

Less Risky Business

In Catastrophe Planning, Location Intelligence Combined with Superior Data Can Mitigate Exposure and Improve Risk Management

WHITE PAPER:
INSURANCE



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ABSTRACT

CHALLENGES: OVER-EXPOSURE AND HIGH RISK

THE YEAR 2010 MARKED THE FIFTH ANNIVERSARY OF BOTH HURRICANE KATRINA AND THE CATASTROPHIC YEAR OF 2005, WHEN OVER \$100 BILLION U.S. IN GLOBAL INSURED LOSSES WERE RECORDED.

YET PROPERTY AND CASUALTY INSURERS' NEED FOR SUPERIOR DECISION SUPPORT TECHNOLOGIES AND INFORMATION HAS NEVER BEEN MORE ACUTE. FOR MANY P&C INSURERS, BEST-IN-CLASS LOCATION INTELLIGENCE SOLUTIONS, COUPLED WITH COMPREHENSIVE RISK DATA AND DATA QUALITY SOLUTIONS, HAVE BECOME STRATEGIC TOOLS FOR COMPETITIVE ADVANTAGE IN CATASTROPHE MANAGEMENT PLANNING AND RESPONSE, RISK EXPOSURE MANAGEMENT, COST CONTROL AND FINANCIAL SURVIVAL.

LOCATION INTELLIGENCE—WHICH OFFERS THE ABILITY TO VISUALIZE AND ACT UPON SPATIAL DATA—AND COMPREHENSIVE RISK DATA ENABLE THEM TO QUICKLY GRASP THE POTENTIAL IMPACT OF BOTH NATURAL AND MAN-MADE DISASTERS: HURRICANES, EARTHQUAKES, WILDFIRES, TORNADOES, FLOODS, HAILSTORMS, LANDSLIDES, WINDSTORMS AND TERRORIST ATTACKS. DATA QUALITY INITIATIVES, INCLUDING ENTERPRISE ADDRESS MANAGEMENT, ENSURE HIGHER LEVELS OF ACCURACY IN POLICYHOLDER OR ADDRESS-SPECIFIC INFORMATION.

THIS PITNEY BOWES BUSINESS INSIGHT WHITE PAPER EXAMINES THE CRITICAL ROLE THAT THESE SOLUTIONS CAN PLAY IN CATASTROPHE MANAGEMENT PLANNING AND EXECUTION.

IMPLEMENTING BEST-IN-CLASS CATASTROPHE MANAGEMENT... HAS BECOME ONE OF THE MOST CRITICAL STRATEGIC BUSINESS DRIVERS FOR THE P&C INDUSTRY.

Property Development in High Risk Zones

While there may be debate about whether there are more catastrophic hurricanes now than in the past, or whether climate change is to blame, one fact is clear: never have so many high-value American homes been built so close to vulnerable shorelines.

Luxury developments can be found on the Gulf Coast shores of Texas, Louisiana, Mississippi and Alabama, as well as all of Florida's coast, and up the Atlantic seaboard all the way to Maine. The endangered coast includes some of America's priciest real estate in New York City and on Long Island, which—according to some weather analysts—is due for a repeat cycle of the severe hurricane seasons of the mid-20th century.

In 2007, insured coastal exposure in the U.S. exceeded \$8 trillion. Both Florida and New York approached \$2 trillion; the heavily populated Northeastern states of Massachusetts and Connecticut ranked third and fourth. Some studies have estimated that coastal properties account for 17 percent of all insured property values in the U.S. Dr. Robert Hartwig, president of the Insurance Information Institute (III), predicted that a future major coastal hurricane could cause more than \$100 billion in losses—2 times the \$40.6 billion impact of Hurricane Katrina—because of increased property development and the high value of coastal property.¹

The population shift to the Sun Belt has not just impacted coastal development in the Southeastern U.S.; it also has spurred hyper-growth for inland centers from the Rocky Mountains to the Pacific. In the West, the housing boom has brought high-value property development to areas formerly left untouched: remote mountainsides prone to mud slides, forest land threatened by wildfires, and along fault lines where seismic activity is most likely.

While the tropical storm environment has been relatively quiet in recent years, tornadoes and thunderstorms with heavy winds in the South and Midwest accounted for the three costliest American catastrophes of 2009². Conflagrations like California's Station Fire and Colorado's Four Mile Fire have plagued high-value communities in the West. The 2010 oil spill caused by the explosion of BP's deepwater drilling platform in the Gulf of Mexico could cause over \$1.5 billion in claims, according to the III.

Without question, implementing best-in-class catastrophe management for natural or manmade events has become one of the most critical strategic business drivers for the P&C industry.

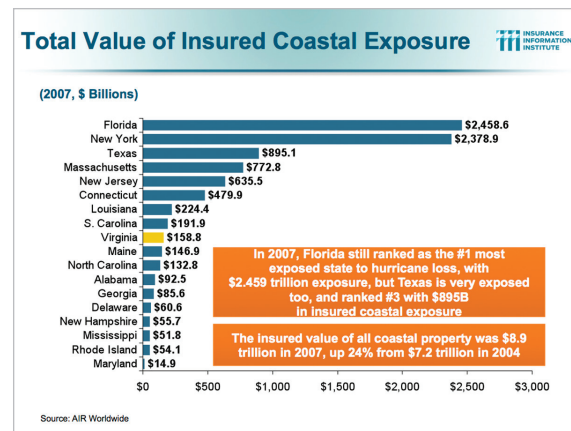


Figure 1. Population shifts and luxury developments continue to increase coastal exposure along the United States. Total value of insured coastal property was just shy of \$9 trillion in 2007. Source: Insurance Information Institute.

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ZIP Codes: For Mail Delivery, Not Risk Assessment

Legacy underwriting processes have traditionally used ZIP Code tables (and, in some cases, on-site inspection) to assign rating territories, manage risk and set premiums. But ZIP Codes were never designed to pinpoint physical addresses; their sole function is to optimize mail delivery. ZIP Codes include many inconsistencies. They may cross municipal boundaries, cover many square miles of diverse terrain (and variable risk hazards), or accommodate “vanity addresses,” where a property physically located in one municipality is given a phantom address in a more desirable adjacent community. And they are updated constantly, with an average of 25,170 Zip Code changes every month.³

ZIP Codes typically aren’t precise enough to accurately calculate proximity to risks, such as a property’s distance to an exposed coastline. They aren’t helpful in settings where a post-office box is the primary delivery point.

And they may be least reliable in locating highest-value property. In the name of privacy and security, many exclusive enclaves—such as gated communities – do not list a home’s physical location as the household’s delivery point. The four thousand residents of Carmel-by-the-Sea, Calif., a city of almost three square miles with some of the most expensive residences in the U.S., do not have mail delivered to their homes; they collect it at their post office.

Geocoding: When Address Accuracy is Paramount

Geocoding is an essential component of location intelligence. The process of geocoding an address assigns a unique latitude and longitude to a physical location. It can pinpoint the location down to the building rooftop (parcel centroid) level—an unprecedented degree of

“point-level” accuracy. Address-point-level geocoding can very precisely determine a property’s distance to the coast, for example, or its proximity to a fault line or an area prone to brush fires. Geocoding can also interpolate the location of an address on a street segment, for “street level” geocoding. Its technologies and processes are integral to any business where address accuracy and location intelligence are critically important.

Geocoding tools play a central role in address standardization, the process of verifying that each address component meets U.S. Postal Service guidelines to improve mail deliverability and overall efficiency. Up to 40 percent of manually entered address information contain errors. Tools that merge spatial data with regularly updated USPS address files—a process called conflation—provide a very high level of address integrity. Optimally, geocoding software tools are integrated with CASS-certified address standardization, which verifies that each address component meets U.S. Postal Service guidelines to improve mail deliverability and overall efficiency.

From the Back Office to the Forefront

In the P&C industry, geographic analysis has gone from being a back-office function—reviewing underwriting decisions “after the fact”—to a role in real-time underwriting decisions. After the catastrophes of 2005, carriers and reinsurers are demanding a vastly improved catastrophe risk management methodology.

This transition was spurred in part by A.M. Best Co., which called for a multi-phase overhaul of existing methods (see Figure 2). Among its recommendations: improve data quality by geocoding all properties, and enhance controls by integrating catastrophe management into underwriting.⁴

“WHAT GOOD ARE THE TOOLS IF THEY ARE PROCESSED AGAINST INCORRECT DATA?”

A.M. BESTS

BEST-IN-CLASS RISK MANAGEMENT GUIDELINES

DATA QUALITY
Senior management’s firm commitment
Proper coding of loss exposure
All properties are geocoded
Auditing of exposure coding
Most current Insurance to Value Analysis

MONITORING EXPOSURE
One or more catastrophe modeling tools are used
Aggregate loss exposure is monitored
Potential loss scenarios are considered in addition to modeled output
Monitoring of catastrophe exposure is a frequent and consistent process

CONTROLS
Specific aggregate limits are established using a reasonable and defensible basis
Reinsurance program is based on an assessment of all available tools to ensure appropriate protection
Catastrophe management is integrated into the underwriting process
Management establishes levels of acceptable exposure and clearly articulates the company’s catastrophe risk-management program and how effective controls are

Figure 2

Making Good Decisions and Taking Action in Real Time

When used in operational activities such as underwriting, location intelligence applies the accuracy of geocoded information and the results of geographic analysis in tangible and powerful ways to allow P&C insurers to make better decisions in real time.

It supports intelligent underwriting, straight-through processing and best practices in catastrophe management, such as:

- Address standardization, including front-end address cleansing
- Universal geocoding of property
- Territory assignment
- Risk assignment
- Determining location in wind pool and premium tax zones
- Real-time PML (Probable Maximum Loss) exposure monitoring, which can determine if maximum risk limits have been reached or surpassed within a high-risk area.

Data Quality, Enterprise Address Management and Risk Data

Location intelligence technology is only part of a catastrophe management solution.

“As the industry begins to embrace and leverage all the various risk analysis tools in the marketplace, now—more than ever—insurers need to ensure that all of the policyholder data is complete, accurate and consistent,” says Deb Smallwood, the founder of the insurance consulting firm Strategy Meets Action (strategymeetsaction.com). “What good are the tools if they are processed against incorrect data?”

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Solutions that improve the quality of enterprise data are critical components to location intelligence for catastrophe management. They ensure customer data accuracy, help create a 360-degree view of policyholders and associated risks, and enable access across different departments and lines of business. Enterprise Address Management automates the process of updating customer address data—and reduces the potential for error caused by manual entry.

Risk data offers, in one solution, peril information aggregated from disparate, multiple public data sources (such as the National Hurricane Center and the National Climatic Data Center). Some risk data sets, such as those from Pitney Bowes Business Insight, also incorporate best-in-class, proprietary peril information—containing, for example, the most comprehensive list of fire station locations across the U.S. These data sets combine geospatial and historical information that enables insurers to make better determinations about possible fire, weather, natural disaster or terror-related exposure.

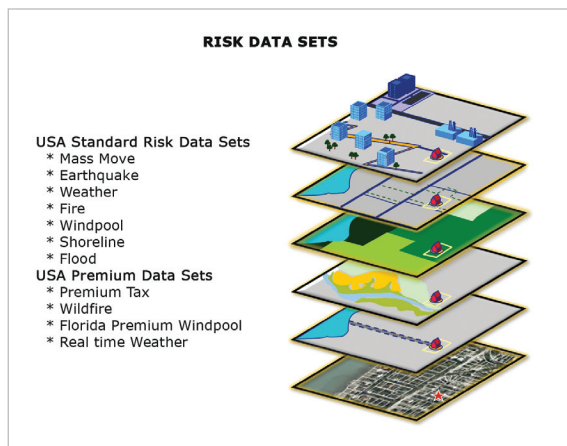


Figure 3. An example of the layers of risk data offered in Pitney Bowes Business Insight's Risk Data Suite.

Harnessing the Power of Location Intelligence

Location intelligence has become a proven, business-critical technology for multiple industries during the past decade. Pitney Bowes Business Insight's location intelligence solutions are used tens of millions of times every day by leading online map services, national fast-food delivery chains, E-911 response units—and 75 percent of the leading P&C insurers in the U.S.

Improved catastrophe management is imperative for a carrier's success and survival. It depends on superior data quality and mitigating risk during the front end of the underwriting process.

Geocoding and the ability to integrate its location intelligence into operational processes are crucial to those initiatives.

Pitney Bowes Business Insight provides location intelligence technology and end-to-end data quality and risk data solutions, along with consulting services, for insurance carriers. We can explore with you how our solutions can help you better manage risk exposure, reduce expenses and improve your competitiveness.

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