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17th Annual Safety Day 87th Annual Meeting

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Drones Will Change the Game in Construction



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Drones, or “Unmanned Aerial Vehicles” as the experts call them, have already found a home in the construction industry. As technology improves, these nifty and creative gadgets will be sure to catch on like wildfire across the industry. Construction for the new basketball arena for the Sacramento Kings is using software and drones to monitor lags in progress with the construction.

Data is gathered on a daily basis and compared to the architectural design and blueprints to ensure the project is moving along as scheduled.

BP uses drones to inspect the Alaska pipeline using infrared cameras to test for hot spots and other infrastructure faults. More locally, in Dayton, Ohio, Woolpert, Inc., a design management firm, is using drones to perform aerial surveying.



Potential uses for drones are truly unlimited:

1. They can be equipped with HD cameras to take photographs and videos for aerial imaging of sites, buildings, and projects. Data can then be used for 3D modeling and site surveying. Laser scanning technology can also be used for modeling.
2. Companies can use drones to monitor progress on construction projects and ensure worker safety.
3. Drones can be used to prevent trespass and other criminal activity on large-scale projects. They offer a low cost form of surveillance.
4. Material and equipment transportation and delivery is an option when cranes are not a viable option. Indeed, unlike cranes, drones have the ability to reach any point in space.
5. Infrared cameras can be used to test materials for defects and flaws, such as water system or chemical leakage.
6. Thermal-imaging cameras can detect heat loss, HVAC, and air conditioning problems.
7. Drones can monitor project lighting during all hours of the night, including tough to reach stops at the tops of buildings.
8. Aerial footage offers fantastic marketing material for construction businesses. Companies can even

use drone footage to offer clients and customers a "live look" into the status of a project.

9. OSHA could use drones to inspect construction sites. Could you imagine being served an OSHA citation with evidence gathered by drone?

According to Pete Campbell, the safety director of BNBuilders, Inc.: *“We started using drones mostly for generating marketing materials and aerial views of our projects, but in that process we found out that we could use drones for all kinds of things. We could take a close-up aerial photo of a concrete pour, to document the locations of post-tension cables, conduits and rebar built into the concrete. It's relatively difficult to document that without drones, so we were able to take photos with drones, and within minutes photoshop them over as-built plans to determine exactly what is located in the concrete.”*

Businesses already exist to fill the needs of the construction world. Companies, including

Kespry and Precision Drone, manufacture drones for the agriculture, mining, and construction industries. Navigation equipment manufacturers, including Topcon and Trimble, provide drones for the construction industry, as well.

However, under the current FAA regulations, commercial operation of a drone is not legal. To use a drone for your construction business you must first obtain an exemption under Section 333 of the FAA's Modernization and Reform Act of 2012. Over 3,300 exemptions have been granted for commercial use, and over 450 of those exemptions include use of drones on construction sites.

Have you considered using drones on your next construction project? Don't sit around. Get on the drone bandwagon while you still can!

Andrew L. Smith is a sixth-year associate attorney in the Cincinnati, Ohio office of Smith, Rolfes & Skavdahl Company, LPA who concentrates his practice in the areas of construction law and general litigation. Andrew has extensive experience in state and federal court handling complex civil litigation matters and counseling business of all shapes and sizes. He is also the co-host of BearcatsSportsRadio.com and an avid UC Bearcats follower.