



## **Property Insurance Technologies: The Future Comes Into Focus**

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### **Drone Use Comes Of Age In Property Insurance**

*By Stephen Applebaum and Vincent Romans*

Toronto, ON (July 5, 2018) – In their 2017 report, *Drones: Reporting For Work*, Goldman Sachs estimated the addressable market opportunity for drones globally between 2016-2020 to be \$100 B, of which the insurance claims drone market was estimated to be worth \$1.4 B.

But the report did not address the wider opportunities in personal and commercial property insurance; underwriting, pricing, risk prevention, traditional and virtual claims management, fraud detection, product marketing or the use of images from satellites, fixed wing aircraft and drones including photos and streaming video.

Whatever the actual size of the total insurance market opportunity, the impact of current and future applications for aerial and drone images in insurance will be enormous.

Industry observers are just beginning to recognize the transformation in property insurance underwriting and claims which is just now emerging as advanced analytics, artificial intelligence and machine learning tied to neural networks and integrated with data from aerial and drone images.

Property claims investigation costs the industry an average of about 11% of premiums – automated inspection can reduce that expense substantially. And automated property inspection cycle times can average 2-3 days as compared to 10-15 days using traditional methods – lowering costs and increasing customer satisfaction.

Further, the convergence of higher resolution satellite and fixed wing image quality, more sophisticated autonomous aerial systems (including drones), expanding numbers and types of connected home technologies, customer self-service preferences and adoption and relevant aggregated property risk data (historic and real-time) providers will fundamentally transform the property insurance industry – including product customization, underwriting, pricing, traditional, virtual and eventually touchless claims processing and settlement and improved customer satisfaction.

## Follow The Money

Venture and private equity investment activity in emerging technologies is a good indicator of potential growth opportunities – these professionals typically engage subject matter experts and conduct deep market research and diligence in a highly disciplined and proven evaluation process prior to investing. Since 2012 almost \$2B has been invested in over 370 drone company deals and the current run rate is over \$500M in announced deals annually, according to CB Insights research which states that "19 of the 24 smart money venture investors have backed at least one drone company since 2012."

Within just the past two months four such insurance related transactions were announced;

- Nationwide Ventures made an investment in Betterview, a machine learning insurtech startup focused on analyzing data from drones, satellite and other aerial imagery for commercial and residential property insurers and reinsurers. This follows a September 2017 seed round funding of \$2M
- DroneDeploy, the world's largest commercial drone platform, raised \$25M of Series C venture capital Funding, bringing total funding to \$56M
- Cape Analytics raised \$17M to grow its AI and aerial imagery platform for insurance companies, led by XL Innovate
- Clearlake Capital Group, L.P. acquired a significant interest in EagleView Technologies alongside Vista Equity Partners who had purchased EagleView in 2015 (Vista also owns the majority of Solera, parent of property and auto insurance claims services and information providers Enservio and Audatex).

In 2017, Genpact, a global professional services and insurance claims solutions provider, acquired OnSource which provides 24/7/365 full service on-demand drone property inspection claims and settlement services across the U.S. Earlier that year Genpact acquired BrightClaim and National Vendor, providers of integrated claims solutions to the U.S. property insurance market

In 2016, Airware, a global enterprise drone analytics company, closed a Series C round of \$30M to bring its total funding to \$110M.

Early in 2016, Verisk Analytics formed the Geomni business unit to specialize in image sourcing and analysis and has since acquired a number of U.S. based aerial survey companies and their aircraft fleets. Verisk also owns Xactware, the dominant industry provider of property insurance claims solutions and third party products. The Geomni fleet is expected to include more than 125 fixed-wing aircraft and helicopters by the end of 2018, operating from 15 hubs located throughout the United States. Verisk expects to invest approximately \$100M in Geomni through 2018.

## **Competition And Differentiation**

The space has attracted a large number of participants in the past two years and there are no signs of this slowing anytime soon. Competitors are taking innovative paths to differentiation including; drone manufacturing, drone operating software for use by field staff and contractors, ground-based roof and wall measurement technologies, and full service, virtual property inspection and property damage reports using drones.

## **Insurance Industry Adoption & Barriers**

The insurance industry's use of images from satellite and fixed wing aircraft is fairly well established, particularly in catastrophe response planning and claims. The North American Property & Casualty insurance industry has been cautious and conservative in its testing and adoption of drone use for property claims and in using aerial images for underwriting.

Until recently, FAA rules had made it onerous for carriers and industry vendors to obtain licenses and permissions to use drones for property inspections. However, after extensive industry lobbying efforts, assisted by more pro-business administration policies, that obstacle has eased significantly and several carriers have trained staff and also use contractors to use drones for property claims inspections. Obstacles remain, including restrictions on use near airfield perimeters and outside of operators' line of sight.

As for the use of more recently introduced third party provided virtual property inspections using drones, carriers are basically split into two roughly equal camps (by market share); those who do not believe that drone image and damage identification technology is sufficiently accurate as yet to manage claims leakage as effectively as their own staff field adjusters – and those who do. Both groups acknowledge that this solution is not appropriate for all property claims. Furthermore, customer satisfaction and therefore retention is thought to be higher when insurance company staff visit the property and the homeowner in person.

## **The Future Of Property Insurance**

For claims, virtual methods of inspection will include not only drones but customer involved claims reporting. Claim self-service, including smartphone images and video, which has seen impressive adoption and results in auto claims, is already beginning to penetrate property insurance claims, particularly for reporting home interior and exterior wall damage. New, accurate 3D smartphone image measurement technology combined with higher image resolution and the expected expanded availability of much faster 5G wireless broadband will converge to drive further adoption.

Other methods of property inspection, particularly following extreme wind or hail events and catastrophes, will most certainly incorporate the use of drones, whether operated by insurance staff, managed repair network contractors or third-party inspection services. Also, autonomous drones performing roof inspections not requiring an operator on site may be expected to appear in the near future

Finally, on the property underwriting side, we expect to see the convergence of high resolution geospatial image data from multiple sources, artificial intelligence and machine learning transform that process in fundamental ways. Real time feeds of comprehensive property attributes such as measurements and condition of roofs and other property on the target site will enable instant and more accurate pricing, quoting and binding/renewal of property insurance.

Aerial imagery, mobile technologies, artificial intelligence and computer vision will continue to transform property insurance products and processes, leading to better pricing accuracy, more profitable operations and above all – more modern levels of user and customer experience in the industry and for policyholders.

#### ***About the Authors***

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Mr. Applebaum is a frequent chairman, guest speaker and panelist at insurance industry conferences and contributor to major insurance industry publications and has a strong passion for coaching, mentoring, business process innovation and constructive transformation, applying disruptive technology, and managing organizational change in the North American property & casualty insurance industry and trading partner communities.

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