a government contracting standpoint is that recognizing the increased demand for earth observation data and related services, GSA adopted a separate Special Item Number (SIN) under IT Schedule 70, Earth Observation SIN 132-4,1.

Other Key Considerations

Although the FAA has control over national airspace, many states and localities have passed laws that restrict drone operations. These laws vary considerably and address a wide range of concerns, including privacy, trespass, nuisance and safety. While there is still some question as to how many of these laws would withstand a federal preemption challenge, given the FAA's broad authority, at this time it is still necessary to understand– and comply with – the local laws in the jurisdictions where operations will be held.

Conclusion

Drones are expected to provide a number of new opportunities to sell services to the federal government. Many of these services will include collecting, processing and licensing various types of data for civilian government agencies. While the opportunities will be significant, federal contractors will need to comply with the complex legal framework associated with drones and data collection. ■

[1] https://www.faa.gov/uas/resources/webinar/