



# **CO-CREATION HELPS IN CLAIMS ASSESSMENT OF ROOFTOP DAMAGES USING CUTTING-EDGE IMAGE ANALYTICS**

This is our story of co-creating a solution with  
a global insurance company

**WNS**

## AS WE KNOW...

Insurance companies have to deploy many resources to process and verify claims related to rooftop damages, ranging from physical surveys to manual checking of the photographs. In the case of roofs on commercial and residential buildings, the area to be surveyed could be up to 50,000 square feet in size. The process then becomes time-consuming and laborious. Until recently, manual inspections — which are inherently marred by inaccuracies and safety concerns — were the only options available to verify such claims.

Video and image analytics have resulted in enhanced drone imagery solutions to generate significant value for insurers. From risk assessments and automated claim settlements to detecting false claims, this technology is already driving measurable business impact.

## THE CHALLENGE FOR THE GLOBAL INSURER WAS...

Deploying costly resources to physically verify the rooftop damages caused by weather-related incidents such as hailstorms. Other challenges for the company included limited roof access, safety and liability concerns, and inaccuracies in manual inspections. Moreover, the available drone imagery solutions were either unable to provide correct labeling of damaged / non-damaged rooftops, or extract relevant data from high-resolution images. Another major concern was getting the appropriate infrastructure with high-end parallel processing computers.

The company was looking for a comprehensive drone imagery analytics solution that could automate damage assessment and claims estimation reporting while minimizing risks.

The insurer required a robust infrastructure platform to handle, process and extract actionable insights on claims assessment to improve operational efficiency, expedite customer service and increase long-term return on investment.

## HERE'S WHAT WE CO-CREATED AS A SOLUTION...

WNS deployed an automated Artificial Intelligence (AI)- and Machine Learning (ML)-based drone imagery analytics solution. Backed by a robust deep-learning methodology, the solution was built to solve the most complex challenges in image processing, cleansing, segmentation and feature extraction.

The solution included three major components:

- Identifying rooftop damages via a combination of image pre-processing, brightness normalization, image thresholding and contour / edge detection for better clarity; image segmentation and feature extraction using supervised ML and deep-learning algorithms
- Analyzing past information on damaged rooftops by surveyors and historical claims assessment value
- Triangulating image, claims and historical data using ensemble modeling techniques to automate the identification of risks and damage assessments

By combining structured and unstructured claims data with drone-captured images and other data sources, the algorithm automatically locates and classifies damages due to hailstorm and other weather incidents. It then provides various metrics to help in appropriate claims decisions.

# OUR LEARNINGS AND OUTCOMES FROM THE PROCESS OF CO-CREATION ARE...

That a robust, advanced analytics-powered image classification methodology can re-shape claims assessment and minimize risk factors, leading to increased operational efficiency and improved customer service. Other benefits include:

- 95 percent accuracy in damage prediction, leading to elimination of manual effort and time spent segregating images

- Easing the process of assessing the validity of claims, identifying risk factors and automating claims estimation reporting

The WNS drone imagery solution offers potential benefits of more than USD 30 Million through automation and increased operational efficiency.

Our proven model development, automated validation process and robust evaluation metrics continue to enable the client to prioritize inspections, proactively measure damages and reduce the claims cycle time.

**For more insights, watch the video at [www.wns.com/insights/videos](http://www.wns.com/insights/videos).**



Accurate damage prediction reduced the claims cycle time



WNS (Holdings) Limited (NYSE: WNS) is a leading Business Process Management (BPM) company. We combine our deep industry knowledge with technology, analytics and process expertise to co-create innovative, digitally led transformational solutions with over 400 clients across various industries. The industries include banking and financial services, consulting and professional services, healthcare, insurance, manufacturing, media and entertainment, retail and consumer packaged goods, telecommunications and diversified businesses, shipping and logistics, travel and leisure, and utilities and energy. We deliver an entire spectrum of BPM solutions including industry-specific offerings, customer interaction services, finance and accounting, human resources, procurement, and research and analytics to re-imagine the digital future of businesses. We have delivery centers worldwide including in China, Costa Rica, India, the Philippines, Poland, Romania, South Africa, Spain, Sri Lanka, Turkey, the United Kingdom and the United States.

To know more, write to us at [marketing@wns.com](mailto:marketing@wns.com) or visit us at [www.wns.com](http://www.wns.com)

**WNS**