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Opinion: Drones Enable Small Businesses And Help Drive U.S. Economy

Tulinda Larsen | Aviation Week & Space Technology

Sep 25, 2018

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Drones are creating opportunities for entrepreneurs to start new small businesses and make established small businesses services more productive. In essence, these flying robotic tools are proving beneficial to the overall U.S. economy.

The industry of small business drone users has grown to include new services, everything from mining and construction to media and law enforcement and even wedding photography. And yet the

industry's leaders face contradictory regulations and confront obstacles to participating in the policymaking process. The FAA should do more to bring them into the discussion.

The agency has moved to provide rules for the industry. In December 2015, the FAA started requiring the owners of recreational drones weighing 250 grams (about 0.5 lb.) to 55 lb. to register through an online system. Today 1.1 million recreational drone owners are registered in the U.S., with 100,000 drones operated for commercial purposes. Of roughly 90,000 commercial drone pilots, most do not have an aviation background.



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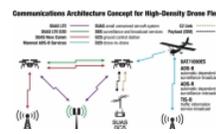
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The FAA's Part 107 regulation, which went into effect on Aug. 29, 2016, governs the commercial use of those small drones. This typically includes flying a drone for hire with compensation or for economic benefit to an entity or person. Intended use, not compensation, is the determining factor.

Under Part 107, an operator requires a remote pilot certificate with a small unmanned aircraft system rating, earned by passing the FAA's Remote Pilot Knowledge Test. A commercial operator must be at least 16 years old and pass a TSA screening. An operator must fly the aircraft no higher than 400 ft. above the ground, no closer than 400 ft. from a structure, within visual line of sight and during daylight hours. The regulation does not allow beyond-visual-line-of-sight operations, flights over people who are not involved in the operation and flights at night, except by waiver.

The penalty for flying a commercial drone without a Part 107 certificate is \$1,100 per violation for the operator and \$11,000 for the organization. A single flight could have multiple violations, resulting in large penalties.

But if a drone is being flown for fun, no such license is required.

That dichotomy is a major sore spot for small drone businesses, but it doesn't stop at the license. For example, a hobbyist simply needs to notify an airport if the planned flight is within 5 mi. of the airport. Commercial drone operators must obtain FAA air traffic control authorization to operate near controlled airports. Recognizing the loophole, small airport operations staff sometimes tell commercial operators to file as a recreational flight to avoid the hassle.

Regulations for night operations are also onerous. Academy of Model Aeronautics safety guidelines for recreational flights state: "Night flying requires a lighting system that provides the pilot with a clear view of the model's attitude and orientation at all times. Handheld illumination systems by themselves are inadequate for night flying operations and must be supplemented with other lighting systems." Commercial drone operators require a night waiver from the FAA, which involves an application process detailing the operator's safety plan and other aspects of the flight that can take as long as 90 days to process. This time delay is difficult for small drone businesses to explain to customers.

Small drone businesses face hurdles with the regulatory process. For example, a fourth-generation farmer in Idaho started using drones in 2007 for crop monitoring on his family farm. In 2008, he sought to participate on an FAA aviation rulemaking committee for drones. He submitted his request two months before the announced first meeting but never received a response. When he followed up with the FAA, he was told all the seats were filled.

Marine biologist Alicia Amerson is working to develop drone best practices that respect wildlife and conform with FAA regulations through her San Diego-based drone company Alimosphere. Looking at differences between drone policy off the coasts of Australia and California, Amerson realized current FAA regulations and other rules aimed at protecting wildlife from drone disturbances are unclear. Commercial and recreational drone operators fly largely unregulated, while scientists face a long process to receive a research permit.

At the Interdrone 2018 conference in Las Vegas in September, FAA Acting Administrator Dan Elwell stated: "We're building flexible, responsive regulatory processes that can keep up with all your creativity while ensuring safety isn't compromised." At least the FAA is saying the right things, but the agency needs to more closely consider the issues small drone businesses face and do more to bring them into the discussion.

Several key initiatives could be undertaken to foster small drone businesses:

- Welcome drone small businesses to the aviation industry through outreach and communication programs.

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- Include nonaviation drone small businesses in the regulatory process through programs to ensure that small business concerns are understood and addressed.
- Demystify, simplify and put into plain language the regulatory process to help small businesses operate safely within the regulations, without undue costs of compliance.
- Develop educational support programs for nonaviation drone companies so they can better understand the regulatory environment.
- Develop educational programs for local, state and federal lawmakers to enact legislation to support small drone businesses and not encumber them with additional regulations.
- Develop educational programs to introduce the benefits of drones to the business community, creating more jobs at small drone businesses.

Small drone businesses have the potential to significantly impact the U.S. economy, but success depends on proactive programs to support these growing new businesses.

Tulinda Larsen is a licensed pilot and drone pilot. She is the founder of Skylark Drone Research, which explores commercial applications of drone technology.

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