

PROACTIVE PREVENTION IS A BETTER WAY TO INSURE

The Potential of Risk Prevention Technology for the Insurance Industry



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Despite the challenging economic backdrop, the Asia Pacific insurance market is now more dynamic than ever. **2023 saw 52 M&A deals in the region's insurance sector¹ and premiums are set to grow by 2.3% YoY in 2024-2025².** The industry landscape is rapidly evolving, driven by extenuating market pressures, sustainability requirements, and technological innovation and adoption.



This whitepaper looks at the key role risk prevention services will play in reshaping the entire insurance industry. It explores the ways these services mitigate risks, create new business opportunities, drive sustainability, and leverage innovative technologies. Using analysis, insights, and real-world examples, this study reinforces the growth and impact rationale for insurance companies to introduce risk prevention into their overall business strategy.

Insurance Market Under Immense Pressure

The insurance industry in the Asia Pacific region faces a crossroads. It is currently grappling with slowing growth, varying profitability, and market fragmentation, while simultaneously being menaced by ongoing geopolitical tensions, supply chain struggles, and rising inflation rates. At the same time, the industry is also encountering mass-scale adoption of new technologies, the rise of InsurTech and consequent increased competition, more acute awareness of cybercrime and climate change, and an increasingly discerning customer base.

However, amid all the headwinds, a positive change for the industry is on the horizon. Driven by emerging technological capabilities and growing consumer expectation, a shift from traditional protection to proactive risk prevention is now imminent. As time goes on, the industry will increasingly be able to focus on preventing or minimizing adversity in advance rather than merely reacting to it. Pivoting toward risk prevention as a strategic imperative will be tremendously beneficial for the industry and for people's lives.

Sustainability is Top of Mind



ESG is now part of the corporate vernacular. New reporting requirements and national sustainability goals ensure that companies commit to sustainability and social responsibility. Businesses in the Asia Pacific region are now obliged to report sustainability metrics and are focusing more intently on ESG due diligence³ as they come under increased scrutiny from consumers, regulators, boards, and shareholders. Insurers are no exception; they are being compelled by the human and economic cost of climate change (and the rise of cyberattacks⁴) to embrace social responsibility and sustainability. In this context, risk prevention services offer a unique opportunity to align business objectives with environmental and societal benefits. By mitigating risks and preventing losses, insurers can contribute positively to the well-being of communities and the planet.

1 Clyde & Co, Insurance M&A activity at lowest level for a decade, February 27, 2024

2 Swiss Re Institute, Global outlook: Insurance industry strengthens resilience in challenging environment, says Swiss Re Institute, November 21, 2023

3 White & Case, ESG in APAC: 3 Trends to Watch in 2024, March 7, 2024

4 Tata Consultancy Services, ESG adoption among APAC insurers

Innovation in Insurance

The insurance sector is currently undergoing a digital transformation, as cutting-edge technologies such as artificial intelligence (AI), Big Data analytics, and the Internet of Things (IoT) begin to manifest in daily procedures. Claims are now processed digitally, and insurers offer a wealth of digital tools that end users can access to view projections, premiums, and coverage. Self-service portals and apps also allow end users to access their policies through sleek, clean, and intuitive user interfaces.

Risk prevention is also evolving with new innovation, especially AI. AI will play a major role in accelerating the shift from protection to prevention, and is already being implemented by insurers to help enhance risk assessment accuracy, predict and proactively mitigate emerging risks, and reduce insurance costs. In a 2023 market assessment, McKinsey estimated that AI could add approximately US\$1.1 trillion⁵ to the annual value of the global insurance industry. At NEC, we are looking to make this potential a reality. Continuing a track record of over 100 years at the forefront of the technology industry, we now aim to apply our AI expertise to support the imminent transformation of the insurance industry. Our track record in this area goes all the way back to 1989 when we conducted our first research into facial recognition, based on optical character recognition – which itself has been researched and employed by NEC for over 50 years.

As of 2023, we at NEC have supported over 8,000 AI projects across various sectors. Some of these projects pertain to industrial and corporate insurance, where we provide preventive risk management solutions designed in close partnership with insurance professionals. Soon we will be offering a new suite of service solutions with revolutionary implications for the entire sector.

Opportunities Aboard

Risk prevention services can unlock new business models and revenue streams for insurers while making their customers safer and healthier. The key to this adaptation is data. Insurers have long analyzed historical data in order to price premiums, but IoT device technology such as wearables and new vehicle sensors now presents them with a massive volume of available data. Applying AI to this often unstructured data will transform the way insurance is delivered and accelerate the shift toward risk prevention.

This catalyst will allow insurers to better predict adverse events in advance, delivering key insights that consumers and businesses will greatly value. From health management programs to safe driving support systems, insurers will be able to diversify their offerings and cater to evolving customer needs.



For example, in certain jurisdictions such as Japan where regulations permit, insurers are able to price motor insurance policies using data collected through telematic solutions that track safe driving behaviour. Health insurance policies can also be priced in accordance with people's activity levels as recorded by a wearable device.

New Horizons, Vast Potential

Risk prevention services are poised for exponential growth. The market for insurance analytics – the software behind risk prevention – grew from US\$11.6 billion in 2022 to \$13.52 billion in 2023, and Asia Pacific is expected to be the fastest-growing region for the market between now and 2027⁶. With increasing awareness of risk mitigation and new regulatory mandates that emphasize preventive measures, demand for these services is already on the rise.

Insurers will soon have an opportunity to tap into these technologies, precipitating a collective shift in the central purpose of insurance. Instead of reimbursing damage and controlling losses, insurers will be able to incentivize behaviors that minimize risks.

When combined with technology-enabled cost reductions and deeper capital pools, **this shift will create tremendous value for all parties and could propel global insurance premiums to \$10 trillion by 2030⁷**. For insurers and their customers, the introduction of preventive services heralds a new and more intelligent era of risk management.

Serving a Larger Purpose

Risk prevention services promise far more than just financial protection – they can contribute to human well-being on a broad scale. Let's take health as an example: chronic diseases are responsible for 74% of all deaths worldwide, but 80% of chronic diseases like heart disease, stroke, and type 2 diabetes are preventable through lifestyle changes. The current gap between awareness and action is exactly where insurers can step in with risk prevention solutions. They will be in a position to incentivize healthy living and push the needle in the direction of preventive health. By encouraging customers to adopt healthy lifestyles, insurers can extend their significance beyond financial transactions and foster a wider culture where health and wellbeing is valued and prioritized⁸.



Furthermore, by focusing on disaster prevention and creating safer living environments, insurers can play a vital role in building resilient communities and mitigating societal risks. Thus, integrating risk prevention into the core of insurance operations will be enormously consequential for our societies in the future.

Technological Drivers

AI, big data analytics, machine learning, IoT, and wearable devices are currently revolutionizing risk prevention. These technologies enable insurers to gather real-time data, analyze complex risk scenarios, and deliver personalized preventive solutions.

⁶ Insurance Business, Insurance analytics market growing – report, May 10, 2023

⁷ Bain & Co, The Future of Insurance: As Risks Mount, Insurers Aim to Augment Protection with Prevention, November 8, 2021

⁸ World Economic Forum, Insurance, wellbeing and social purpose: paving the way for a healthier future, January 10, 2024

At NEC, we are committed to innovation and are now applying our deep expertise to the insurance industry using the following solutions⁹:



Invariant Analysis: Predictive maintenance solution which uses steady-state data to create AI models that correlate information from every kind of sensor. AI models can even be created without actual accident data. This method can be used to detect faults and anomalies in facility machines.



Satellite Image Analysis: Using SAR satellite images, NEC technology can monitor landslides and ground subsidence, detecting movement down to the millimeter scale. It can also monitor crop growth or measure the extent of ocean oil spills.



"NEC cotomi" Generative AI Services: "NEC cotomi Pro" and "NEC cotomi Light" are two new high-speed generative AI large language models (LLMs) that use the latest training data and architectures.



Real-time Video Analytics: Monitors a specific location, analyzes the behavior and activity of each individual in frame, and issues alerts when necessary to pre-empt emergencies.



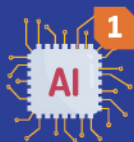
Predictive Health Care Solutions: These tools analyze blood samples or health readings to predict diseases or future health conditions. Can be used by health insurers to incentivize healthy behaviors as part of risk prevention.



VR/AR/MR Solutions: Replicate realistic scenarios that help with risk awareness training, which is especially useful for security personnel.

Real-world Applications

Many of NEC's solutions have been successfully integrated into the wider matrix of risk prevention solutions. They bring manifold advantages – from enhanced risk prediction and proactive risk mitigation to streamlined claims processing and improved customer engagement. Here are some examples of clients which have gained tangible benefits through our solutions:



1 MS&AD's business operations in Japan have been greatly enhanced with the introduction of NEC's dotData system. dotData allowed MS&AD to efficiently design and build the AI models used in the MS1 Brain system that now supports the sales activities of approximately 38,000 insurance agents across Japan. **Through a combination of human cognition, AI, customer relationship management (CRM), and sales force automation (SFA), agents can uncover a customer's potential needs.** Using docData capabilities, MS1 Brain analyzes massive amounts of data and suggests the ideal insurance products to propose and the best approach to use.



2 MS&AD is now using our Gen AI service "MS-Assistant" to boost operational efficiency¹⁰. **This AI assistant offers customers an accessible summary of insurance product terms and conditions or internal operational guidelines, so they don't have to read these documents in full.**



3 Together with Tokio Marine and ABEAM (subsidiary of NEC), we have introduced a sophisticated claims payment system using satellite image analysis to determine the extent and scope of flood damage and obtain other information. **This AI analysis, used in tandem with the company's customer data such as locations and property information, produces a detailed calculation of damage and degrees of flooding in a matter of hours.** The new system is expected to significantly speed up customers' receipt of insurance claims.

Through these and other pioneering NEC solutions, insurers can unlock new levels of efficiency, profitability, and customer satisfaction.

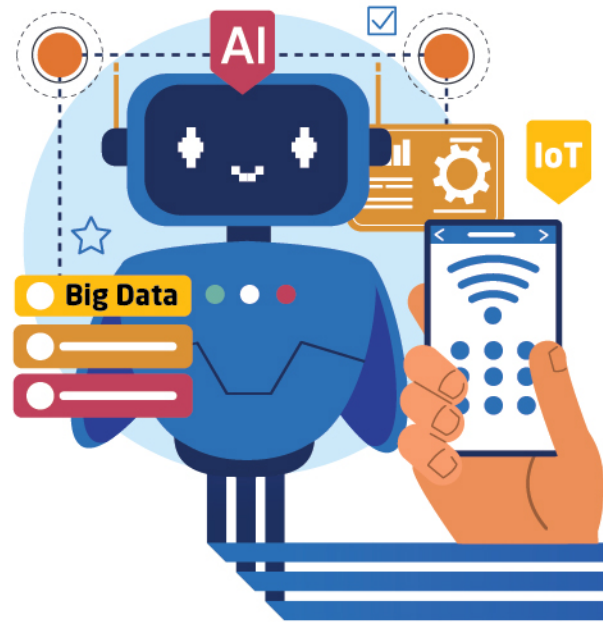
⁹ NEC, Solution List for Insurance Industry

¹⁰ MS&AD, MS-Assistant, An AI-generated Chat Tool for Employees, press release, Dec 14, 2023

Tech Will Be Key to Future Success

The future of the insurance industry will hinge on its proactive adoption of risk prevention innovations. Insurers that embrace AI, Big Data, IoT, and other cutting-edge technologies will gain a competitive edge and position themselves for long-term success.

For example, NEC's quantum computing developments promise rapid efficiencies for claims payment systems. By investing in technology-driven risk prevention services, insurers can future-proof their businesses, safeguard their bottom line, stay ahead of evolving market dynamics, and drive positive societal change.



Capitalizing on Growth Opportunities

Risk prevention services are fertile ground for innovation, offering insurers a way to pre-emptively safeguard their customers' wellbeing and make a positive impact in people's lives through efficient new service models. In the future, prevention will supersede protection as the core goal of insurance solutions, enabling people to avoid accidents and bad outcomes of all kinds. The road is now open for insurers to partner more closely with tech innovators in the search for new products and solutions geared toward a safer, healthier future.

Talk to Us

At NEC, we are developing prevention solutions that insurers and their customers can rely on in the years to come. As insurers embark on their transformation to risk prevention services and help make positive pre-emptive change in people's lives, we stand ready to support them with our talent, solutions, and expertise. We can help insurers navigate the complexities of digital transformation and unlock the next era of insurance.

Contact an NEC representative today to learn more about our predictive insurance solutions and how we can help you deliver protection through prevention.

This whitepaper was created by Kunihiko Amako, Senior Director of Value Chain Innovation Laboratory, NEC Asia Pacific, together with Sandpiper.

Orchestrating a brighter world

NEC

Transformation Through Trust

In the vibrant tapestry of ASEAN's technological landscape, NEC stands as a beacon of transformative power and trust.

For over five decades, we have woven a seamless thread of integrity and transparency through the intricate fabric of governments and enterprises, becoming a confidante, partner, and an indispensable ally in their digital journeys.

Our commitment to societal growth and innovation has spearheaded national initiatives and laid the foundation for enduring relationships - empowering communities and changing lives to propel the region into a new era of prosperity and **trusted transformation**.

NEC Asia Pacific Pte Ltd (Regional Headquarters Singapore)