readwrite

BUILD

How To Get Drones Off Of The Ground: Be An Active Player

BILL O'CONNOR · 20 HOURS AGO

Business leaders are turning to drones to solve complex operational challenges.

Guest author Bill O'Connor serves as co-chair of Morrison & Foerster LLP's UAS/Drones Group.

On CBS news program "60 Minutes," Amazon CEO Jeff Bezos very publicly declared his intentions to use unmanned aerial systems (UASs) to make deliveries. Leaders at GoPro are eager to use drones to help customers capture previously impossible angles. And businesses like Airware are breaking new ground with software to make drones useful for sectors ranging from mining to humanitarian work.

These aren't the only businesspeople taking notice of drones. At the end of 2014, the Federal Aviation Administration granted just 12 business entities permission for commercial drone use. Fast-forward to today, and the FAA has issued UAS approvals for more than 1,700 commercial organizations.

See also: New Mandatory Drone Registration: The Worst-Case Scenarios

---

Currently, however, using UAS commercially comes with some hefty baggage: predominately, immature and rudimentary regulations that are still being formulated. Indeed, the bottom line for business leaders is that the FAA has yet to issue final regulations for commercial drone use.

Gaining Authorization For Commercial Use In The U.S.

Until the FAA introduces formal regulations—likely in 2016 or early 2017—only two ways exist for obtaining legal authorization in the U.S. for commercial UAS operation.

First, business leaders may apply for permission to use drones commercially through an exemption process set forth in Section 333 of the FAA Modernization and Reform Act of 2012. This exemption process is the main avenue through which the FAA grants companies approval to fly UASs for commercial purposes.

These Section 333 exemptions come with strict parameters, including height, speed, and flight-time restrictions. Although initial exemptions took six months or more to process, a streamlined process means approvals now take about 90 days. Notably, these exemptions are currently only available for small UAS (under 55 pounds) with extremely low risk profiles.

Businesses may gain approval to fly UASs commercially by obtaining an FAA Special Airworthiness Certificate. This more onerous process is akin to the approval process for manned aircrafts. Businesses that take this route might someday reap rewards by obtaining a less restrictive approval than those that do so through the Section 333 exemption process.

Upcoming Regulationson Commercial Drones

While the FAA closed the formal comment period in late April that encouraged stakeholders to comment on proposed commercial regulations, businesspeople are keeping their eyes peeled for finalized FAA rules. Because the proposed regulations are incremental in nature, business leaders are pressing the FAA to undertake more comprehensive rulemaking.

Nonetheless, the proposed regulations in the notice of proposed rule-making strongly indicate what the interim regulatory framework might look like. Some of the proposals include:

- The UAS must always be within a licensed operator's line of sight.

- The UAS operator must possess an FAA Airmen Certification.

- The operator must refrain from careless or reckless operation of the UAS.

- UAS may only be operated during daylight hours (official sunrise to official sunset, local time).

- Airspeed cannot exceed 100 mph.

- The UAS must be operated below an altitude of 500 feet.

- UAS operators are restricted to operating a single drone at a time.

- Operators must submit their drone for FAA inspection upon request.

It's clear these rules will — at least for the short term — significantly restrict commercial UAS use. For instance, they would forbid Amazon's proposed delivery drones fleet which, when traveling longer distances, would not be able to remain within operators' lines of sight at all times.

Right or wrong, some business leaders have accused the FAA of stymying innovation. But the FAA's primary mandate is to keep the skies safe. As such, the FAA is working with industry partners and NASA to safely integrate UAS by creating an Unmanned Traffic Management (UTM) system. And requiring UAS pilots to be trained and certified ensures they understand where commercial air traffic may operate, the effects of weather conditions, and how to prevent accidents.

What Your Company Should Be Doing

If companies like Amazon succeed in pushing for more flexible regulations, drones might be the next big innovation for your industry. Be proactive about voicing your thoughts about how drones should be regulated. Get involved in organizations like the Association for Unmanned Vehicle Systems International (AUVSI). Look for opportunities to partner with government agencies like NASA and the FAA.

Plenty of regional and international regulatory bodies are also working to formulate commercial UAS rules. The International Civil Aviation Organization, in conjunction with various working groups, is working to develop Standards and Recommended Practices (SARPs) for UAS that likely will form the basis for comprehensive, global regulation. The European Aviation Safety Agency recently issued a proposal that takes a risk-based approach to drone regulation. The results of these international efforts will undoubtedly affect U.S. regulation of UAS.

To participate in the discussion, identify specific regulations you'd like to see tightened or eased. How would you use the technology, and how might certification procedures impact your operations? How would you limit risks and address any losses that might occur as a result of UAS operations? How would you demonstrate a level of safety equal or greater than that of manned aircrafts?

The most pressing barriers to widespread UAS use—and the ones business leaders can contribute most toward solving—involve the infrastructure needed for drones, as well as the development of safe and reliable detect-and-avoid technology. Chiefly, we need a low-altitude highway where UAS could operate beyond line of sight—autonomously and safely. To navigate such a highway, drones would need the ability to "see" other drones, other manned aircrafts, and any obstacles along the ground. Until this kind of infrastructure is developed, beyond-line-of-sight commercial drone operations will likely remain restricted.

Don't be passive about how the rules for business drones are developed. Be involved if you want to be heard—it's a discussion that's happening quickly, and it will likely have a huge effect on a wide variety of business in the years to come.

Lead photo by Don Mills