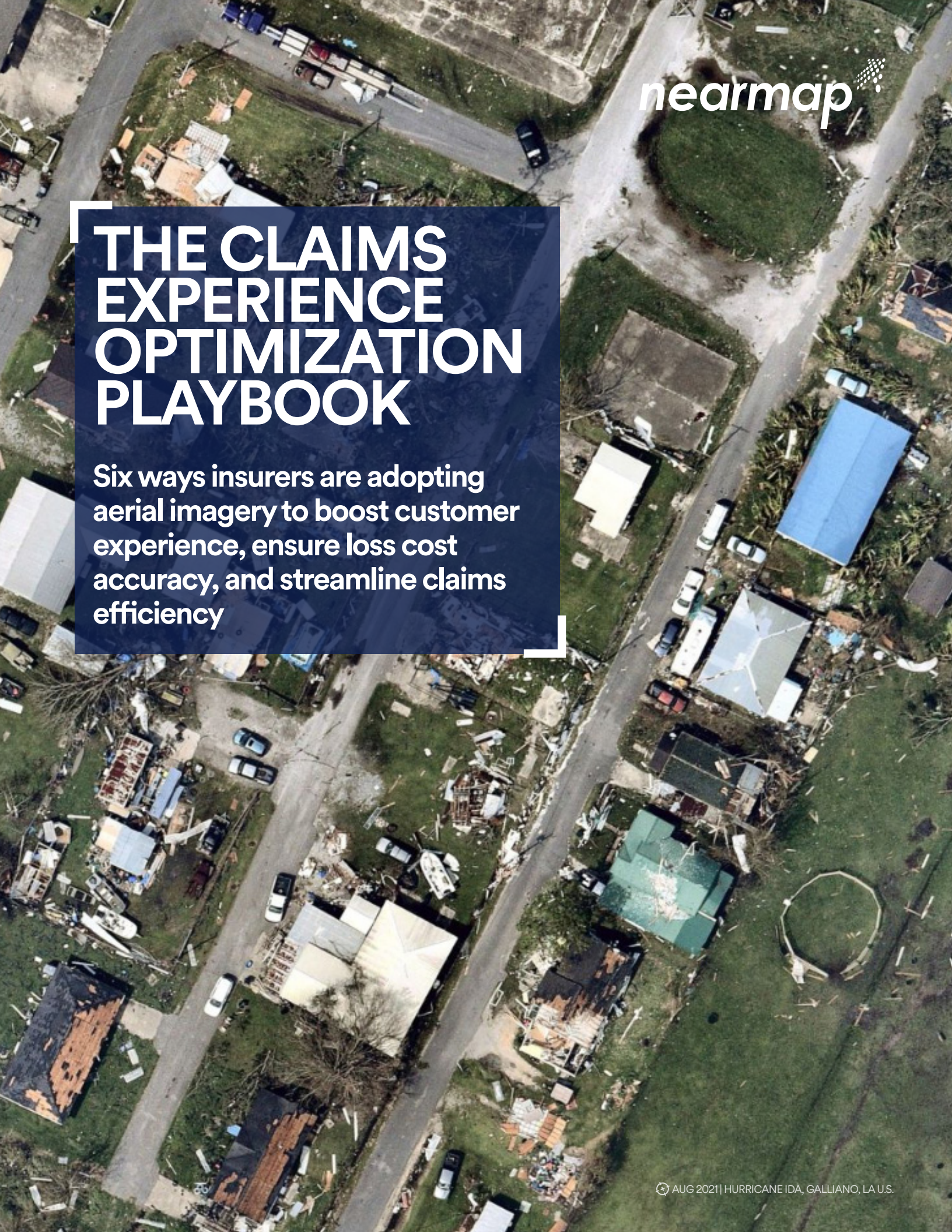

nearmap

THE CLAIMS EXPERIENCE OPTIMIZATION PLAYBOOK

Six ways insurers are adopting aerial imagery to boost customer experience, ensure loss cost accuracy, and streamline claims efficiency

AUG 2021 | HURRICANE IDA, GALLIANO, LA U.S.

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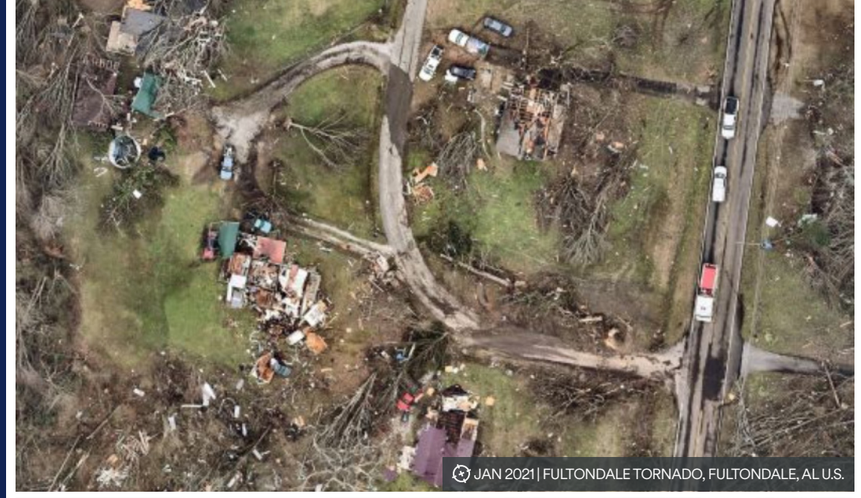
AUG 2021 | BOOTLEG FIRE, FREMONT NATIONAL FOREST, OR U.S.

WE HAD THREE MAJOR TORNADOES HIT IN A MATTER OF WEEKS.

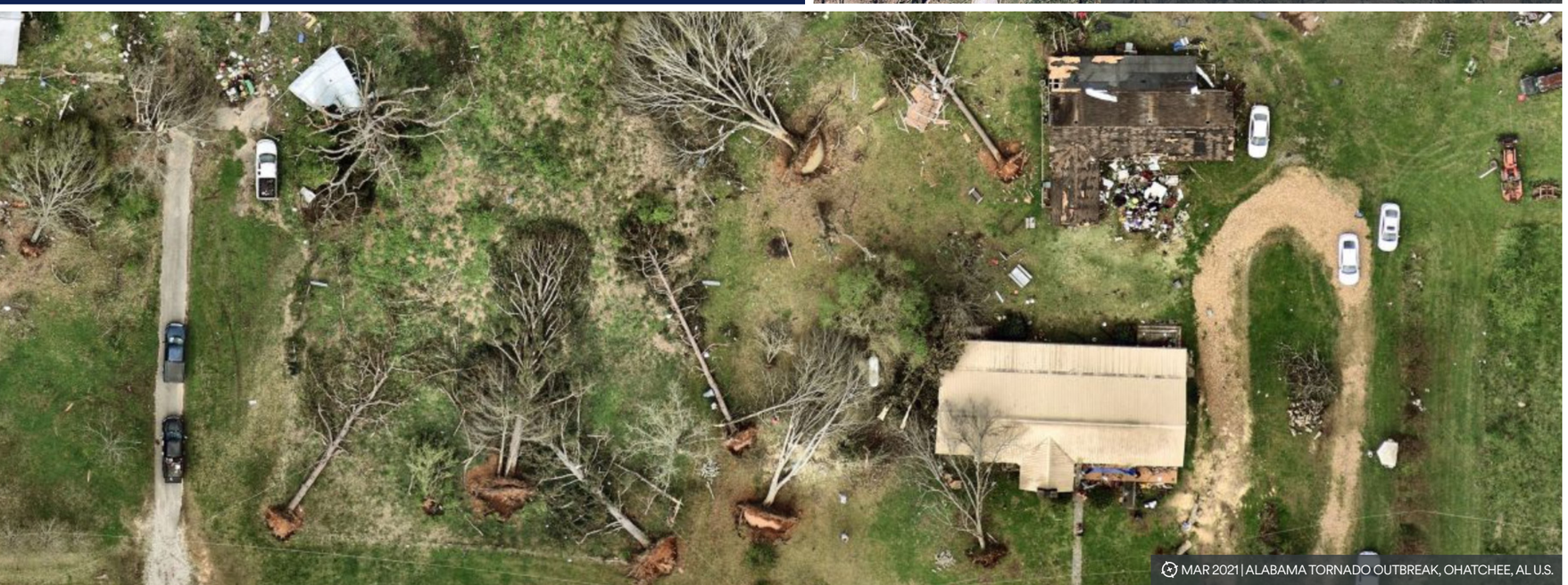
Nearmap was very responsive; they got planes in the air, and we had pictures the next day of the damage on the ground. Having that historical imagery with oblique views — the way I can get eight views of the house before it was destroyed, **allows us to have a really good idea of what it would take to make that person whole again**.

— Director of Geospatial Capabilities, Tier 1 carrier



JAN 2021 | FULTONDALE TORNADO, FULTONDALE, AL U.S.

FEB 2021 | OCEAN RIDGE TORNADO, OCEAN RIDGE PLANTATION, NC U.S.



MAR 2021 | ALABAMA TORNADO OUTBREAK, OHATCHEE, AL U.S.

When a policyholder files a claim, it's a make-or-break moment for carriers. In JD Power's 2021 Property Claims Satisfaction Study, 90% of "highly satisfied" claimants said they would renew coverage with their carrier.

However, of claimants who responded they were "indifferent" or "displeased," 60% said they would shop for a new carrier within a year.

One of the challenges with processing commercial and residential property claims is that they can be manually intensive in nature — automation only goes so far when a customer's home or business is at stake.

Adjusters are often required to gather important property details from in-house legacy systems and third-party data providers to progress a claim. Once the necessary information has been collated, field adjusters are sent to inspect hundreds or even thousands of claims, depending on the severity of the triggering event.

This time-consuming and highly labor-intensive process is one reason the NAIC reported the number one complaint by policyholders in 2020 was related to claim handling delays.

In this e-book, we'll seek to illuminate some of the ways forward-thinking insurers are modernizing their claims workflows to deliver better outcomes for their policyholders.

You'll understand:

- ✓ Some of the key trends driving digitization of the claims cycle
- ✓ How to evaluate remote sensing solutions for virtual inspection
- ✓ Six ways aerial imagery can help you create new claims efficiencies, improve loss cost accuracy, and deliver better outcomes for policyholders

LET'S GET STARTED.

INTRODUCTION:

MODERNIZING THE CLAIMS CYCLE WITH REMOTE ADJUSTING TECHNOLOGIES

In the past few years, innovative claims professionals have embraced the implementation of digital technologies to streamline their workflows and invest in that most critical part of the claims moment: the customer experience.

New tools such as self-survey applications, photo estimatics solutions, customer communication apps, and virtual inspection platforms have been gaining traction, especially as insurtechs seek to disrupt the traditional insurance model by leveraging proprietary technologies to create a more transparent, faster claims settling process. Many insurance carriers understand the benefits of these technologies and are adopting them as part of a holistic digital transformation — but there's no doubt that hurdles like legacy systems and regulatory compliance can slow down even the most visionary claims managers.

That began to change in 2020, when the combination of a global pandemic, multiple severe weather events, and rising adjustment expenses vastly accelerated digital transformation within the property claims cycle.

“THE PANDEMIC EFFECT” ON SPEEDING TECHNOLOGY ADOPTION

With the rise of the COVID-19 pandemic, insurers that had been reluctant to fully embrace remote adjusting suddenly faced a very different environment. States issued stay-at-home orders, and policyholders became increasingly wary of unnecessary visits to their homes and businesses. Of course, insurers also bore the responsibility of keeping their workforce safe. Carriers who considered technology upgrades on a multi-year timeframe quickly pivoted to remote workflows that could keep both their employees and policyholders safe.

While larger, more complex claims often still require an adjuster to go on site, insurance carriers quickly added up the benefits of performing virtual inspections on smaller or more straightforward claims.

The use of virtual adjusting solutions like self-survey tools and high resolution imagery quickly enabled claims teams to process claims remotely, allowing them to maintain — or even improve — response times while still abiding by social distancing mandates.

What started as a required response to a global emergency quickly became a revelation, as carriers realized that smaller claims could be adjusted entirely from the desktop — in some cases saving hundreds of dollars in adjusting expenses per claim.

Along with the cost savings accrued by virtual claims adjusting, remote inspection and estimation tools can be a salve for other claims workflow bottlenecks — including field adjuster workforce shortages in the wake of a cat event that generates thousands of claims simultaneously.

COPING WITH A RISE IN NATURAL CATASTROPHES

In 2019, natural catastrophes in the United States accounted for $39.6 billion in losses. Last year, that number rose by 88% to $74.4 billion. In addition, the U.S.'s total economic loss from catastrophes rose 59% to $119 billion in 2020.

The combination of six hurricanes making landfall, a record-breaking year for severe convective storms (over $30 billion in losses), and a highly active wildfire season meant insurance carriers were on the hook for rate hikes around 10-15% to renew treaties with their reinsurance carriers.

Unfortunately, things haven't changed course recently. In the first half of 2021, Aon reported that 72% of global insurance losses occurred in the United States. Verisk and the American Property Casualty Insurance Association (APCIA) also reported that in Q1 of 2021, insurers experienced $16.3 billion in net catastrophe loss adjustment expenses (LLAE) — more than double that of the previous year. These severe weather events also impacted the insurance industry's combined ratio, which declined from 94.9 in Q1 2020 to 96.1 in Q1 2021.

To make matters even more critical, Swiss Re reports that insurance losses from both primary and secondary perils have been rising since 1970. Many experts predict natural hazard catastrophe losses will continue to rise due a number of influencing factors:

- Climate change
- Urban expansion into high-risk areas
- Larger roofs (since 1973, the size of homes increased by over 1,000 sq. ft)
- Outdated building codes

In this unforgiving environment, the imperative to adopt technologies that allow insurers to make their customers whole quickly in the wake of extreme events is more pressing than ever.

RISING MATERIALS COSTS ADD URGENCY TO CLAIMS TRANSFORMATION

Another trend carriers are facing is the rising expense of building materials. According to recent figures from the National Homebuilders Association, exploding lumber prices have resulted in an average price increase of $30,000 to build a new single-family home since April 2020.

Along with rising lumber prices, the NAHB also reported shortages of windows, doors, roofing materials, vinyl siding and more. These shortages are being driven by a number of factors — including increased demand because of a home improvement craze during COVID; a record number of cat events driving reconstruction projects; and a lingering supply chain shortage after the real estate bust of 2008.

REIMAGINING SCOPING, TRIAGE, AND INSPECTION WORKFLOWS WITH GEOSPATIAL TECHNOLOGIES

Self-survey protocols are empowering carriers to capture vital information at the ground level to help adjusters take action earlier in the claims cycle. Most carriers acknowledge that self-survey tools alone do not entirely replace manual claims processes — but when used in conjunction with other remote damage assessment tools, they can remediate costs and enhance the carrier's ability to provide faster, better customer outcomes.

When it comes to getting the full view of an impacted property, policyholder photos provide a useful but not always complete perspective. A reliable, consistent imagery source that provides both pre- and post-event insights into the property's condition and value is vital to understanding the nature of a claim and the required response.

Since a few of the top P&C insurers began adopting drones in the middle of the last decade, interest in other remote sensing solutions for insurance has been on the rise. There is a growing selection of imagery solutions in market, each with distinct advantages and drawbacks. In the next section, we'll take a look at the different types of remote sensing data solutions, and explain why one in particular is becoming the go-to resource for virtual inspection and assessment during the claims cycle.

OCT 2020 | BLUE RIDGE FIRE, YORBA LINDA, CA U.S.

CHOOSING THE RIGHT REMOTE SENSING SOLUTION FOR YOUR BUSINESS

CAPTURE ALTITUDE

160 - 2,000 km
(50,000 - 6 million ft)

Free satellite imagery
- 30cm+ GSD resolution
- Δ Often 2-3 years out of date
- ✕ Oblique
- ✕ Historical imagery
- Δ Extremely prone to atmospheric conditions

60,000 - 120,000 ft

Strastospheric balloons
- 10-30cm resolution
- Δ As high as daily, but not consistent
- ✕ Oblique
- ✓ Historical imagery
- Δ Primarily bespoke, one-off surveys

8,000 - 14,000 ft

Aerial imagery
- 5-7.5cm GSD
- Camera sensors quickly evolving to enable wide-area capture at higher altitudes and lower resolution
- ✓ Multiple times per year
- ✓ Oblique
- ✓ Historical imagery
- ✓ Regular collection schedule and footprint, building a library over time

100-400 ft

Drone imagery
- 1.5-3cm GSD
- ✕ Irregular frequency; event dependant
- ✕ Oblique
- ✕ Historical imagery
- ✕ Costly to hire licensed, accredited operators

Ground

Terrestrial
- Resolution depending on camera system used
- ✕ Irregular; solution dependent
- ✓ Oblique
- ✕ Historical imagery
- ✓ Flexible collection methods

RESOLUTION

	Terrestrial	Drones	Aerial imagery	Stratospheric balloons	Free satellite imagery
Coverage	Free providers like Google Street View offer global coverage, but property owner smartphone capture is policy by policy	1-10 sq km coverage per flight Usually limited to a few properties at a time, and prone to FAA restrictions Cannot cover wide areas quickly	Typically offers a regular capture footprint covering 60-90% of residential and commercial properties across North America	Offers both rural and urban coverage across North America, but regular coverage can be inconsistent; operates more as a bespoke capture	Full Earth coverage
Data hosting and delivery	Solution dependent	Carrier often has to assume processing and storage operations	Most solutions hosted in the cloud — no procesing or storage required Very fast publishing speeds — within days of capture Available via web viewer, API, GIS integration	Available via API or GIS integration	Available through web viewer
Suitability for AI feature extraction	Collection area not large enough to warrant AI	Suitable for specific types of detection, such as hail strike analysis	Suitable for both manual visual inspection and wide-scale AI extraction	Confidence scores and accuracy considerably lower with AI extraction at this resolution	Not suitable for reliable AI extraction of individual property features
Most suitable for	Customer documenting damage when filing a claim Inspection of specific property features, not a holistic view of the entire property Perspective can be limited to the front of the property or obstructed by ground features.	Small-scale event capture Hail damage assessment Lower flight altitude provides flexibility when atmospheric conditions are adverse	Wide-scale regular and cat capture Pre- and post-event comparison Accurate damage scoping and estimation Wide-scale AI feature extraction	Complementary dataset to complete PIF coverage in rural areas	Regional or national assessment, not property-level

The remote sensing marketplace is fast evolving, and there are a range of innovations that are enabling step-changes in coverage, frequency, resolution, and cost efficiency. More recent technologies, including imagery collected by drones, stratospheric balloons, and mobile phones, give us a glimpse of the great potential for the future of remote sensing.

When considering a solution that will scale with your business, it's important to choose a provider that can ensure you'll have the insights necessary to make decisions when it matters most.

- Does the provider cover the majority of your book of business? Where are your most valuable or high-risk policies clustered?
- How often does the provider capture fresh data? Is this frequent enough to identify changes, like property additions, home renovations, or recent damage?
- What is the promised resolution of the data? Is it high resolution enough to inspect important property details visually, and to allow AI algorithms to reliably extract ground and structural features?
- How extensive is the provider's library of historical captures? Is there enough data to identify correlation between past claims and property features captured in imagery at that time? Is there likely to be pre-event imagery available in disaster-prone areas, like the Southeast of the U.S. and California?
- Is the data easily accessible? Does it integrate with existing workflows and systems? Does it offer corollary tools that can help your team perform the necessary measurements and annotations?

Today, aerial imagery offers a combination of distinct advantages not currently shared by other remote sensing solutions in the market. There are a few reasons for this. First, planes fly at altitudes suitable for wide-scale capture at very high resolution and frequency, enabling extensive coverage, high accuracy and refresh rates, rapid post-catastrophe capture capability, and the potential for highly accurate, regular artificial intelligence feature extraction.

Second, aerial imagery providers typically offer a regular capture program that covers large geographic areas multiple times per year — along with a library of historical surveys to enable confident damage assessment and claims investigations.

Third, because aerial imagery solutions have been in market longer than some other types of remote sensing technologies, they have evolved to provide incredibly fast processing and publishing of new surveys, often with web-based imagery viewing applications that can offer advanced annotation, measurement, and export capabilities.

Although most aerial imagery camera systems cannot yet achieve the sub-1" resolution of drone imagery, innovations in plane-mounted camera systems are advancing rapidly. Over the next few years, new generation camera systems will be able to capture at extremely high altitudes with far lower resolution than what is currently in market, across continental footprints. This will enable not just more confident visual inspection, but also more accurate AI processing and forensic-level damage analysis.

In sum, aerial imagery provides a robust foundational location dataset that can power virtual claims management and loss adjustment across an insurer's entire book of business today and into the future. Think of aerial imagery as the engine room of your property intelligence capability.

THE HAIL CAPTURE IS THE BEST IMAGERY I'VE SEEN —

I can see the 'make safes' and destroyed tarps on the roofs. Day in and day out, my team use it consistently. It was a $45 million dollar event for us, $40 million of which is significant roof damage. We need a cost comparison to see if the builder charge is reasonable. Overage adds up very quickly.

— Head of Property Supply Chain, Tier 1 insurer

NOV 2020 | SPRINGFIELD, QLD AU

APR 2020 | CHATTANOOGA TORNADO, CHATTANOOGA, TN U.S.

SIX WAYS TO USE AERIAL IMAGERY FOR A BETTER CLAIMS EXPERIENCE

Whether confronting a regional windstorm or a hurricane whorling a destructive path along the East Coast, modern insurance carriers are using high resolution aerial imagery to triage claims with greater precision, make more informed damage assessments, and most importantly, improve the customer experience by accelerating response and resolution times to quickly get customers back on their feet.

Harnessing the powerful data combination of regularly updated aerial surveys and post-catastrophe imagery, claims teams can conduct virtual inspections to scope property damage in the early stages of the claims cycle, triage adjuster resources, or identify pre-existing damage in the case of suspicious claims.

Below we'll illustrate six key ways high resolution aerial imagery, along with AI datasets derived from aerial imagery, are helping claims teams manage their workflows and resources more efficiently to deliver the best possible outcomes for their policyholders.

1

PROACTIVELY UPDATING PIFS TO AVOID CLAIMS SURPRISES

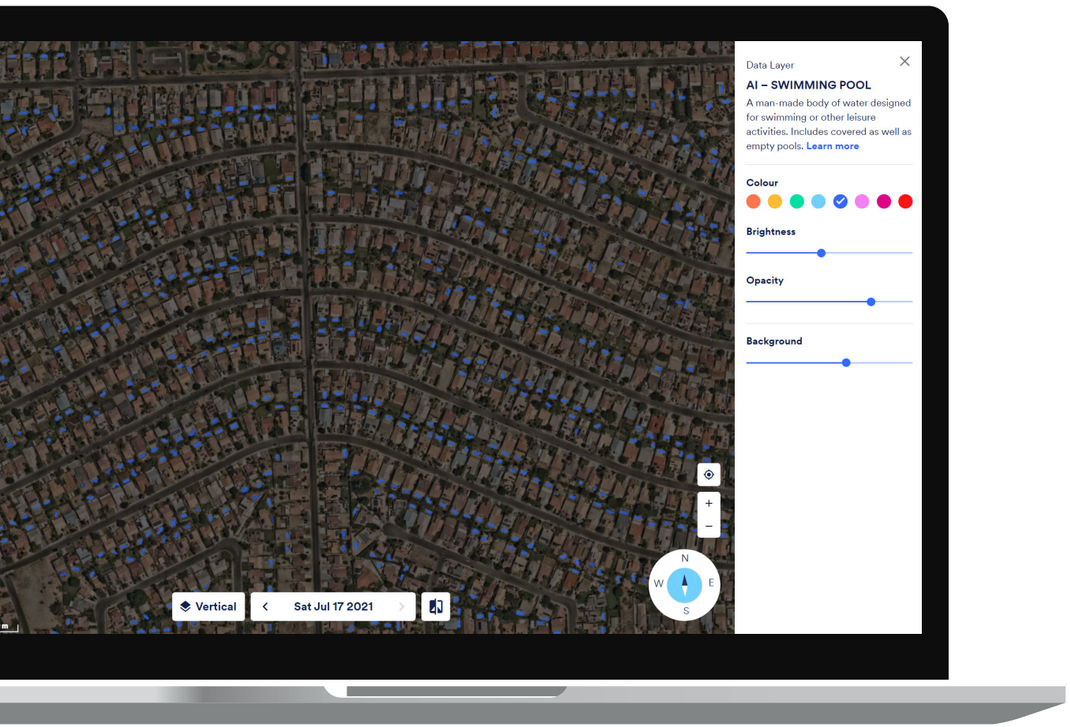
When underwriting a new piece of business, insurance carriers often order a loss control survey to ensure there are no issues with a property. After this initial inspection, however, some carriers may renew the same policy for three to five years without performing a follow-up survey. This inspection lapse can lead to potential blind spots in a carrier's book of business.

If a claim is filed, adjusters will then have to spend time manually aggregating loss control, underwriting, and other data sources to gain insights into the property's condition before the claim date.

Using property insights surfaced through artificial intelligence performed on the latest aerial surveys, insurers can update their PIFs to reflect current property characteristics (roof shape, material, and condition; swimming pools; solar panels; vegetation height; etc.) to keep their portfolio up-to-date and ensure there is no premium leakage — and that proper coverage is in place should a claim occur.

This kind of portfolio-wide update is more critical than ever as home improvement projects enjoy renewed focus during the pandemic. In 2020, a COVID-fueled trend to redirect financial resources from vacations and other amenities to home renovations resulted in 70% of homeowners making a significant change to their property, according to a survey by the Hanover Group. This included 15% who replaced their roof or siding.

Carriers can also use historical imagery to maximize their adjusting resources by putting the latest dated and timestamped imagery at adjusters' fingertips. Claims teams can quickly scroll through a timeline of imagery to identify pre-existing damage that may have been present before a policy was bound, verify if previous claims payments were used for repairs, or provide photographic documentation to trigger reinsurance coverage.



2

MORE EFFICIENT POST-CATASTROPHE CLAIMS TRIAGE

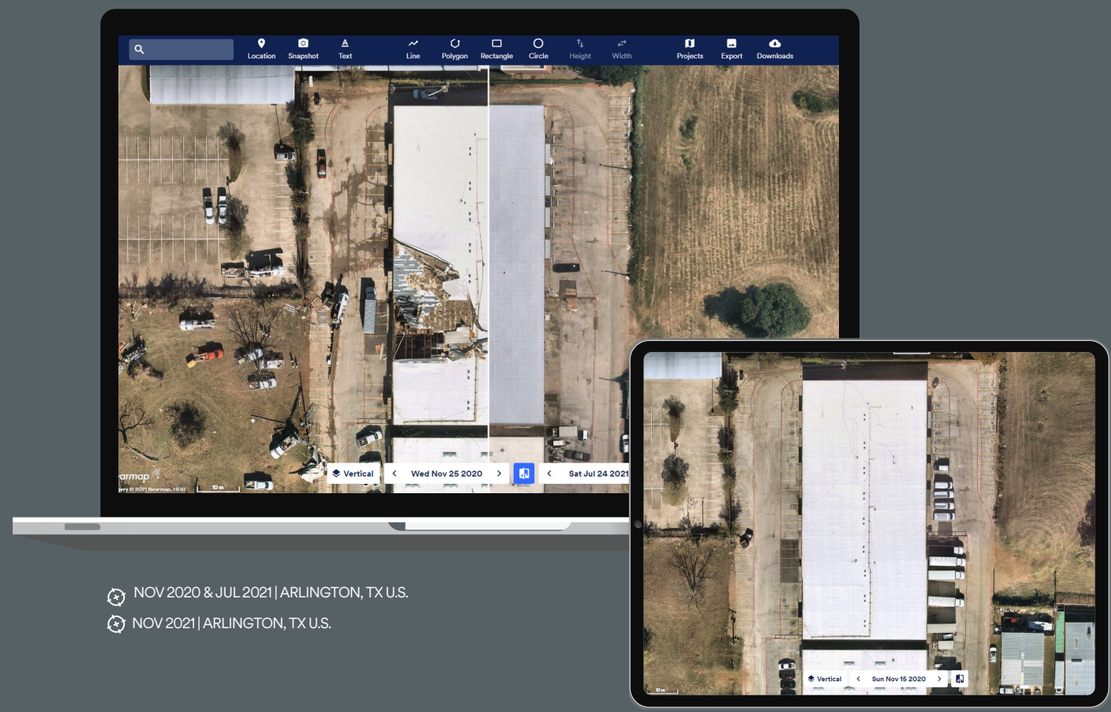
An effective cat response requires quick analysis of the severity of events, including the impacted areas and the total liability in order to accurately set loss reserves. Insurance carriers can now inspect post-catastrophe imagery published within days of an event to understand the total impact to their business, without waiting to send adjusters into the field — and often before receiving the FNOL.

Once the aggregate impact of an event is well understood, insurers can also facilitate claims triage by identifying the type of loss (no loss, partial, full) to resolve claims more efficiently — either by performing desk adjustments on less complex claims, or understanding how to most efficiently deploy claims adjusters and where to stage field resources.

For example, low-touch claims (broken windows and minor roof, siding, or façade damage, etc.) can be routed to less experienced staff, allowing them to launch a digital interaction via text, chat, or email to quickly pay and close a claim.

In the event of a partial loss, adjusters can consult historical imagery updated multiple times a year to assess the pre-existing condition of roofs, siding, or secondary structures. If a claim is deemed valid, adjusters can leverage virtual measurement tools in an imagery-viewing web application to generate or confirm initial repair estimates — without ever setting foot on the property.

In the case of a total loss, multi-line carriers can limit loss of use coverage by leveraging imagery to quickly assign initial payments and set reserves — but they also have the information at their fingertips to proactively send funds to policyholders to enable them to acquire temporary housing, secure a rental car, etc. In addition, imagery can help insurers avoid unnecessary future disputes by routing high-value or more complex claims to more experienced adjusters.



NOV 2020 & JUL 2021 | ARLINGTON, TX U.S.

NOV 2021 | ARLINGTON, TX U.S.

3

POWERING DESKTOP ADJUSTMENTS WITH IMAGERY

After extreme natural disasters, insurance carriers often have to respond to hundreds or even thousands of claims in a very short period of time. Along with responding to incoming claims, carriers must also understand the impact of events on their policies in force (PIFs) to accurately set reserves.

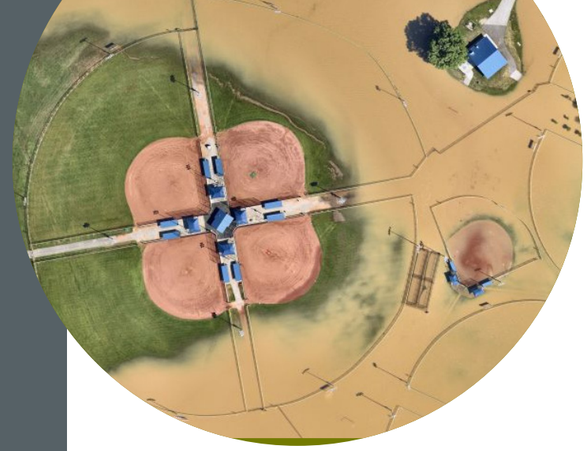
Post-catastrophe imagery captured and published within days of catastrophic events is critical to enable insurers to mount a quick and effective cat response. Once imagery is online, carriers can start to assess their overall exposure to catastrophic events, strategically route adjusting resources to high priority claims, or virtually adjust claims by capturing measurements to generate estimates.

In particular, when accompanied by highly accurate measurement, annotation, and export capabilities, aerial imagery can power desktop adjustments and allow overburdened field resources to attend to the most complicated claims.

With insights gathered using side-by-side comparison of pre- and post-event imagery, adjusters can:

- Understand the true state of the property pre-claim, including any changes that may have taken place post-bind
- Take virtual measurements on structures that may have been completely destroyed to accurately assess the replacement cost
- Assess the full scope of damage by verifying what structures and features existed pre-event
- Inspect the condition of adjacent properties to understand the event's path and severity
- Support claims decisions, as well as potential contested claims and future compliance requirements, by validating the date and cause of loss with easily exportable, dated and time-stamped evidentiary imagery

Considering the technical capabilities of today's imagery — consistent high resolution, frequency, fast processing speeds, and intuitive measurement and annotation tools — insurers are increasingly relying on aerial imagery not just as a complementary tool to in-person adjustments, but as a replacement for them.



APR 2020 | CHATTANOOGA TORNADO, CHATTANOOGA, TN U.S.

4

SPEEDING THE POLICYHOLDER RESPONSE WITH UP-TO-DATE PROPERTY INSIGHTS

When a policyholder files a claim, it comes at an extremely difficult juncture in their lives. How a carrier responds during this "moment of truth" will play a critical role in whether a customer renews coverage or takes their business to another carrier.

It's not always possible to send adjusters immediately to every affected policy — especially when adjuster resources are overstretched after a large event; ground access is limited due to downed trees, flooding, or compromised transit routes; or in extreme cases, when fires are still burning and local emergency authorities have restricted access to impacted properties.

But policyholders don't want to wait for financial relief, or, if they've evacuated, to learn whether their property has been affected. Insurers must meet increasingly high customer expectations for the speed and accuracy with which they respond after the first notice of loss.

With the advantage of rapidly available post-catastrophe aerial surveys, insurers can leverage imagery to quickly assess the post-event condition of a property, without waiting to send an adjuster on site.

Imagery of impacted properties — and of damage to properties in the surrounding neighborhood — can deliver powerful insights when combined with other industry data sources. For example, imagery can help insurers identify low touch claims that can be paid immediately, provide agents with talking points when discussing claims with clients, or take proactive measures like alerting policyholders their homes were not impacted by a severe weather event in situations where they may have evacuated ahead of an emergency.

5

VALIDATING CONTRACTOR ESTIMATES TO CONTROL CLAIMS LEAKAGE

Carriers often rely on contractor estimates to determine their liability, and after a large-scale cat event, they may lack the adjuster resources to validate every single builder estimate.

Contractors may "over-measure" or suggest unnecessary work (whole roof replacement instead of fixing a damaged section). Depending on the severity of the event, this could lead to claims leakage of hundreds or even millions of dollars for some carriers. Conversely, imagery can also help insurers comply with state code requirements — for example, identifying roofs grandfathered to old building codes that require a total replacement, no matter the extent of damage.

Before accepting a bid, claims teams can quickly understand the scope of work, validate contractor estimates, and even understand their total liability across all impacted PIFs by taking fast, accurate virtual measurements on the latest aerial imagery.

6

ARMING YOUR SIU TEAM WITH THE BEST VIRTUAL PROPERTY INTELLIGENCE TOOLS

The Insurance Information Institute estimates that 10% of all P&C claims are fraudulent, costing insurers approximately $38 billion annually. And with the rise of new imagery-enabled technologies, it's possible for property owners to exploit gaps in digital estimatics solutions by re-using images to file multiple claims with different carriers, or submitting manipulated images.

In addition to databases that can quickly surface claims history for a particular address, an instantly viewable library of historic imagery that documents change on a property over the course of several years can be a critical tool to establish the validity of a claim. Insurance carriers can reconstruct a timeline of events with dated, timestamped imagery, and validate photos submitted by claimants to route outliers to SIU.

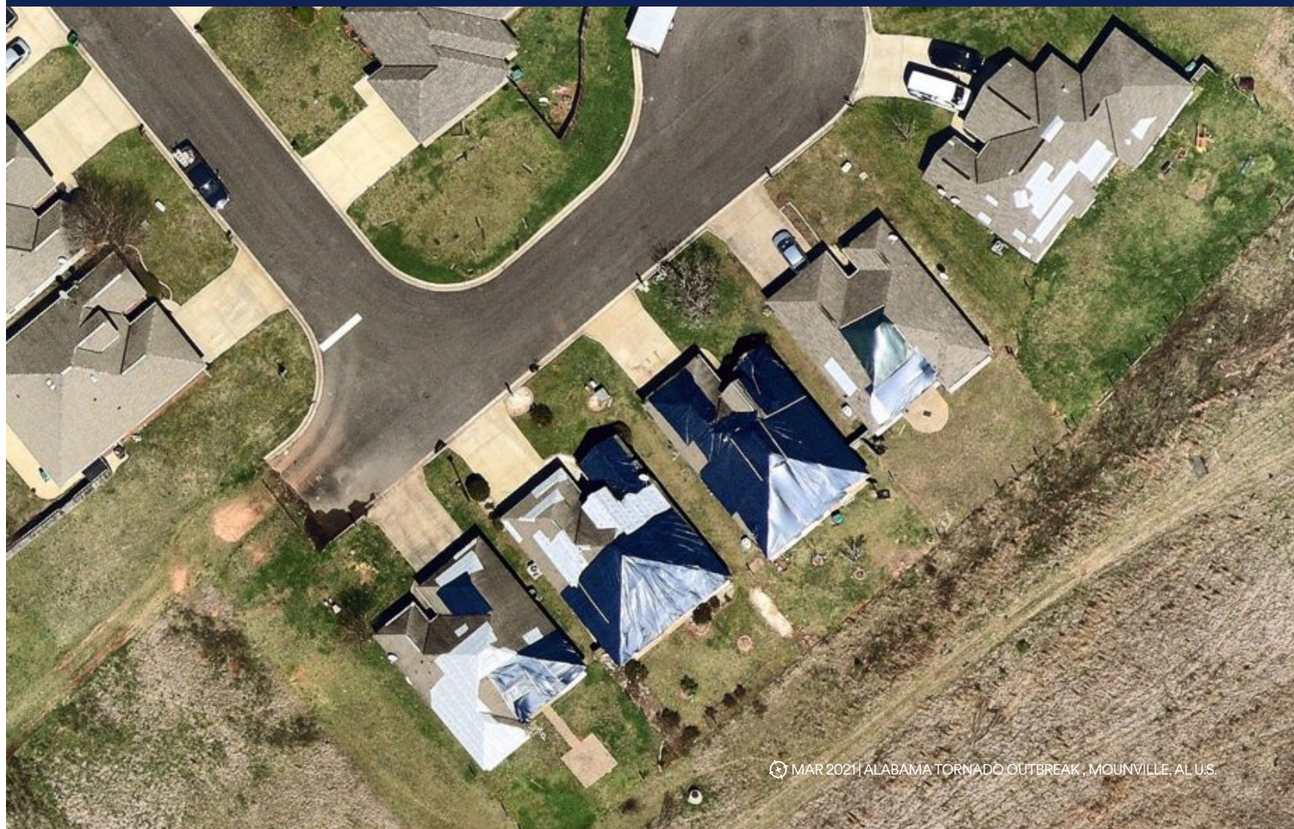
For investigations where the ultimate decision is in the insurer's favor, imagery can be a valuable documentation tool to substantiate the decision and defend against any future disputes, or in extreme cases, even support a decision to drop a policy.

"

If you have a house that's large enough and it costs $15,000 to put new roof and we say 'oh wait this damage has been here for several years,'

THEN WE JUST SAVED THE COMPANY A LOT OF MONEY."

— Property Field Adjuster, Tier 2 carrier

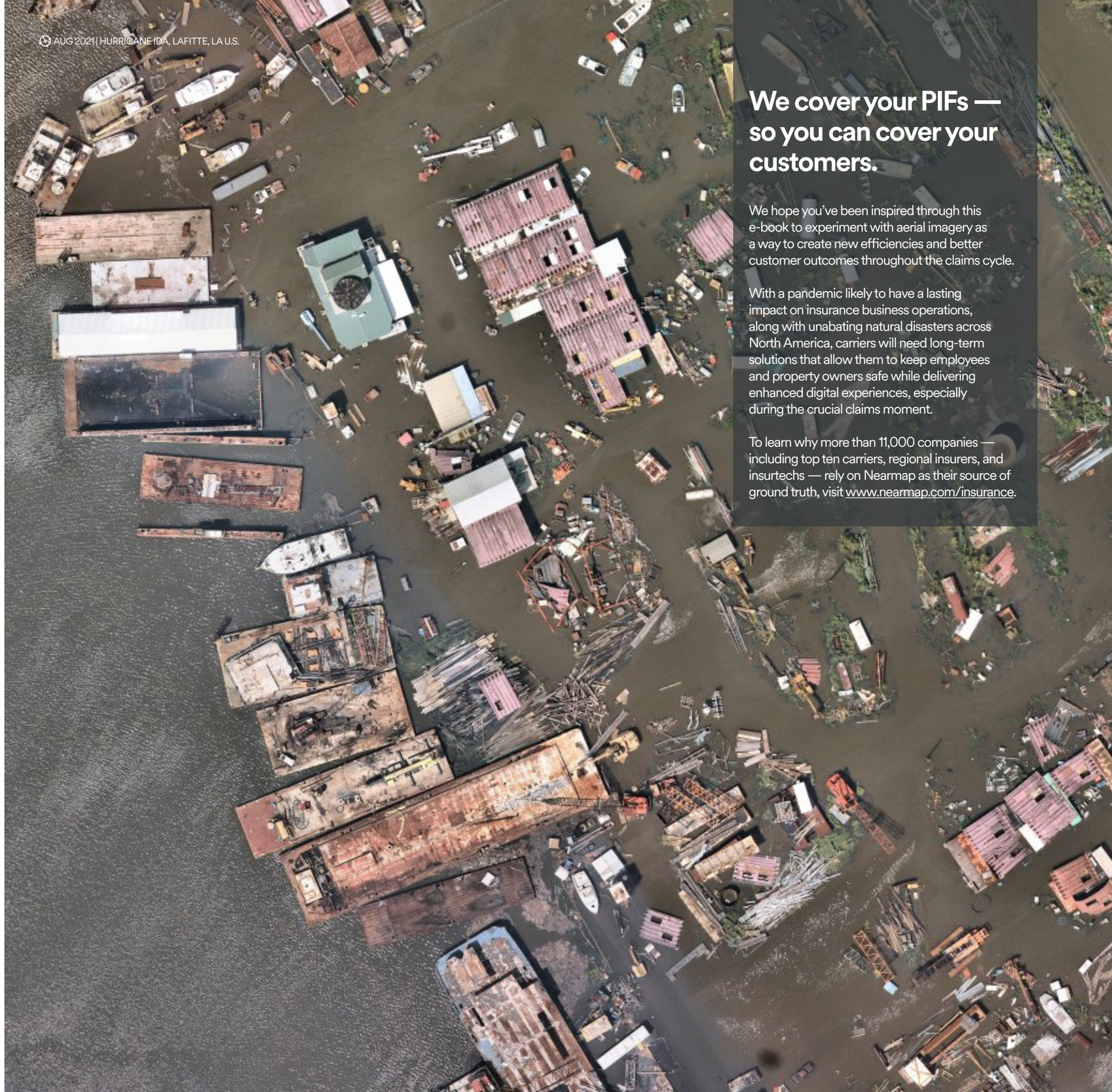


HI THERE — WE'RE NEARMAP.

AN AERIAL IMAGERY PROVIDER FOR INNOVATIVE INSURERS.

Nearmap regularly captures current, high resolution imagery and AI-derived property insights across more than 90 million residential and commercial parcels in the U.S. and 10 million in Canada, giving the North American insurance ecosystem unprecedented access to truth on the ground to make critical decisions across the entire policy lifecycle — from mitigating risk and calibrating price, to supporting underwriting and renewal decisions, to speedy investigation and processing of claims with both pre- and post-catastrophe surveys. Our latest generation camera system produces imagery with an industry-leading resolution of 5.5cm, allowing reliable analysis of important property features. With a rich location content library — including ortho, oblique, post-catastrophe, 3D datasets like DSM and DEM, and AI-derived property characteristics — insurers gain actionable property insights to assess risk and respond to claims while serving customers with the care and responsiveness they expect.

Nearmap location content is built to give claims professionals an easy, seamless experience. Some insurance carriers leave the geospatial analysis to a few GIS and data analytics teams, while others want to empower non-technical users with the latest location intelligence. Whatever your approach, we offer simple ways to plug Nearmap into your workflows — without interrupting critical operations and processes. Whether exploring, measuring, and exporting imagery in our intuitive MapBrowser web application, streaming content into your proprietary systems with our suite of reliable APIs, or consuming the latest geospatial insights in a range of GIS, policy administration systems, and estimatics software tools, Nearmap location content is ready to go, when and where you need it.



We cover your PIFs — so you can cover your customers.

We hope you've been inspired through this e-book to experiment with aerial imagery as a way to create new efficiencies and better customer outcomes throughout the claims cycle.

With a pandemic likely to have a lasting impact on insurance business operations, along with unabating natural disasters across North America, carriers will need long-term solutions that allow them to keep employees and property owners safe while delivering enhanced digital experiences, especially during the crucial claims moment.

To learn why more than 11,000 companies — including top ten carriers, regional insurers, and insurtechs — rely on Nearmap as their source of ground truth, visit www.nearmap.com/insurance.


SEP 2020 | CREEK FIRE, SHAVER LAKE, CA U.S.
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