inhance®

For informed exposure data analysis and augmentation

EXPANDING THE EXPOSURE MANAGEMENT SERVICES

WITH A PLATFORM & DATA ANALYTICS DRIVEN SOLUTION

Inside cover: Global Earth Observation (EO) data is used with image processing and machine learning techniques to identify development patterns for modeling building exposure, locating assets, and estimating replacement costs. In this image, widely insured assets in Europe, America, and Japan are depicted in dark blue. Similar development patterns are sparse in developing regions, despite dense population (in yellow).

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Crafted for experts by experts

Inhance® is a data analysis and validation platform developed for the (re)insurance industry by ImageCat in close co-operation with the players in the London and US markets.

FacFinder™ is an exposure accumulation and hazard mapping platform for (re)insurance underwriters.

Better exposure management focuses on understanding and improving your risk data
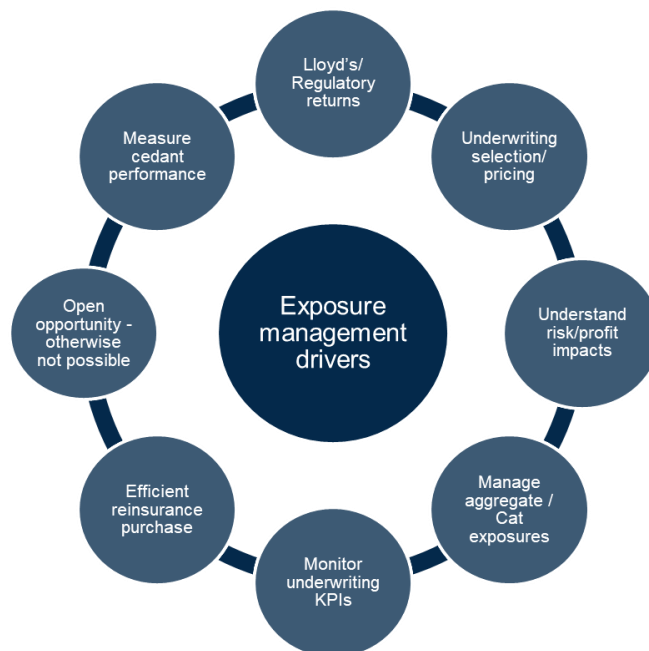
Insurance Market Cycle and Other Challenges Ahead

The property and casualty (P&C) insurance industry is facing new challenges as well as uncertainty not felt in over a decade. Current market condition is expected to see modest hardening while interest rates are expected to remain low. New market competition from InsureTech companies are driving established insurers to look for new ways to compete for market share. New technologies such as Earth Observation (EO) data, Artificial Intelligence (AI), and Internet of Things (IoT) are transforming how insurers underwrite risk and deliver services.

Role of exposure management

Exposure management in (re)insurance companies focus on understanding and improving their exposed risks in order to price business, balance portfolios, allocate capital, and meet regulatory demands. Solvency II requires insurers to examine data quality, determine provenance of data, and account for uncertainties in data, pricing and capital. New market opportunities require review of exposure and risk from a wide variety of hazards. Managing accumulation and catastrophe exposures requires efficient data analytics. Monitoring of underwriting KPIs is enabled through systematic exposure management processes. The role of exposure management may vary from company to company depending on individual circumstances, i.e. size and type of business as well as extent and focus of underwriting/operational management and control.

A Time for Reassessment with New Technologies

Inhance® leverages Earth Observation (EO) technologies to deliver solutions

Promise of new technologies in Exposure Management

There are new technologies available with the potential to disrupt the insurance value chain. Older and traditional insurance market players will be challenged by younger and technology driven users and decision makers.

Earth Observation (EO) based Exposure Data Solutions

EO imagery (satellite, aerial photos) used to develop regional or country-level building exposure data significantly enhances the speed and accuracy of quantifying the building characteristics necessary for natural hazard risk assessment, particularly in developing countries and emerging insurance markets. Such EO-derived exposure data can be used as a basis to develop products that help measure and underwrite risk in communities globally.

Machine Learning to Solve Data Quality Problems

Machine Learning, an application of Artificial Intelligence (AI), can now benefit insurance companies by streamlining the data cleaning process. Using a series of data quality rules, AI models can be leveraged to deliver data cleansing solutions for insurance companies. The AI based data cleansing and data preparation approach can unlock unmatched opportunities for efficient underwriting, enhanced risk selection, better pricing, and customer growth.

APIs, Platforms, and Cloud based Solutions

Analytics are now a central component of insurers' decision making process. Products and solutions are delivered through APIs, platforms and the cloud. Using these technologies and an analytics driven approach, companies are focusing on efficiencies and profitability at levels not imaginable before.

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Focusing on Solutions that Drive Efficiency and Profit

Inhance® solutions are a perfect balance of innovation and practical operational needs

Alignment of solutions with the priorities of insurance companies

In the changing risk management landscape for P&C insurers, there are several key priorities for insurance companies. Technology solutions that address these priorities will drive efficiencies for insurers. The key priorities include:
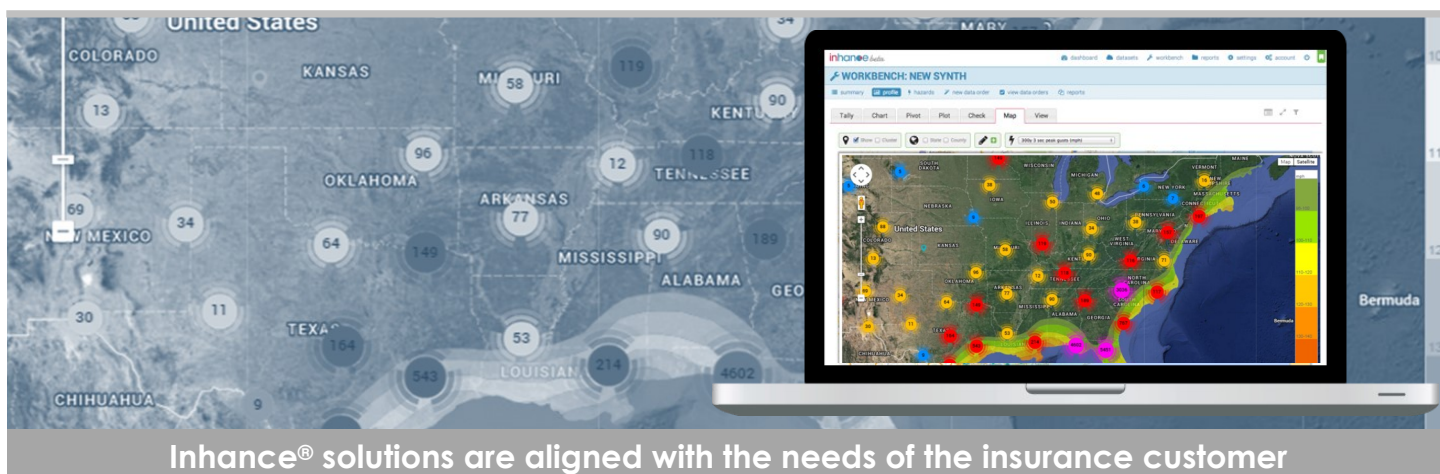
♦ Focusing on innovation while balancing operational realities and future needs

♦ Solving practical issues for decision makers and business operations

♦ Demonstrating improvement of outcomes that the solutions create, i.e. better quality data, confidence in CAT modeling results

♦ APIs for enabling new services and accelerating implementation

♦ Clear understanding of "how" and "where" products and services are adding value and improving data and decision confidence

♦ Clear understanding of pricing model for solutions

♦ Solutions that enable companies to price, underwrite, and allow to take on risk on one hand, while providing data and analytics to improve efficiencies and reduce costs will drive profitability.

What are the priorities for P&C insurance companies

♦ Mature industry, conservative, with large legacy systems looking for ways to harness new technologies

♦ Sometimes lacking internal know how for implementing new technology solutions

♦ Innovation is important, but need to balance with operational reality and costs

How ImageCat exposure solutions can help

♦ ImageCat solutions are driven by innovation and proven to work for large insurance companies

♦ ImageCat are industry leaders in the EO data space

♦ Customers benefit from the latest advancements in EO based exposure data and machine learning for data quality solution

♦ Simple models for pricing and easy deployment options

A Strategic Roadmap for your Exposure Management

Inhance® solutions are aligned with the needs of the insurance customer

1. Focusing on your needs

Staying customer focused and addressing the following needs will help insurers to radically transform exposure management operations:
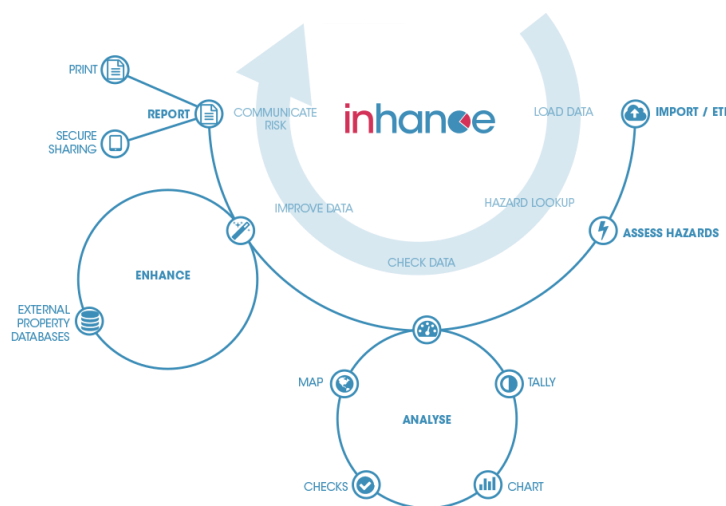
- Pricing and underwriting portfolios accurately
- Exposure management with confidence
- Portfolio valuation for proper price-setting
- Regulatory compliance goals achievement
- New market opportunities identification to maximize revenue
- Loss avoidance by addressing underinsurance
- Cost-effective and efficient

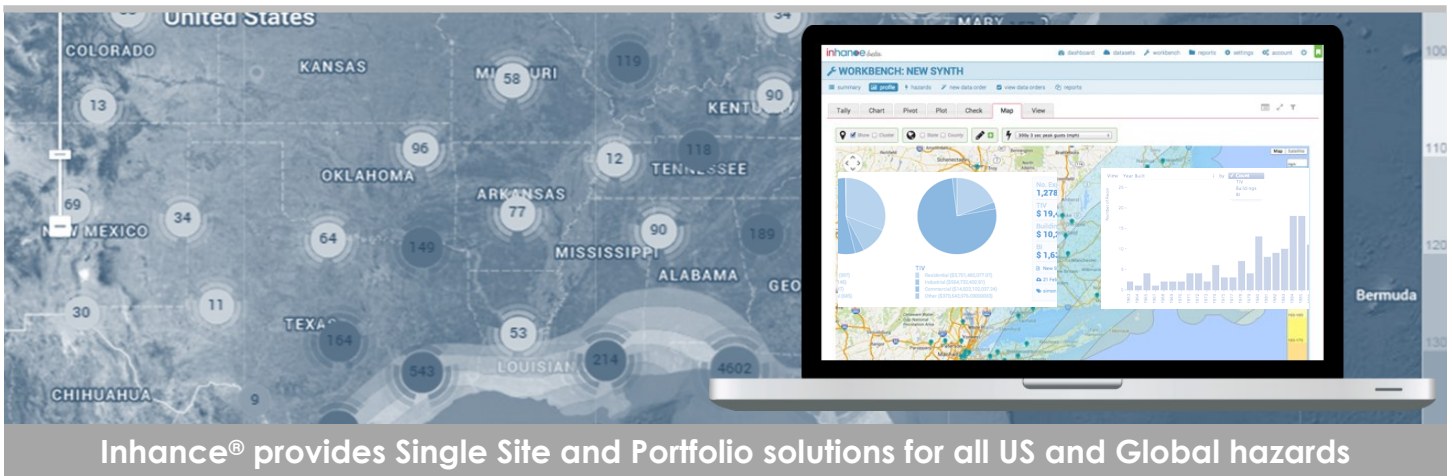## 2. Use of best in class technology

- EO-based next generation insurance solutions
- Machine learning based data quality solutions
- Best in class Analytics dashboards and API technology for access

3. Leveraging Data and Technology Partnerships

- Use of specialty data from multiple sources
- Integration of mapping and data analysis technologies

Partnerships to Deliver Wide Ranging Value to Insurers

Inhance® provides Single Site and Portfolio solutions for all US and Global hazards

To be competitive in today's business, P&C carriers need to draw from multiple technology, data, and service companies. Inhance's expansive partner network offers its clients the breadth and depth of critical and complementary solutions needed to maximize success and profitability of business.
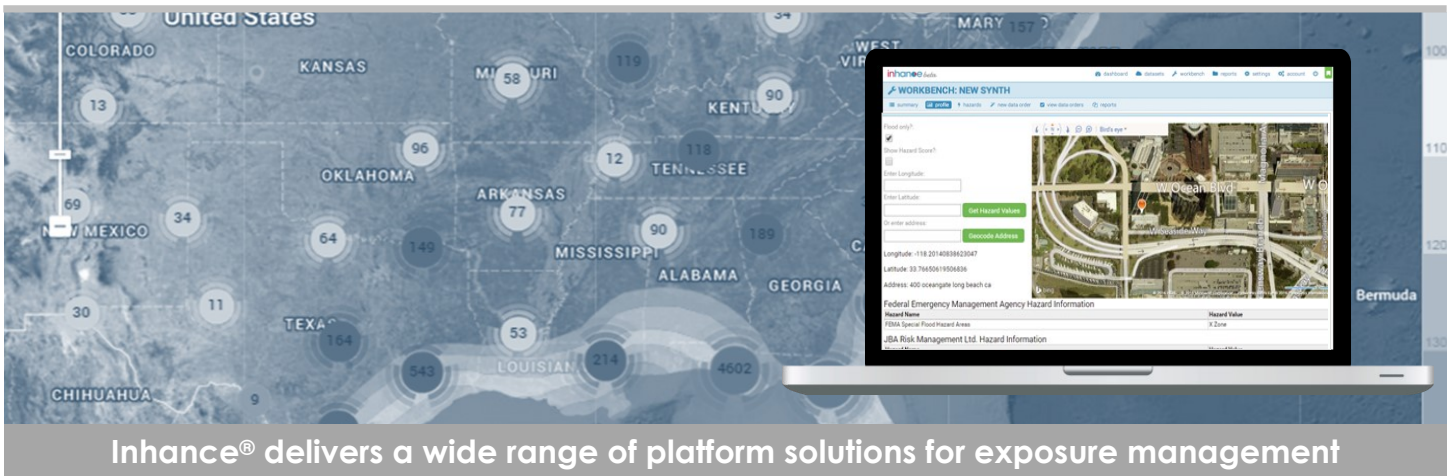
Data partners

Impact Forecasting

AON
Empower Results®

FATHOM

JBA
risk management

KatRisk

KINETIC
ANALYSIS CORPORATION

GfK

Technology partners

Bing maps

amazon
webservices™

rackspace

Inhance® Data Market

♦ The Inhance data market provides instant access to exposure comparison data and more than 3,500 layers of hazard data.

♦ Unlimited use or pay-per-use access to third-party exposure datasets from a range of market leading providers.

♦ Customers benefit from instant, fair access—we have taken the hard work out of accessing these data for you. Several datasets are provided free of charge in Inhance.

Delivery partner

Pro.

Delivering a Wide Range of Solutions

![inhance]

Inhance® delivers a wide range of platform solutions for exposure management

Inhance® Solutions

Inhance Coastal Risk Investment Strategy Program (CRISP) new

Inhance Wildfire Risk Assessment Program (iWRAP) new

Inhance Platform— Basic, Pro, Premium

Inhance Single Site - All Hazards

Inhance Flood Single Site

Inhance Heuristics

Inhance Hazards API
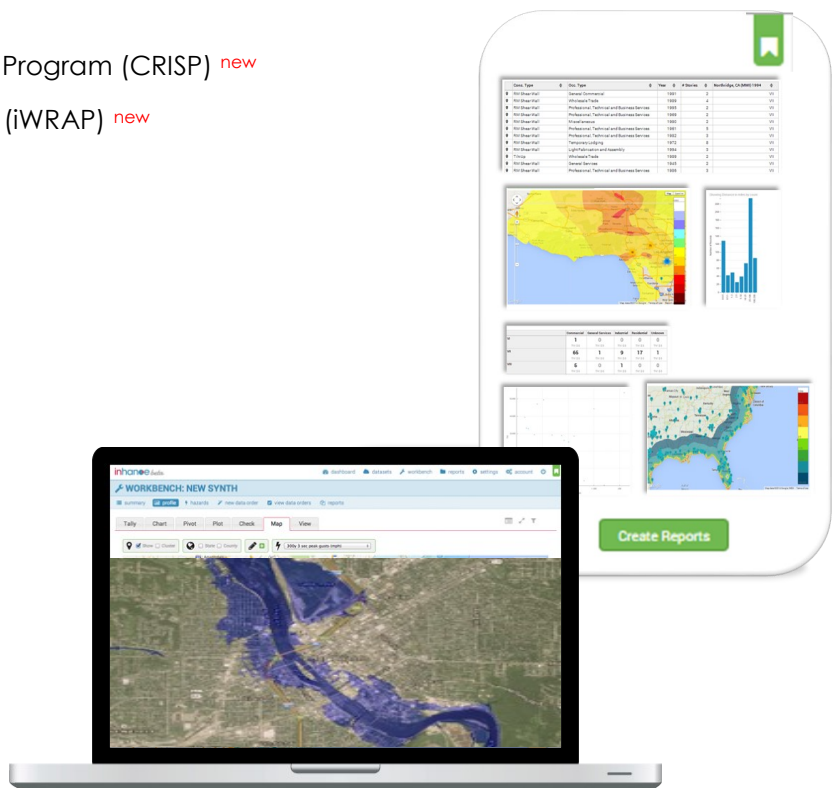
Inhance Heuristics API

Inhance Insurance To Value (ITV) API

Inhance Spatial Disaggregation API

FacFinder™ Solutions

FacFinder Premium

FacFinder Flood

Learn more about our solutions and how we can help you by getting in touch:
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We are helping to solve insurers' Exposure Management problems. Here are some of the reasons why clients partner with us:

Team Commitment: Committed and experienced team of platform programmers, data analysts, remote sensing scientists, and business leaders focused on building out the platform and data analytics area.

Team Focus: Focus on remote sensing/geospatial information and links together information and creates content that puts remote sensing and geospatial insights in the hands of decision makers to solve big data problems.

Insurance Domain Knowledge: Experts on insurance technology and data domain to provide solutions to more accurately characterize risk. We have developed an extensive list of engineering and fundamental data quality rules. In-depth knowledge of insurance data for building, infrastructure, and critical facilities. Years of thinking and development behind usable metrics for remote sensing and geospatial information – building values aggregated at a point location, risk scores, damage criteria, hazard ranks, vulnerability indices, flood warnings.

Platform and Data Analytics Experience: Creating content and platform for using data (remote sensing, geospatial, and other structured and non-structured data) for risk management and disaster planning.

Data Cleansing Domain Knowledge: In the data cleansing business for over 15 years, with experience dealing with raw, unstructured data cleansing for a host of our insurance customers.

Global Footprint: We do work globally for large multi-national clients. Deep involvement in global disaster management. Understand the mega risks and their impacts globally – Hurricane Katrina and Sandy, Tohoku Earthquake, Haiti Earthquake, Indian Ocean Tsunami, Nepal Earthquake.
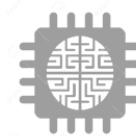
Dashboard & Data visualization

Analyst workflow enhancements

Cloud-based solutions

Data cleaning and enhancement logic

Global footprint

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About Us

ImageCat is an international risk management innovation company supporting the global risk and catastrophe management needs of the insurance industry, governments and NGOs.

Inhance®'s novel analytics tools help you identify spurious and damaging flaws in exposure datasets. Our satellite imaging solutions provide rapid insight into unfolding disasters or previously unknown risk. With unrivalled access to global hazard data in our software, insurance clients can make better informed decisions regarding their risks.

FacFinder™ is an exposure accumulation and hazard mapping platform for (re)insurance underwriters.