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# Up in the Air: The emerging issue of drones in the construction industry

## What is a Drone?

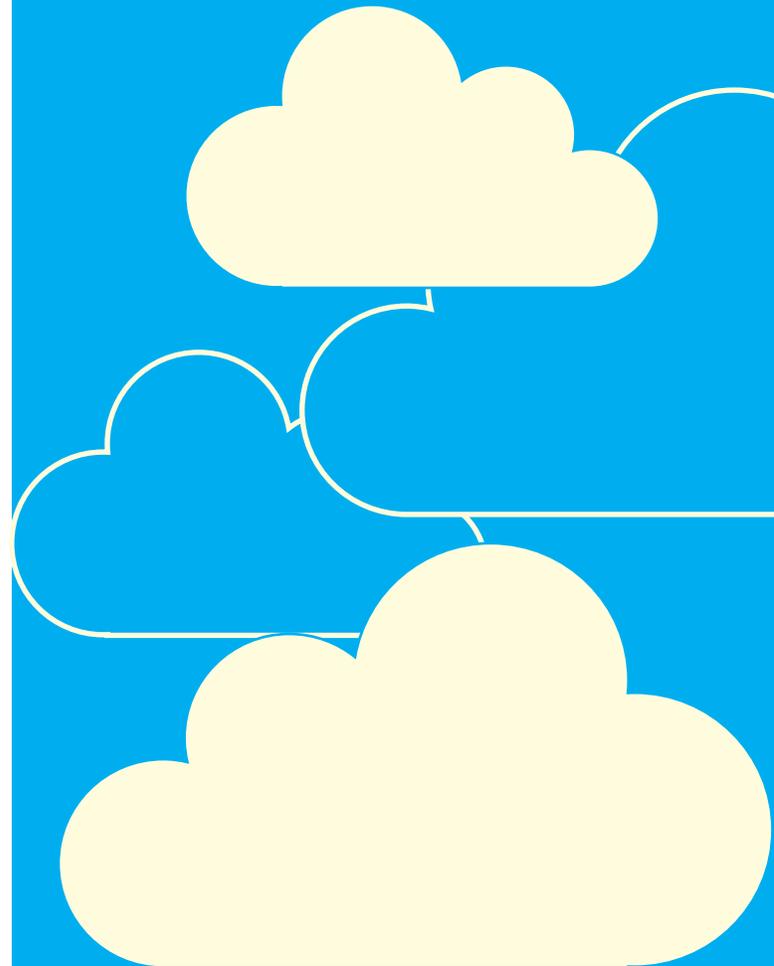
Unmanned aerial vehicles (UAVs, also known as “drones”) are changing the way construction companies do business. Contractors are increasingly using camera-mounted UAVs to monitor their construction activities. These devices provide a way to obtain real-time data on job progress, may identify potential hazards or quality issues, and help acquire other useful information in a very expeditious and cost-effective manner. The larger the construction site the more helpful they are in monitoring the project. Types of UAVs typically available for commercial application include packages with four, six, or eight rotary blades. More blades mean more lift, and that provides more power for attached payloads. Many of today's drone systems are iPhone controlled, connected by Wi-Fi, and positioned using Global Positioning (GPS). Due to the rotary blade design, unmanned aerial UAVs can remain in one place for extended periods without the extravagant costs associated with helicopters and small planes.



Source: [bnbuilders.com](http://bnbuilders.com)

## Commercial Applications

The United States is the world leader in the production of UAVs. However, we lag far behind the rest of the world in terms of commercial UAV applications, which include movie making (Wolf of Wall Street, Skyfall, and the Harry Potter movies), real estate (showing homes), roof inspections, mining (post-blast surveys), environmental, and emergency response and recovery, missing person searches, etc. In the United States, several news



organizations, including the *Sacramento Bee* have recently acquired UAVs for news gathering. Contractors and engineers are exploring the technology around the country. Engineering firm Wilson & Co. has worked with Kansas State University to build and fly a UAV for surveying and mapping a landfill near Manhattan, Kansas. Eric Cenovich, a Kansas City, Mo.-based principal of the firm, says the UAV follows a programmed path at 35 to 40 mph. It can document the 160-acre site in about 40 minutes on one battery charge. "It dramatically affects the price that smaller areas can be mapped for," Cenovich says. "It's easily a 50% reduction." Moreover, he says, the use of UAVs will eliminate the need for significant investment to enter the surveying-and-mapping business and likely will result in increased competition. Wilson & Co. has invested millions of dollars in aircraft, cameras and LiDAR mapping tools, Cenovich says. "All of those capital assets and investments that needed to be made to get into this aerial photography and mapping game are no longer going to be applicable for smaller-type projects," he says. "It's going to allow a lot more people to get into this."

For many years, UAVs have been used safely for commercial purposes in Australia, Japan, and the United Kingdom; primarily for agricultural purposes. Regulations in Australia require commercial UAV operators to demonstrate their ability to fly the vehicle, and each must meet minimum standards set by the United Nations Aviation Body. The "commercial UAV" has not had a major accident in over 10 years of operation in Australia. In the United States, where there are no federal legislative rules, there is a distinction between recreational use and commercial use of the vehicles. The Federal Aviation Administration (FAA) currently "permits" recreational use of UAV's. They stipulate that UAVs must weigh less than 55 pounds, cannot fly higher than 400 feet above the ground, or interfere with manned airplane traffic. If the craft is operated within five miles of an airport, the operator must contact airport personnel.

## Laws Up in the Air

Laws regarding the use of UAVs in the United States are unclear. While the commercial use of UAVs is not technically illegal, the FAA has held that it has regulatory authority over their use and has been sending cease and desist letters to companies as well as individuals it suspects of violating its UAV policy. Those who have been cited include aerial photographers, journalists and even tornado researchers (see examples below). Further complicating the matter, there is currently no criteria or legal definition differentiating UAVs used for recreation and those used for commercial purposes. It is nearly impossible to differentiate between the \$17 million "Reaper" surveillance attack drone used by the military, from a \$1,500 commercially available, camera-equipped, hand launched drone available at retail stores and online. To date, the FAA has officially permitted the commercial use of UAVs in just two cases. Both permits were granted to Conoco Phillips for documenting whale migration and pack ice movements using a very sophisticated Insitu ScanEagle UAV (Boeing) in remote areas of the Arctic in Alaska.

According to the FAA, which controls U.S. National airspace, there are over 7,000 aircraft over U.S. skies at any given time. They assert adding thousands of commercial unmanned aircraft (UAVs) into already-crowded skies is part of the reason they have been slow to recognize commercial use of the devices, or create regulations pertaining to their use. The FAA is rightly concerned with sharing of limited airspace and with related homeland security issues, e.g., use by extremist groups and illegal surveillance. There are also concerns about the potential for hacking UAV controls or loss of drone power, which could result in personal injury, death or physical damage to vehicles or structures.

Congress recently passed a law (February 14, 2012) to compel the FAA to issue rules making commercial UAV use legal by 2015. The 2012 law, called the FAA Modernization and Reform Act, contains a seven-page provision known as the "Drone Act" requiring the FAA to fully integrate unmanned aircraft into the National Airspace System by September 2015. Additionally, the "Drone Act" allows law enforcement agencies, including local police forces, to buy and use unmanned aircraft for evidence gathering and surveillance. In response, the FAA released a memorandum in February 2013 regarding the selection of test sites for an "Unmanned Aircraft System (UAS) Test Site Program". According to the FAA, the "UAS program will help the FAA gain a better understanding of operational issues such as training requirements, operational specifications, and technology considerations, which are primary areas of concern to our chief mission, which is ensuring the safety and efficiency of the entire aviation system." Six states will be test sites for integrating UAVs into domestic airspace: Alaska, Nevada, New York, North Dakota, Texas, and Virginia.

Several recent court cases against the FAA dispute their jurisdiction over commercial UAV use in the absence of regulations. In March 2014, a federal administrative judge held that the FAA has no legal authority to regulate UAVs used for commercial purposes. Judge Patrick Geraghty of the National Transportation Safety Board ruled that the FAA had issued internal guidance on UAVs, but had not followed the required rulemaking to restrict the use of them by the public. He ruled the FAA lacked authority, concluding that UAVs are model aircraft, which FAA excludes from regulation. The case involved a vendor providing aerial video footage of the University of Virginia for promotional purposes. The vendor was hit with a \$10,000 fine for "reckless operation" of the UAV while filming (the fine was overturned by the judge). Interestingly, the director of "Wolf of Wall Street" did not receive any fines for his use of UAVs. Sales of UAVs have surged 25% ever since the ruling. The FAA is appealing to the full NTSB board. Pending the outcome, the agency maintains that use of a UAV for anything other than hobby or recreational purposes is "unauthorized" and subject to regulatory action. In another case, Texas based Equu-Search has been conducting searches for missing persons since 2000 and using UAVs since 2006. The organization was recently ordered by the FAA (via email) to stop using a hand-launched UAV. The company responded to the FAA with a letter

asserting the agency has no legal authority to prohibit UAV use, and threatened to take legal action if the agency didn't rescind its order. The FAA asserted that Equu-Search should find one of the police departments, public universities, or other public entities that already hold FAA "certificates for non-emergency use" of UAVs for their searches.

Commercial UAV use on construction sites raises the question of whether contractors have coverage for liability arising out of their use. The standard commercial general liability (CGL) policy and many if not all non-standard CGL policies excludes liability arising out of the insured's "ownership, maintenance or use" of an auto, aircraft, or watercraft. Contractors thinking of using UAVs should consult with their broker and/or carrier to see if a UAV would constitute an aircraft (and thus trigger the exclusion). The FAA only defines aircraft used for manned general aviation and recreational aircraft. These aircraft include: light sport Aircraft, small airplanes (e.g. Cessna 124), ultralights, amateur built, and vintage/surplus aircraft. If the FAA is the agency responsible for defining what is an aircraft in United States National airspace, owners and insurance companies may have to wait for the new FAA regulations mandated by Congress for a definition of whether a UAV is an aircraft. The FAA's use of the term "Unmanned Aircraft System" may also provide an indication on how the FAA will define a UAV in the future, which may indeed affect the definition in terms of the CGL Policy. Until rules for commercial use of UAVs are developed by the FAA, the legality of using them commercially in the U.S. will likely remain murky. In the absence of a federal definition or regulatory framework, contractors should determine what the laws are in the states where they operate, as many states are considering bills, and several have already passed legislation governing the commercial use of UAVs.

Construction companies using or considering the use of UAVs on their projects should examine their CGL policy to determine whether a UAV would be considered an excluded aircraft. IRMI recently noted that a "strong argument" can be made that a UAV with a camera attached qualifies as an aircraft. If this is true, contractors may attempt to negotiate a specific exception to the exclusion for UAVs with their underwriter. If an exception cannot be obtained, risk management strategies may include purchasing a specific aviation policy to cover the UAV exposure, or to use an insured bonded subcontractor for this task, since the CGL exclusion does not reach an insured's liability for a subcontractor's use of an aircraft that is not owned, rented, or maintained by the insured. Certainly, the subcontractor would also have to meet state and federal guidelines, and operate within those restrictions.

This is a developing issue, and questions remain whether the FAA currently has jurisdiction over the commercial use of UAVs, or if UAVs are considered "aircraft" for purposes of the CGL Policy. How is your company handling this exposure? What kind of protocol(s) have you implemented to ensure the legal and safe use of UAVs? Have you discussed this issue with your insurance broker and carrier?

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