

The Drones are Coming to the Jobsite

Once upon a time, the idea of unmanned flying objects in the sky may have elicited thoughts of an eventual robot takeover. However, the capabilities of drones to capture breathtaking video footage has made the reality much more intriguing. Drones or unmanned aerial vehicles (UAVs) are becoming an increasingly common sight in the sky—now being used for everything from [pizza delivery](#) to military exercises to [shipping solutions](#). While [many sectors](#) have embraced drones, they are just starting to appear in the construction industry.

A Case for Flying Cameras

Since the adage “time is money” is the prevailing truth of any jobsite, these machines provide a fast, cost-effective way of mapping sites and facilities—allowing site managers to glean insight into geographical and topographical data in a matter of hours. In fact, it’s been shown that they can cut down survey time on a 12-acre property [from 100 hours to about two](#).

The use of 3D mapping is perhaps one of the foremost emerging applications of UAV technology for construction firms. More data up front allows your business to differentiate itself from the competition early on, allowing contractors to estimate project costs more efficiently and competitively.

Besides aerial footage of a site, using drones can have a dramatic impact on your project management process, capturing images rapidly or streaming real-time video to remote project managers. This footage can be used in various ways, including:

- Sharing content with stakeholders, regardless of location, allowing for more informed decision-making throughout the building process
- Tracking a project, such as an in-ground pipeline construction project that could stretch for hundreds of miles
- Using footage to track materials, equipment and people on an active jobsite

Don’t underestimate the value of the last point. Being able to track your materials throughout a project and during a site closure can save you significant time and money. “For [sites that use gases] in particular—imagine being able to fly a drone over your site to map and locate all your industrial gas cylinders, vessels or tanks,” says Jason Vetterick, Vice President of Construction Markets at Airgas.

Safety Guidelines for New Technology

Increased efficiencies, productivity and a healthier bottom line are just a few of the perks offered by UAVs. Additionally, they can significantly impact jobsite safety: These flying scanners enable companies to identify unsafe locations and structural flaws on worksites, making managers aware of vulnerabilities before any incidents can occur.

Of course, there are always some concerns when dealing with new technology. Vetterick notes, “Some of the challenges posed with such technology or processes today relate primarily to compliance. Following [Federal Aviation Administration] rules, certified drone operators, general

drone safety, proper insurance liability policies and site awareness would be key measures to consider.”

Luckily, the FAA has issued some formal guidance. Drones must:

- Not exceed 55 pounds
- Only be flown during daylight hours
- Be flown no faster than 100 mph
- Not be flown higher than 400 feet above ground, except in special circumstances

Some jobsites may have natural obstructions or buildings in the way that exceed the traditional height guidance. In these instances, your aerial craft may go higher so long as it stays within 400 feet of the structure. Your drone pilot or provider can make appropriate recommendations for your particular use case.

Drones on Your Jobsite

Until recently, aerial imagery on the construction jobsite has been seen as a lofty and ambitious undertaking. However, the long-term savings could be beneficial to your operation if you're experiencing challenges with hard-to-reach inspections, productivity concerns, insufficient progress reports or material inefficiencies.

Vetterick offers some easy steps to getting started: “[As a first step] my recommendation would be to do some research and make contact with those who specialize in this area. Adoption is the easy part as there's no disruption to the jobsite with respect to process or productivity.”

It may take some time to find the right operator for your project. He finishes, “The key aspect with implementation would be the initial investment and willingness to spend a little time on trials.”

As more site managers get on board with using drone technology, seeing these aerial objects buzzing around the worksite might just become as common as hard hats themselves.