

Taking Insurance Business Operations to New Heights with Drones

Abstract

The rapid growth of sophisticated Unmanned Aerial Systems (UAS) and cost effective solutions is enabling commercial players to tap drones effectively. One of the key sectors where drones are set to make a huge business impact is insurance. A growing number of insurance companies are exploring the application of drones for enhancing their claims, underwriting, and risk assessment processes.

Teal Group's 2014 market study¹ indicates that investments in UAS will nearly double over the next decade to reach almost USD 91 billion. These autonomous systems powered by the Internet of Things (IoT), robotics, and Artificial Intelligence (AI) will gradually disrupt every line of business.

Over 10 insurance companies including AIG, State Farm, and Liberty Mutual have received FAA clearance for flying drones in 2015.² Erie Insurance, a US-based insurance company plans to test two drones it has acquired, which will enable the multi-line insurance company to embrace a high tech approach to underwriting and claims adjusting.³

A Bird's Eye View of Operations

With their reach and capabilities, drones promise a world where proactive measures can be taken to prevent accidents and catastrophes. For instance, drones can assess the potential damage en-route a predicted hurricane path, enabling preventive actions such as quick and efficient communication and routing of medical aid. Drones can also provide a bird's eye view of an operating industrial landscape such as a remote drilling site or a hazardous processing plant, help monitor security at events, enable mining and energy companies to conduct inspections and do much more.

Insurance is no exception. By incorporating drones, insurance players can transform the way they assess risk, process claims, optimize the utilization of resources, and prevent fraud.

Potential for Drones to Touchdown in Insurance

Drones have the potential to deliver substantial benefits to insurance carriers across the value chain enabling insurance companies to take the first step towards autonomous business operations. Some of the key areas in insurance where drones can play a major role include:

- **Improving Underwriting Performance:** UAS can provide property data and exposure information that enables carriers to manage as well underwrite the risks more effectively, accurately, and efficiently. It can assist in new business and renewal inspections, endorsements, or special request situations by enabling the validation of critical underwriting attributes. Instead of leveraging approximation techniques, underwriters can use precise information from the camera and other sensors attached to drones.
- **Enabling Risk Mitigation:** UAS can help property and casualty insurers to shift from protection to prevention-based models. Autonomous drones will significantly reduce the time, cost, and effort it takes for carrying out frequent preventive inspections on properties, especially in the event of probable catastrophes such as hurricanes or storms.
- **Driving Greater Accuracy in Claims Management:** Leveraging UAS for aerial inspections can substantially improve accuracy, and increase the productivity of adjusters by up to 60%. UAS can help improve efficiency, reduce costs, and increase ROI. They will enable insurance carriers

UAS can also handle numerous cases within a geographic zone in a short time, and eliminate risks to field agents. Leading insurer, Farmer's is exploring the use of drones to inspect brush clean-up in areas that are vulnerable to wildfire. Similarly, Allstate is contemplating using drones to manage property claims post natural disasters.⁴

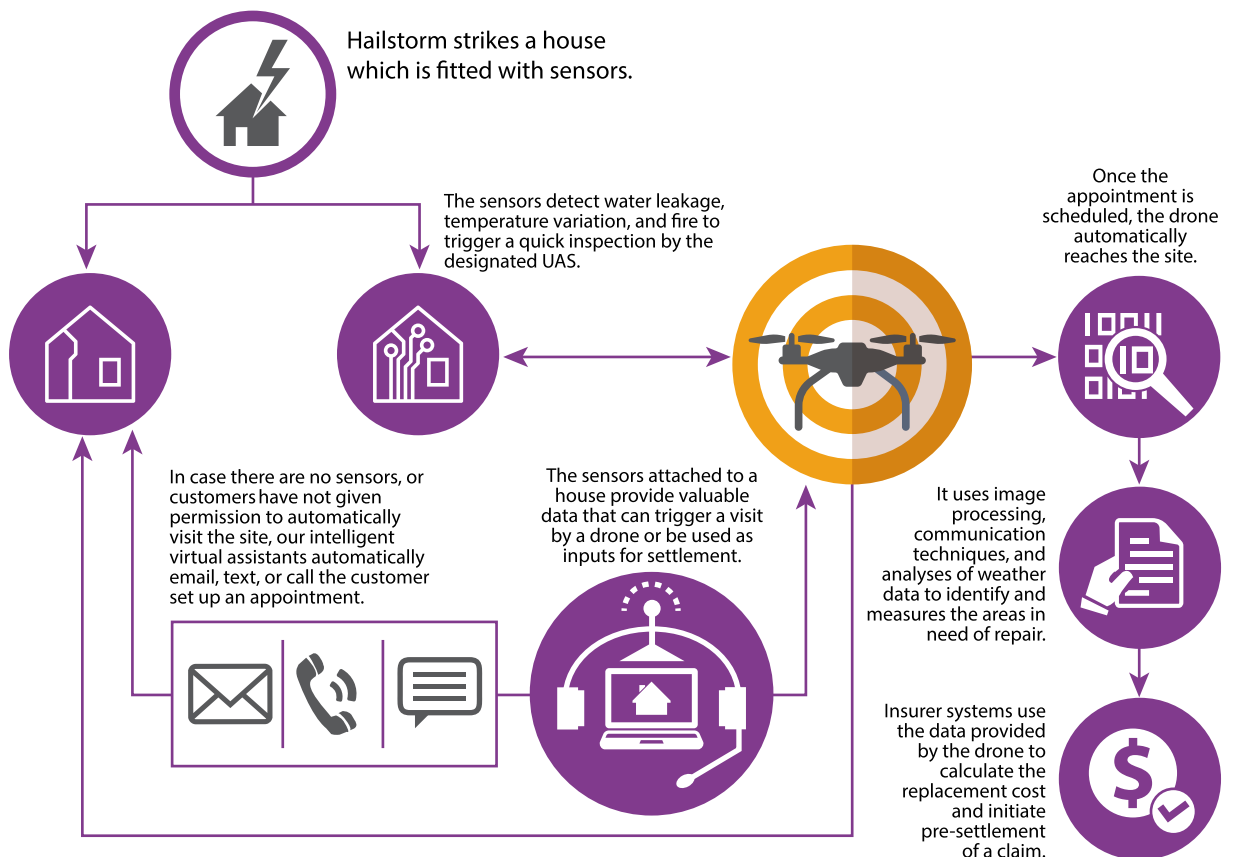
to access hard-to-reach locations for damage evaluation and facilitate faster settlement of claims. UAS can also handle numerous cases within a geographic zone in a short time, and eliminate risks to field agents.

Why Drones are a Big Deal

UAS have a profound impact on revenues by aiding prompt renewal inspections, and in turn, improving the underwriting value. It simplifies the process of inspections and reduces the operating cost and complexities.

Gaining new Ground with Analytics

UAS technologies are maturing rapidly to handle autonomous operations that leverage advancement in GPS, computational power, obstacle detection, path-finding algorithms, image processing, and others. The analysis of environmental data from external sources provides a plethora of opportunities for further optimizing resources. Autonomous UAS can enable quantum leaps in operational efficiency, revolutionizing the claim settlement experience both for the insurance carrier as well as the end consumer.



Potential for Drones to Touchdown in Insurance

EEhang's 184 AAV (Autonomous Aerial Vehicle)⁶ is designed to carry a single human passenger, autonomously flying them from one location to another.

Keeping Pace with Regulations

Even as the insurance sector joins other industries to invest in drones, many countries are framing regulations that cover their use through interim notifications. A few have even sought to ban the use of UAS in public airspace until the time such regulations are formulated. In the

European Union, the European Aviation Safety Agency (EASA) has released a regulatory framework for operating drones within EU with three categories of operation: open, specific, and certified with different safety requirements for each, proportionate to the risk⁵. In the U.S., the Federal Aviation Administration (FAA) has finalized the first set of operational rules for commercial use of UAS.

Conclusion

By 2020, it is estimated that about 30,000 small unmanned aircrafts will be used for all types of business purposes. The FAA has allocated \$63.4 billion for the modernization of the United States' air traffic control systems as well as an expansion of airspace to accommodate the commercial use of UAS⁷. In order to gear up for the exciting journey ahead, insurance companies need to invest in the right infrastructure, processes, and capabilities, and define robust business strategies to support them.

Drones promise disruptive potential for the industry at a time of sluggish growth. By determining the type of drone and technology solutions best suited to their needs, insurers can make drones an integral part of their innovation ecosystem to boost productivity, reduce costs, and enhance customer experience.

References

- [1] Teal Group, Teal Group Predicts Worldwide UAV Market Will Total \$91 Billion in Its 2014 UAV Market Profile and Forecast, 2014, <http://www.tealgroup.com/index.php/aboutteal-group-corporation/pressreleases/118-2014-uav-press-release>, Accessed March 2016
- [2] CBInsights, How Insurers Are Racing To Adopt Drones In One Chart, January 2016, <https://www.cbinsights.com/blog/insurance-firm-drone-exemptions/>, Accessed March 2016
- [3] Pittsburgh Business Times, Erie Insurance hopes these are drones they're looking for, April 2015, <http://www.bizjournals.com/pittsburgh/blog/morning-edition/2015/04/erieinsurance-hopes-these-are-drones-theyre.html>, accessed March 2016
- [4] CBInsights, How Insurers Are Racing To Adopt Drones In One Chart, January 2016, <https://www.cbinsights.com/blog/insurance-firm-drone-exemptions/>, Accessed March 2016
- [5] EASA, Civil Drones, <https://easa.europa.eu/easa-and-you/civil-drones-rpas>, Accessed March 2016
- [6] Ehang184, Accessed June 2016, <http://www.ehang.com/ehang184>
- [7] Risk&Insurance, Rise of the Drones, March 2014, <http://www.riskandinsurance.com/rise-drones/>, Accessed March 2016

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