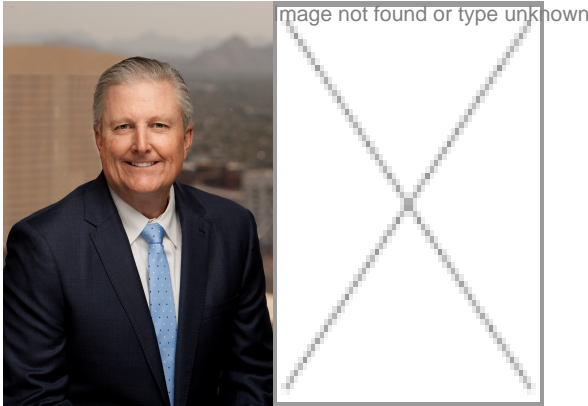


DONALD MYLES AND MICHAEL BROWN PUBLISH ARTICLE, “HOW DRONES CAN BENEFIT THE INSURANCE INDUSTRY,” IN FALL 2020 ISSUE OF USLAW MAGAZINE

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JSH partner [Donald Myles](#) and summer associate [Michael Brown](#) published their article, “[How Drones Can Benefit the Insurance Industry](#),” in the latest issue of [USLAW Network’s Magazine](#).

Not long ago, the idea of unmanned vehicles roaming the skies at our behest seemed something out of science fiction. Very soon, it will just be business as usual. There are already nearly half a million drones registered for commercial use in the United States.¹ They are being used across a wide range of industries as an innovative and cost-effective solution to various challenges.

The insurance industry is particularly well-suited to benefit from the use of drones. Insurers that implement drone programs stand to enhance worker safety, improve work efficiency, and save substantial cost. Following is a brief overview of drone design and some practical ways insurers can use drones, including a case study that shows the advantages of drones.

All drones share certain features that make them useful to insurers. To begin with, they are small, easily maneuverable, and far less expensive than manned aircraft.² They can cover large areas quickly and, because they have no onboard pilot, can access places that are unsafe for human travel. An insurer can accomplish most drone-related tasks with just two models: the multi-rotor drone and the fixed-wing drone.

Multi-rotor drones are best suited when one needs a small camera in the air for a short period of time.³ Their multiple rotors allow for precise controls, making them perfect for aerial photography. However, their flight duration and speed are limited. Current battery technology limits flight time to around 25 minutes when carrying lighter camera equipment. A heavier payload will shorten the flight time. As such, multi-rotor drones might not be suitable for projects requiring long distance travel.

Fixed-wing drones rely on wings instead of rotors to provide vertical lift—a more energy efficient design than the multi-rotor variety. They can also run on fuel engines, as opposed to electric, with some models capable of staying aloft for over 16 hours. This longer flight time lends itself to large-scale aerial mapping, a task ill-suited for multi-rotor drones. While fixed-wing drones are more efficient, they are not as flexible as their multi-rotor counterparts. Their design prevents them from hovering in one location, making them a poor candidate for general aerial photography.

The areas of claims adjustment, risk assessment, disaster management, and fraud monitoring can all benefit greatly from incorporating drones into an insurance company’s operations. When put to the task, these drones offer insurers increased efficiency and productivity from their workforce, a corresponding improvement in customer satisfaction, and long-term financial gains.

Drones also enhance safety in two major ways: they reduce the number of workers needed in the field, and they provide safer working conditions for the field workers who are needed.

Claims adjusters often encounter hazardous situations. They climb ladders to access roofs and chimneys. Complex fire investigations may require scissor lifts or box trucks to evaluate the scene and determine the fire’s origin.⁴ Where damage is extensive, adjusters might need expert advice on a building’s structural integrity and whether toxic materials are present.⁵ Harsh weather conditions exacerbate these dangers and present risks of their own.⁶

Using drones eliminates these and other hazards. No longer would a claims adjuster need to scale a ladder with a camera in one hand and a notepad in the other. Instead, the drone performs the dangerous work, while also providing features that make adjusting claims more efficient and

productive. For example, a drone equipped with an infrared camera can more easily detect potential air or water leaks, saving an adjuster significant time. With drones, claims adjusters can quickly obtain high resolution images of roofs, interiors of large warehouses, and other difficult to reach areas. Moreover, drone technology allows for the sharing of drone-captured data in real time. This gives adjusters in the field easy access to remote specialists, enabling more accurate decision-making and faster claims processing—all while the claims adjuster is a safe distance away from any hazards.

Natural disasters are unfortunately increasing worldwide, both in frequency and severity. In these scenarios, claims adjusters encounter blocked roadways, downed power lines, unstable buildings, and flooding, to name a few. Further, civil authorities might limit access to certain areas in a catastrophe's wake to facilitate rescue or other public safety efforts. For example, when a tornado struck Joplin, Missouri, in 2011, access issues and the sheer scope of the damage prevented insurers from identifying the perimeter of the loss for three full days—usually a half-day job.⁷ Resolving total loss claims took two weeks, even with adjusters working 18-hour days.

Using drones to assess damages gives adjusters access to disaster sites without compromising their safety, enabling faster claims processing. Even if a site is accessible, using drones still provides advantages. Drones can travel faster than people, and the images they capture provide adjusters with a richer data set to use during the claims process.⁸

Drones can also be useful to monitor fraud arising out of disasters and other situations. For example, before a hurricane makes landfall, a fixed-wing drone can survey a large area and document pre-existing damages to structures.⁹ Once the storm passes, an insurer can then use the images to discern pre-existing damages and disprove false claims.

Risk assessment is another area that can benefit from drones. To assess property and liability risk, risk engineers must often travel to various locations to conduct surveys and gather data. With a drone operator in the field, the need for risk specialists to travel is eliminated, saving time and cost. Instead of being in-person, the risk engineer can view the property in real-time, provide instructions to the drone operator, and even remotely control a drone's camera system. Further, drone technology allows multiple specialists to actively participate in a survey, from virtually anywhere with internet access. Doing so also allows all the necessary work to be performed in a single site visit.

Iowa-based insurer EMC Insurance Group has already begun to reap the benefits of a successful drone program.¹⁰ Because the Midwest is often exposed to severe convective storms, roof-related claims represent a significant portion of EMC's property losses. For safety reasons, EMC does not send its personnel onto rooftops, so they could only provide insureds with general information regarding roof risks and control measures.

EMC was looking for a way to provide its customers with personalized, value-added roof assessments and loss control solutions to improve roof longevity and resiliency in this valuable market segment. Kespry is a Silicon Valley-based startup company that offers drone piloting software and expertise to companies looking to use commercial drones. Their aerial intelligence platform gives businesses a starting point to integrate drones into their operations.¹¹

EMC embarked on a trial run using Kespry's drone technology platform. The trial started with EMC using drones for roof assessments on insured schools in Iowa, Wisconsin, and Kansas. Over a nine-month period, EMC conducted more than

UAS by the Numbers, [faa.gov](https://www.faa.gov/uas/resources/by_the_numbers/), https://www.faa.gov/uas/resources/by_the_numbers/ (last visited July 10, 2020). Marianne Bonner, How Drones Will Change the Insurance Industry, [thebalancesmb.com](https://www.thebalancesmb.com/how-drones-change-insurance-industry-4125242), <https://www.thebalancesmb.com/how-drones-change-insurance-industry-4125242> (last visited July 10, 2020). Andrew Chapman, Types of Drones: Multi-Rotor vs Fixed-Wing vs. Single Rotor vs. Hybrid VTOL, [auav.com.au](https://www.auav.com.au/articles/drone-types/), <https://www.auav.com.au/articles/drone-types/> (last visited July 10, 2020). Aldrin Aloysius et al., Drones: The Insurance Industry's Next Game-Changer?, [cognizant.com](https://www.cognizant.com/InsightsWhitepapers/drones-the-insurance-industrys-next-game-changer-codex1019.pdf), <https://www.cognizant.com/InsightsWhitepapers/drones-the-insurance-industrys-next-game-changer-codex1019.pdf> (last visited July 24, 2020). Judith Vaughan, 4 Hazards at the Scene of a Claim, [insurancethoughtleadership.com](https://www.insurancethoughtleadership.com/4-hazards-at-the-scene-of-a-claim/), <https://www.insurancethoughtleadership.com/4-hazards-at-the-scene-of-a-claim/> (last visited July 24, 2020). Aloysius, *supra* note 4. Denise Johnson, Claims Tales from Joplin, [claimsjournal.com](https://www.claimsjournal.com/magazines/special-report/2012/04/15/204639.htm), <https://www.claimsjournal.com/magazines/special-report/2012/04/15/204639.htm> (last visited July 24, 2020). Frank Segarra, How Drones Improve Disaster Response and Relief From Hurricane Florence, [connexicore.com](https://connexicore.com/blog/drone-response-natural-disasters-hurricane-florence/), <https://connexicore.com/blog/drone-response-natural-disasters-hurricane-florence/> (last visited July 24, 2020). Bonner, *supra* note 2. Drone-Based Aerial Intelligence Provides Precise Insights and Improves Property Risk, [pluginandplaytechcenter.com](https://www.pluginandplaytechcenter.com/emc-kespry-case-study/#download), <https://www.pluginandplaytechcenter.com/emc-kespry-case-study/#download> (last visited July 10, 2020). How It Works, [kespry.com](https://www.kespry.com/how-it-works/), <https://www.kespry.com/how-it-works/> (last visited July 10, 2020). 160 flights with the Kespry systems. Roof assessment reports were generated for many schools, providing insureds with insights on repair planning and preventative roof maintenance.

Though EMC originally intended to use the drones only in loss prevention during the trial run, a devastating tornado that directly hit Marshalltown, Iowa, in July 2018 changed those plans. In the disaster's wake, EMC's loss control and claims teams quickly collaborated to conduct flights over damaged commercial buildings using the Kespry system. This enabled the claims team to safely assess the damage and start processing claims days before they would have without the drones.

Following the trial run, EMC decided to scale drone operations across the company. As a result, EMC now proactively informs its insureds about roof conditions and steps they can take to improve their roof system's performance. EMC's underwriters can now access higher-quality property risk assessments, which in turn leads to better underwriting decisions. And EMC's claims processing is safer and faster, improving both the employee and customer experience.

The success of EMC's trial run and its decision to scale drone operations across the company show that drones have a promising future in the insurance industry. While the idea of flying robots may seem futuristic, for companies like EMC, the future is indeed happening right now.

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