TRANSFORMING

INSURANCE WITH LOCATION INTELLIGENCE

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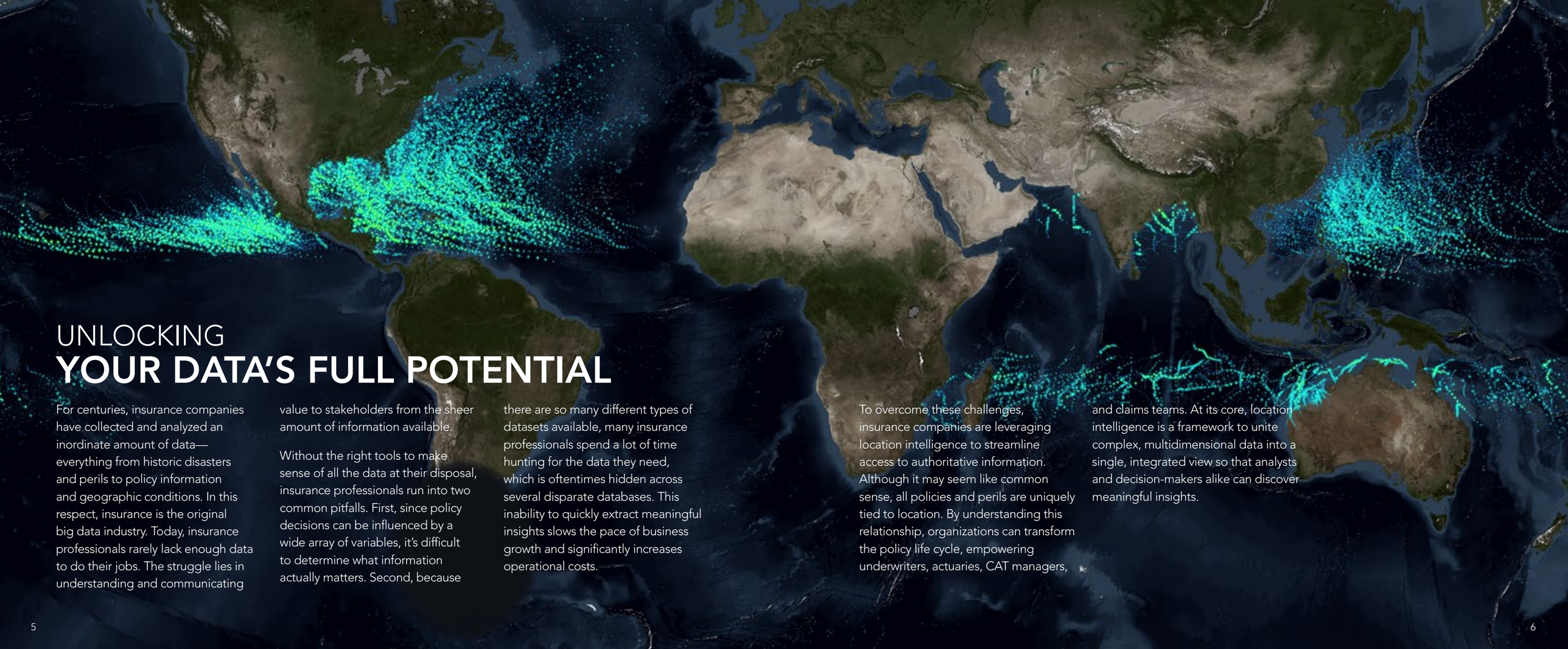
OVERCOMING THE CHALLENGES OF A CHAOTIC WORLD

Over the past five years, the insurance industry has endured a series of record-breaking natural disasters, from hurricanes and wildfires to severe weather events and widespread flooding. In 2017 and 2018 alone, the combined economic impact from catastrophic (CAT) events surpassed half a trillion dollars. Although figures like these are staggering, this overall trend is not new, nor are the effects unexpected.

Since the 1950s, the number of natural disasters worldwide has continually risen by more than 450 percent.[1] Regardless of the cause, the reality is that the frequency and severity of natural disasters have drastically increased, without a clear end in sight. This seemingly never-ending barrage of calamities has not only devastated communities and disrupted businesses but also exhausted the resources of insurance companies—many of which are stuck in a vicious cycle of jumping from crisis to crisis. To succeed in today's chaotic world, insurance companies need to stay ahead of disasters by leveraging better tools, technology, and data.

Although it may feel like 1,000-year storms and black swan events are the new normal, innovative insurance companies are finding transformational ways to proactively manage their exposure long before losses occur. These groups are turning to the power of location intelligence to holistically understand and manage their portfolio's exposure to these increasing risks. These groups realize that in the face of growing perils, it's no longer enough to rely on the old ways of writing business.

[1] Data from the Brussels-based Centre for Research on the Epidemiology of Disasters.



UNLOCKING YOUR DATA'S FULL POTENTIAL

For centuries, insurance companies have collected and analyzed an inordinate amount of data—everything from historic disasters and perils to policy information and geographic conditions. In this respect, insurance is the original big data industry. Today, insurance professionals rarely lack enough data to do their jobs. The struggle lies in understanding and communicating value to stakeholders from the sheer amount of information available.

Without the right tools to make sense of all the data at their disposal, insurance professionals run into two common pitfalls. First, since policy decisions can be influenced by a wide array of variables, it's difficult to determine what information actually matters. Second, because there are so many different types of datasets available, many insurance professionals spend a lot of time hunting for the data they need, which is oftentimes hidden across several disparate databases. This inability to quickly extract meaningful insights slows the pace of business growth and significantly increases operational costs.

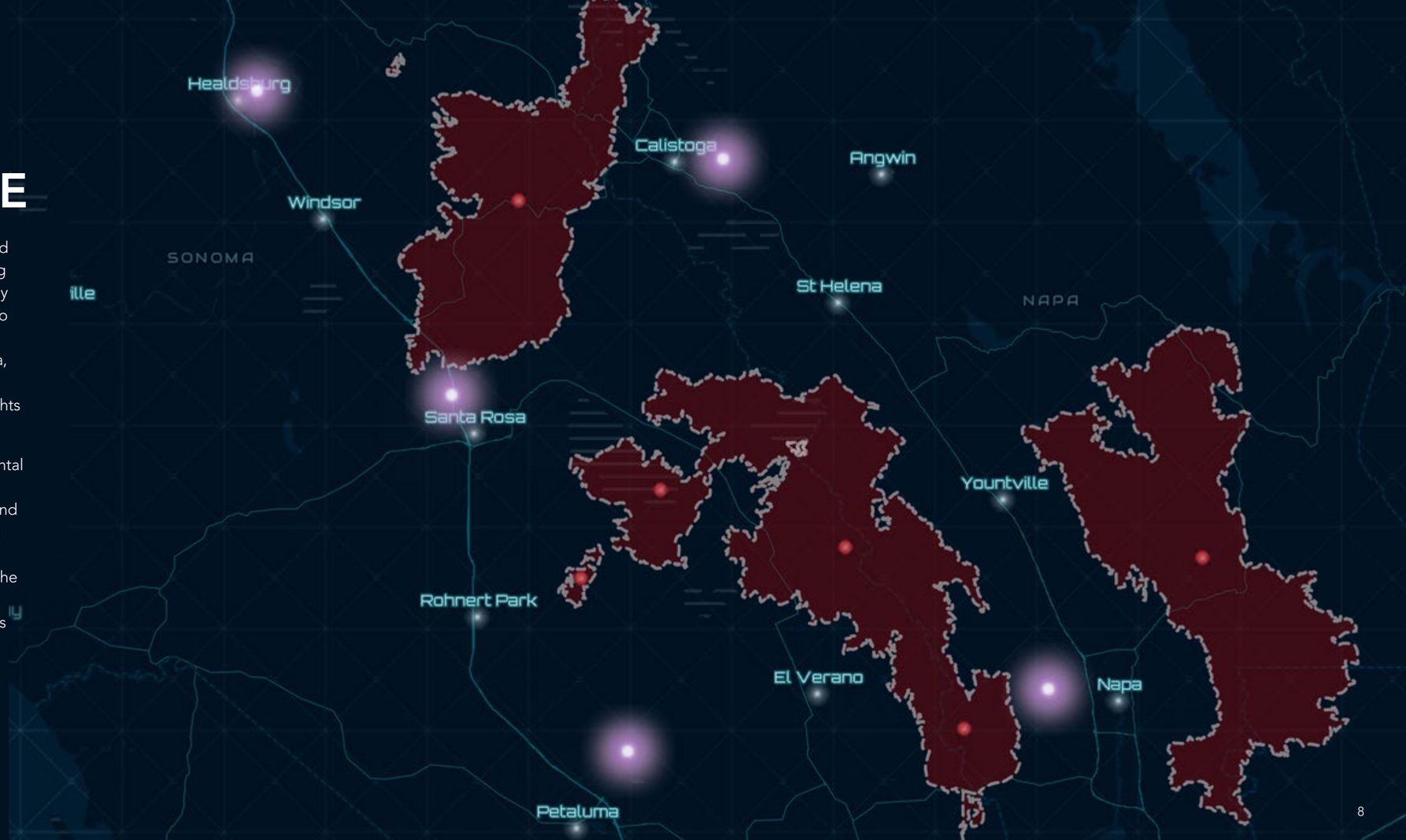
To overcome these challenges, insurance companies are leveraging location intelligence to streamline access to authoritative information. Although it may seem like common sense, all policies and perils are uniquely tied to location. By understanding this relationship, organizations can transform the policy life cycle, empowering underwriters, actuaries, CAT managers, and claims teams. At its core, location intelligence is a framework to unite complex, multidimensional data into a single, integrated view so that analysts and decision-makers alike can discover meaningful insights.

EMPOWERING INSURANCE **PROFESSIONALS WITH LOCATION INTELLIGENCE**

The insurance industry is not known for being fast paced or quick to innovate. Today, far too many insurance professionals rely on cumbersome ad hoc processes to collect, access, analyze, or share data across departments. From integrating the outputs of disparate point solutions to managing legacy databases, these highly siloed environments create slow, manual workflows that are immediately out-of-date after a disaster. Although these processes have been effective for many insurance companies to date, the sharp increase of natural disasters in recent years sends a clear signal that the entire industry needs to become more agile.

Insurance professionals need more than just raw computational power. Location intelligence empowers them with robust analytical tools and methodologies to maximize existing investments in Insurtech solutions by integrating disparate data feeds into a single, holistic view. With instant access to historic and real-time data, analysts and executives alike can visualize and uncover valuable insights that would otherwise go unnoticed.

Understanding location is fundamental to every decision made in the insurance industry before, during, and after catastrophes. From identifying growth opportunities in new and existing markets to understanding the accumulated risks in a portfolio, the spatial relationship between policies and perils has enabled insurance companies to see the relationship between variables and holistically understand their business—from underwriting to claims.



ENHANCING CRITICAL **UNDERWRITING DECISIONS**

Despite the growing frequency and severity of natural disasters, insurance companies do not have the luxury of issuing moratoriums in every market to hedge against these risks. In today's highly competitive business climate, customers now have more options than ever before, making market share difficult to secure. Underwriters are at the forefront of this dilemma, maintaining the delicate balance between generating new business while maintaining solvency. To ensure the overall health of the insurer, underwriters need to make decisions based on scientifically sound results.

Today's perils are dynamic, with dramatic shifts in landscape and climate. The Woolsey Fire in 2018 clearly demonstrated this point as wildfires devastated Los Angeles and Ventura Counties, unearthing unforeseen exposure to landslides and debris flows. To minimize the loss ratio, insurance companies need a flexible and holistic view of their entire book of business.

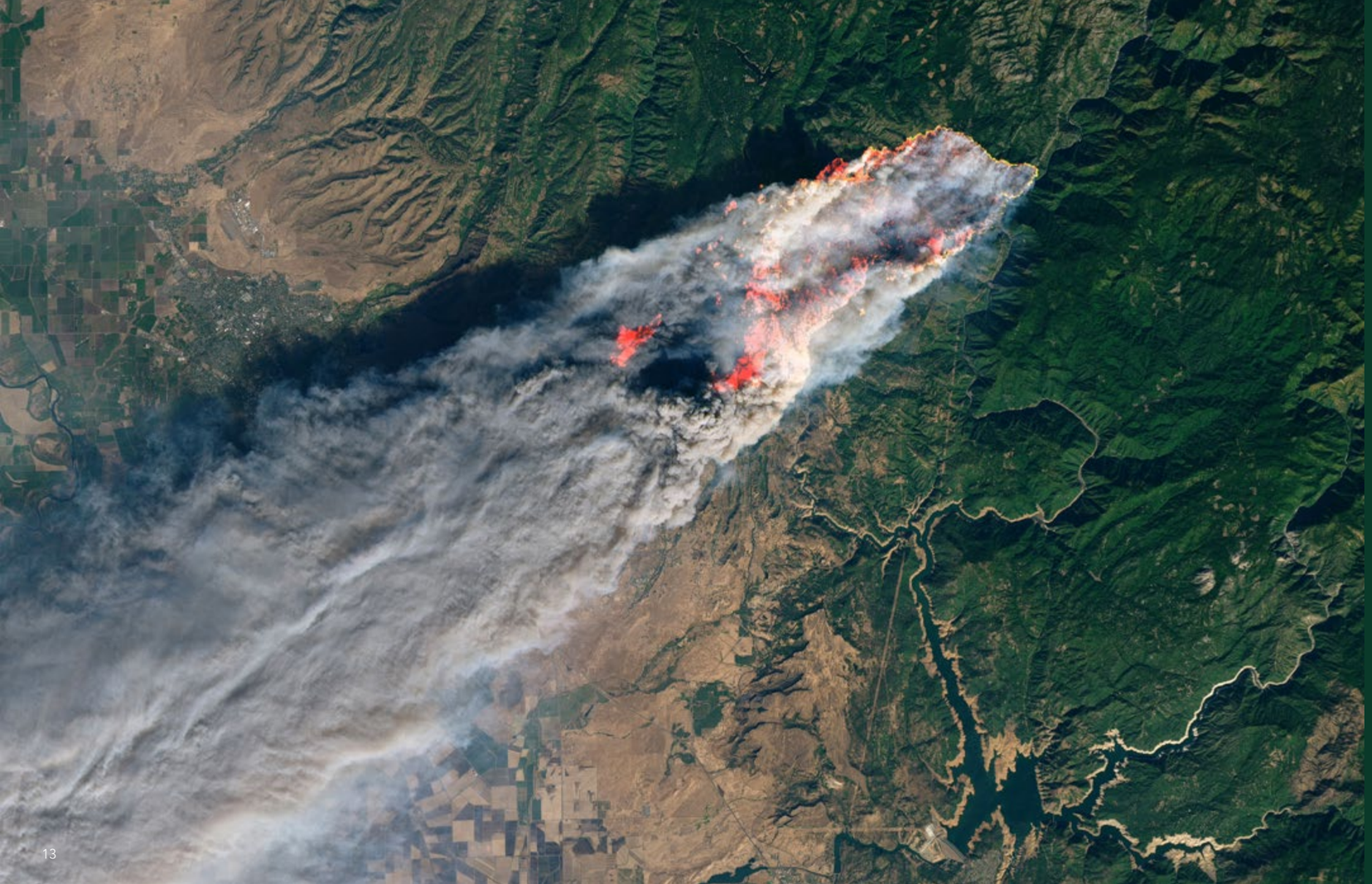
By leveraging location intelligence, underwriters obtain a complete view of their risk, quickly analyzing metrics across different product lines. This single-pane-of-glass approach to underwriting not only accumulates the overall risk within a specified geography but also clearly visualizes how additional policies and strategies will affect their operations. With automated workflows to flag potentially problematic policies, underwriters can confidently rely on location intelligence to provide quotes to potential customers faster.

MAINTAINING SITUATIONAL AWARENESS
DURING CAT EVENTS

During a catastrophic event, time is the greatest adversary to risk managers and CAT response teams. Every moment counts for allocating resources and forecasting impact, making access to timely authoritative data essential. Under normal circumstances, data can depreciate within 24 hours, but during a natural disaster, a single event can alter the entire situation instantly—leaving little room for delay. To better understand the situation on the ground and effectively align response efforts, risk managers need a common platform to access and share authoritative data to both internal teams and supporting governmental agencies.

Location intelligence promotes situational awareness during a crisis by facilitating a seamless connection between an insurance company's databases across multiple lines of business. When combined with accurate, real-time weather and sensor data, these organizations can effectively monitor their exposure to a wider array of calamities. This practice, called absolute communication, ensures that valuable insights for disaster response are not hidden within a spreadsheet on an analyst's computer.

Analyzing the spatial relationship between policies and risks produces the most accurate representation of the potential impact of an event. Whether you are overlaying a projected storm path to forecast the impact to your portfolio or modeling the potential for flooding in a market you service, understanding and visualizing these relationships provide a clear picture of exposure to potential losses.



IMPROVING THE TIME-TO-CLOSE
DURING CLAIMS

When disasters strike and losses occur, insurance companies understand that there's nothing more important to their customers than recovering from losses. In these crucial moments, families rely on their insurers to respond as quickly and efficiently as possible. The challenge is identifying which policies were affected by an event and prioritizing response efforts based on severity, ensuring that claims are processed and resolved quickly and accurately.

Traditional physical inspection workflows rely on responding to claims in the order they are filed, which can take several weeks from the first notice of loss to the final settlement. This wait-and-see approach forces insurance companies to send large numbers of claims adjusters into the field, coordinating on an ad hoc basis. Not only does this delay timely claims settlement but also significantly increases operational costs.

Claims teams can leverage location intelligence to proactively monitor ongoing CAT events and prioritize their resources before a single adjuster is deployed. Understanding the degree to which neighborhoods and cities are affected by a catastrophe and the location of existing policies within the area enables insurers to triage claims in the immediate aftermath of an incident—often before policyholders can with even return to the area. This guarantees that customers are provided unparalleled customer service during their time of greatest need, while drastically cutting insurers' operational costs and overhead.

SHARING MEANINGFUL **INSIGHTS WITH DECISION-MAKERS**

Analytical workflows and reports are produced to provide executives with the insights they need to determine the best course of action and influence the decision-making process. Ultimately, this means that knowledge, technology, and expertise are worthless unless they can clearly and effectively communicate critical information when needed.

Oftentimes within the insurance industry, decision-makers and key stakeholders may not have the same level of expertise as an individual analyst within a specialized area. This knowledge gap increases the likelihood of misunderstandings, which can have devastating consequences.

Location intelligence not only serves as an interpretive tool for analysts to understand their data but also as an intuitive way for decision-makers to deepen their contextual understanding of what's being presented to them, regardless of the complexity of the underlying data. With digital maps, interactive reports, tailored applications, and dashboards, location intelligence makes it possible to quickly share complex information with decision-makers.

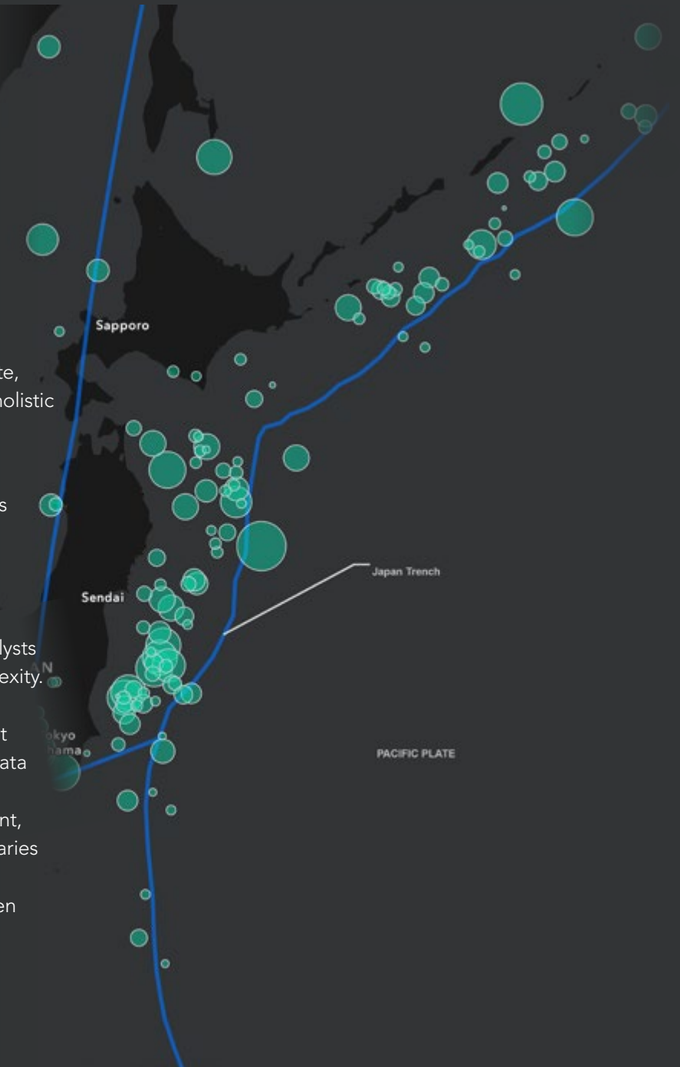
These digital products are an indispensable resource for quickly coordinating and responding to an event and working with policyholders to begin rebuilding their communities. Utilizing the same framework for sharing data across departments, analysts can leverage location intelligence to quickly convert their analyses into digital information products and share them with decision-makers—instantly providing real-time updates to their mobile devices or command centers.

ENVISIONING THE **NEXT INSURANCE TRANSFORMATION**

For many industries, the drastic increase in the frequency and intensity of natural disasters over the past five years will not lead to direct consequences in the near term, but insurance companies are already grappling with the effects. As these companies continue to grow their book of business in both new and existing markets, they will inevitably become exposed to a broader array of risks as high-impact, low-probability events continue to become more prevalent.

This new normal for the insurance industry sends a clear message that the old ways of writing new business and managing risks will simply no longer serve the needs of today's markets. The next great transformation in the insurance industry has arrived, and it's centered around ensuring that insurance professionals are able to better understand these rising threats and have rapid access to accurate, authoritative data that shares a holistic picture of the portfolio's health.

From the early stages of writing a policy to monitoring calamities and processing claims, location intelligence promotes deeper contextual understanding of insurance data by providing an intuitive lens through which analysts and executives can tame complexity. Every day, we use location to navigate time and space without considering the magnitude of data that is processed. By applying location data to risk management, analysts, underwriters, and actuaries are able to uncover new market opportunities and identify hidden risks within their portfolio.



About Esri

Esri empowers insurance companies through insightful maps and apps to better manage risk. All policies and perils are influenced by location. Location intelligence empowers insurance professionals to understand, manage, and communicate risks across the organization—before, during, and after a catastrophe.

As the global market leader in geographic information system (GIS) software, Esri offers the most powerful mapping and spatial analytics technology available. Since 1969, Esri has helped customers unlock the full potential of data to improve operational and business results. Today, Esri software is deployed in more than 350,000 organizations including the world's largest cities, most national governments, 75 percent of Fortune 500 companies, and more than 7,000 colleges and universities. Esri engineers the most advanced solutions for digital transformation, the Internet of Things (IoT), and location analytics to inform the most authoritative maps in the world.

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