

Are Unmanned Aerial Vehicles Good for Business

A Briefing for CEO's

Technology has improved our lives in countless ways. Personal computers, the Internet, cell phones, GPS navigation systems, wireless communications and networking are a few of many examples. Enter the small Unmanned Aerial Vehicle (sUAV), or what is commonly referred to as drones,

The key question facing most companies is whether or not these aircraft can help them achieve their respective missions, improve operational efficiency while reducing related business expenses and risk. This brief will help shed light on what needs to be considered for the profitable use of these aircraft systems.

What is a small unmanned aerial vehicle (sUAV)?

It is a remote, radio-controlled (RC) aircraft weighing less than 55 pounds. Hobbyists have been flying RC models for decades. They can be fixed wing, like the airplanes you see flying through the skies or rotary wing, a helicopter with single to multiple blades. Those spinning four (4) blades are known as quadcopters.



A transmitter, in the hands of an operator, is used to provide the signals necessary to dictate commands to the aircraft (which has a receiver on board) to adjust the altitude and flight path the operator wants it to follow. They can carry cameras, or a variety of sensors to meet the needs of the user.

Industry uses include: agriculture, energy, utilities, entertainment, engineering, journalism, construction, mining, sports and real estate.

Business uses include search and rescue, delivery, newsgathering, photography, video, surveillance, mapping, inspection, public safety, law enforcement, pest control, commutations and crowd control.

Commercial versus hobbyist usage

The commercial use of sUAV's is what separates them from their hobbyist cousins. FAA guidelines must be followed to avoid enforcement actions with related fines. As a hobbyist, as long as you operate the model aircraft in line of sight (in other words you can see it at all times), remain below 400 feet of altitude, 5 miles or more from an airport, away from populated areas and is not used for commercial purposes, peace reigns among the land. But its the FAA's definition of commercial usage that can catch the uninformed off-guard, regardless if money has changed hands or not.



To comply with FAA mandates for commercial operations you must have either 1) applied for and been granted a 333 exemption or 2) you must have passed a written exam, at an FAA designated testing center, to obtain your remote pilot certificate (formerly known as notice of proposed rule making (NPRM) 107).

As an aside, it is also interesting to note that Mexico, Brazil, Australia and New Zealand are ahead of the U.S. in UAV commercial use approval, while Canada, the United Kingdom, Europe and Asia are on par or lag behind the United States.

Commercial operation compliancy options

For commercial use of UAV technology 1) A business can secure its own FAA licensing, register its drones, train and certify staff in flight operations, 2) they can contract with an outsider provider for the aforementioned or 3) a combination of the previous two options.

If a company is interested in securing their own remote pilot certification, this link will help you get headed in the right direction. <http://www.faa.gov/uas/>

Training and operator (pilot) certification

Another consideration is the training and operator (pilot) certification of internal staff. As with anything aviation related, currency and breadth of flight operations experience is crucial in the efficient and effective use of drones. Thus, a company might consider retaining routine or repetitive flight programs and outsource those that are special or rarely needed. Many firms have decided to forego establishing their own flight department to eliminate liability risks.

Drone selection and insurance

The sUAV platform must also fit the mission requirements especially in terms results desired. Poor choices here can be costly. Payload, flight time, range of control, reparability, maintenance and parts availability must all be considered. Insurance policies should be reviewed to make sure you're covered in case something goes wrong.

Business analysis and ROI

Finally, some pre-flight (no pun intended) number crunching is needed to compare sUAV platform options, capital investment needs, operational, repair and maintenance costs against those currently expended for comparable or planned job or project requirements. Once completed, you can now determine whether or not it is profitable to pursue sUAV usage, if and where it makes financial sense to do so.

About Flight Ventures Ltd (FVL)

Flight Ventures Ltd provides companies with the most up-to-date information, analysis, risk assessment and consultation available for the profitable and cost effective commercial use of sUAV systems. FVL does not limit its scope to only sUAVs but considers and compares all available options, be it existing solutions, manned aircraft, ground support systems or other alternatives, to develop the best financially sound program for short, mid-term and long range business requirements.

If you have further questions or need additional information please contact:

Robert Zarracina at 651-351-2929, email robertz@flightventuresltd.com

