

NEW AGE DIGITAL RISK MANAGEMENT FOR PROPERTY INSURANCE

A Whitepaper by Tech Mahindra Insurance Practice

Objective of this paper is to present the new age digital risk management trends and techniques in the property insurance domain that will help P&C carriers transform their risk management practices, including effective risk assessment, risk monitoring and value-centric customer engagement. This paper also provides an overview of Tech Mahindra's in-house risk management offering **Sentinel** that is designed with new age technologies to provide efficient risk scoring through connected ecosystems and devices like sensors, drones, geo spatial image analysis & predictive decision models.



Introduction

There are approximately five million commercial buildings in the United States which are insured by 2500+ property and casualty Insurers. With the current global crisis situation, “stay at home” & “social distancing” are the new normal. Also with multiple hurricanes, wildfires, and mudslides in the past several years, P&C insurance industry has been hit hard. It now faces the stress of trying to return to being profitable. There is an increasing preference in the P&C industry for greater selectivity of new risks. In recent days due to emerging risks, climatic changes & increase in adhoc risks from temporary structures is leading to poor combined ratios (greater than 100%).

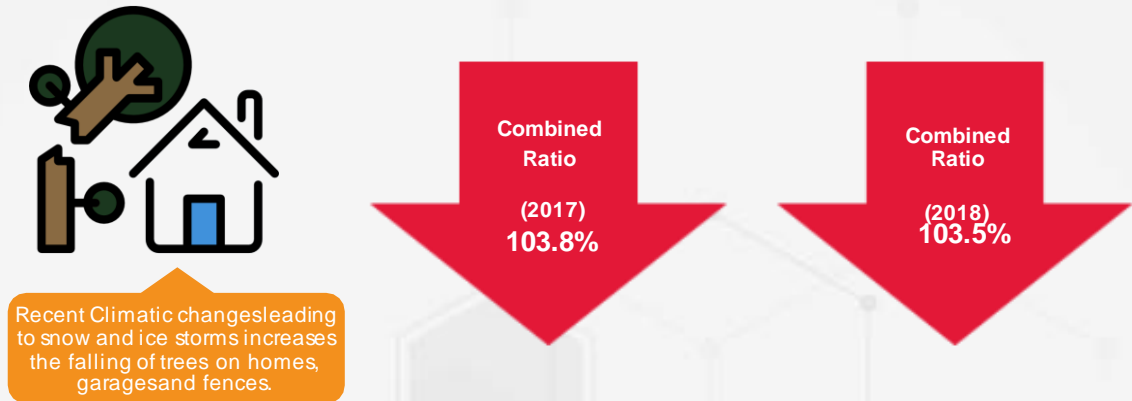


Figure 1: Adhoc Risk (Ex:Falling of tree) Image courtesy: flaticon.com

To overcome the threats of emerging and new risks and the increasing loss ratio, Insurers are focusing on following practices.

Risk Management: Digital technologies leverages ever increasing volumes & type of data for better risk assessment and management. Data from connected devices is being consumed to assess risk more accurately. The new types of data is also being utilized for better risk control and loss prevention.

Customer Engagement: Customer engagement not only includes customer experience, but customer-centric products, new benefit services and new business models as well. Users can create customizable engagement campaigns, stimulating and rewarding desired behavior. Ultimately, insurance companies to achieve significant savings through lower claim costs and facilitate business growth through lower acquisition cost.

US Property Insurance - Facts and Statistics

A. Property Insurance Losses by Cause, 2013-2017

P&C insurers paid out \$101.9 billion in property losses related to catastrophes in 2018. About one in 325 insured homes has a property damage claim related to fire and lightning. Property damage, including theft, accounted for 98.1 percent of property insurance claims in 2018.

Cause of loss	2013	2014	2015	2016	2017
Property damage (2)	95.5%	95.8%	96.3%	96.6%	98.1%
Fire and lightning	28.5	23.9	21.6	25.0	35.1
Wind and hail	30.0	28.7	21.2	34.1	38.2
Water damage and freezing	27.1	34.0	46.1	30.2	19.5
Theft	3.4	2.4	1.7	1.8	1.0
All other property damage (3)	6.4	6.8	5.6	5.5	4.4
Liability (4)	4.5	4.2	3.7	3.4	1.9
Bodily injury and property damage	4.3	4.0	3.6	3.2	1.8
Medical payments and other	0.2	0.2	0.2	0.2	0.2
Credit card and other (5)	(6)	(6)	(6)	(6)	(6)
Total	100.0%	100.0%	100.0%	100.0%	100.0%

FACT 1
Growing losses from Property damage & Theft in last 5 years upto 98%

Table 1: Property Insurance Losses by Cause

Source: <https://www.iii.org/fact-statistic/facts-statistics>

B. Incurred losses in Homeowner Insurance (2012-2017)

Table 2 below depicts that insurance industry have spent approx. 56 billion U.S. dollars to handle the home insurance incurred losses.



Source: <https://www.statista.com>

Table 2: Incurred losses in Homeowner Insurance 2012-2017

With above fact & stats, it is evident that conventional risk assessment and risk & claim control techniques needs a transformation **with new-age digital techniques**. Proactive detection in advance of the occurrence of various claim events to prevent or minimize the financial impact is the need of the hour. By leveraging the emerging technologies, integrating them with risk management and customer services approaches, insurers can design risk assessment and risk management strategies to improve their combined ratios.

New Digital Developments Applicable to Property Insurance

Insurers of the future will prefer to improve their risk selection & risk minimization methods to achieve healthy underwriting performance. They are keen to focus on the following digital capabilities to achieve the objectives.



GEOSPATIAL ANALYTICS

Geospatial analytics providers are aiming to enable better risk assessment by providing location specific risk metrics for properties. Advances in AI analytics, combined with cheaper aerial imagery, have created an opportunity in property insurance.



DRONE INSPECTIONS

Drones can help gather data before property risks are insured, assist in preventative maintenance, and assess damage after catastrophic events. It is possible to provide real time insights with automated roof measurement and digital terrain modeling.



EMBEDDED HOME INSURANCE

As home buying goes digital, home insurance will more closely integrate into those platforms. We are already witnessing P&C carriers engaging property focused IoT (Internet of Things) device vendors as part of their property insurance offerings.



AI & ANALYTICS

AI & Machine learning is widely adopted for fraud detection and risk assessment to better predict and mitigate risk. AI-powered analytics can distill the expanding set of real-time data signals into a dynamic view of risk that can be used to trigger mitigating actions or consideration of risk transfer alternatives.

Figure 2: New age digital trends in property Insurance

Above detailed new digital value drivers will improve the insurers ability to transform their businesses and secure their future competitiveness.

SOLUTION – Sentinel (TechM Powered Digital Risk Management Offering)

In view of the emerging advances in the risk assessment, monitoring and customer analytics areas, Tech Mahindra have designed unique offering called **Sentinel**. The key features of this offering are as depicted below. (Refer Graphic 3).



Figure 3: Sentinel Overview

Image source: Tech Mahindra

Sentinel leverages Geospatial image analysis, IOT sensors feed and drones for holistic risk engineering for property structures, as part of risk assessment, profiling and pricing function. It also supports sensor-based monitoring of properties for early detection of claim events like smoke/fire, burst pipes and boiler explosions to reduce claims thus improving customer engagement.

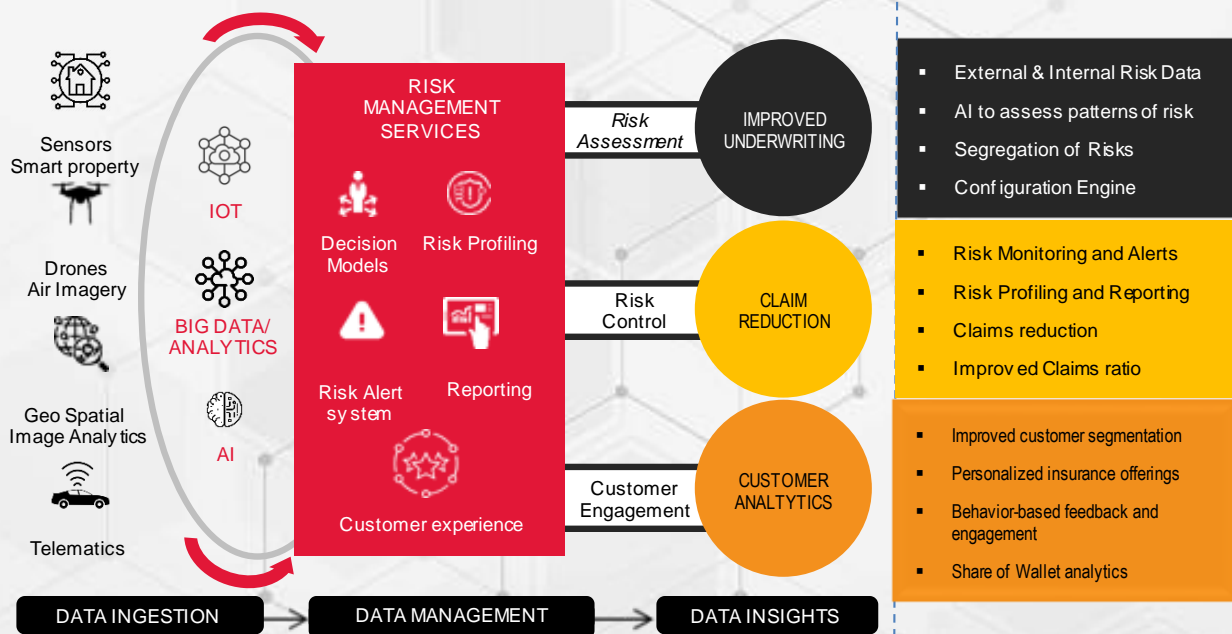


Figure 4: Sentinel –Solution Diagram

Image source: Tech Mahindra

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ABOUT TECHMAHINDRA

Tech Mahindra, a leading global IT company represents the connected world, offering innovative and customer-centric information technology experiences, enabling Enterprises, associates and the society to Rise™. Tech Mahindra is a USD 4.9 billion company with 118,500+ professionals across 90 countries, helping over 930 global customers including Fortune 500 companies. Its convergent, digital, design experiences, innovation platforms and reusable assets connect across a number of technologies to deliver tangible business value and experiences to our stakeholders. Tech Mahindra is amongst the Fab 50 companies in Asia (Forbes 2018 list). Tech Mahindra feels proud to be the part of the USD 19 billion Mahindra Group that employs more than 200,000 people in over 100 countries. The Group operates in the key industries that drive economic growth, enjoying a leadership position in tractors, utility vehicles, after-market, information technology, and vacation ownership.

Tech Mahindra @ Insurance sector

Tech Mahindra has worked with several global Insurance Carriers across all the lines of business (Life/Non-Life/Health) over the last 20 yrs. Our global Insurance customers include 1 of top 3 Insurers in US, Europe, Australia and India. This experience involves managing various systems related to core policy processing including product configuration, New Business & Underwriting, Claims handling, Finance & Accounting, legal-compliance & regulatory requirements, and reporting. We have proven expertise in process automation, straight through processing, digitization and business transformation initiatives, as well as application development, testing, and maintenance activities. Tech Mahindra's Insurance Business Unit has a dedicated team of domain specialists who bring in the business knowledge to the delivery teams and projects. Our Domain team members are involved in various activities like:

- Business Consulting
- Insurance Process Transformation Services
- Design and Development of Insurance Solutions
- Platform Implementation and Support
- Insurance Training & Knowledge Management
- Cutting Edge Solutions based on the most recent / latest technologies

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