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Tokio Marine Innovation Lab London

The Future of Insurance

Strategic report in collaboration with
Tokio Marine Innovation Labs, London

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sosa

Foreword

DALJITT BARN
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Insurance undoubtedly plays a pivotal role in people's lives by mitigating loss through services and /or financial compensation. As technology transforms our lives, consumer habits e.g., perception of value and distribution changes, it will also change how people view and buy insurance. Therefore, we are at a nexus in the industry and this collaborative report identifies opportunity and future trends for growth. Without doubt it's our collective responsibility to help with societal issues such as raising awareness for insurance and closing the protection gap. How we do that in a rapidly changing world where sustainability has become an increasing factor in how policyholders view their insurer, will determine the future of insurance.

Once again, I thank our partner SOSA for their research and insights to help us deliver this report.

UZI SCHEFFER
CEO, SOSA

The insurance sector is experiencing a period of rapid innovation while adapting to customer preferences, managing complex risks, new distribution models, and establishing a competitive, digitized footprint for the industry of tomorrow. Those who understand the importance of hyper-personalized customer experiences, intelligently automating the end-to-end insurance lifecycle, and embracing data-driven technologies will lead the way. Amid these shifts, climate change and the ensuing natural catastrophes further exacerbate the global protection gap, which largely impacts developing nations. As the insurance industry moves forward, a digitization strategy will be able to address untapped markets, the widening global protection gap and ultimately leverage the latest technology in order to re-define the relationship between policyholders and insurers.

We are pleased to present this report in collaboration with Tokio Marine Innovation Lab, London. Through this research, we hope to pave the way for the adoption of new technologies in insurance, and their implementation into services that can benefit society.

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00
Introduction

The world today does not look like it did three years ago. The fast pace of digital transformation and advancement in technologies has changed the business and consumer landscape. Add to that the climate crisis and a pandemic that puts the world on hold while simultaneously accelerating all that is digital - and you'll find yourself in an entirely new territory, one ripe with opportunities - particularly for insurance companies.

More critically, the insurance industry has an opportunity to leverage these digital transformations to address the growing protection gaps resulting from the evolution of economies, climate change, and healthcare needs across the globe. If we focus on the effects of climate change and natural disaster, for instance, the most vulnerable people in developing countries where traditional insurance models will not suffice. As leading insurance providers respond to untapped markets and closing protection gaps, new price models and relevant product offerings are being developed.

Some other major trends and opportunities start with a new primary consumer - Gen Z & Millenials- and their needs for a hyper personalized customer experience against the backdrop of the pandemic. With the outbreak of the pandemic came uncertainty - financial, job security, rising unemployment, and lower investment income, as well as cyber vulnerabilities from remote and hybrid work connectivity. Consumers also increasingly expect insurers to offer products and services that address their needs and allow them to interact with them whenever, however, and wherever they choose. In the midst of this changing landscape, how can insurance companies regain this foothold? That's what we cover in this report.

Before we dive into the FUTURE OF INSURANCE, here is a glimpse of the report:

→ A changing climate and globalization of digitization is opening doors into untapped markets in desperate need to close protection gaps. For insurance providers to gain customers among these underserved populations, new pricing models and products are being developed and customized.

→ The demographics of insurance consumers are shifting. From the gig economy, to digital service products, and the sharing economy, these new initiatives will allow insurance companies to address new market opportunities.

→ Hyper personalized products sold through familiar distribution channels are in high demand by consumers. In particular, Gen Z and millennials prefer holistic customer experiences that include personalized value added services.

→ Embedded insurance and affinity partnerships are the best way to meet customer expectations, deliver seamless customer experiences, and remain competitive in the market.

→ First-generation digital transformations are no longer market differentiators, but rather a requirement for staying relevant. Innovations included cloud-based collaboration tools for hybrid work and remote connectivity, digital sales enablement, and omnichannel customer service.

→ The next generation of the customer-insurers relationship requires forward thinking innovation that will differentiate one's impact and relevance in the market. The insurance leaders of today are exploring ways to:

a. Provide value-added services in the precarious and vulnerable reality of cybersecurity and the need for resilience building.

b. Invest in advanced-automated underwriting and the impact of DeFi insurance on the carrier's relationship with intermediaries and claims management.

c. Understand the opportunities the industry has in mitigating risk and engaging with the next generation of consumers in the metaverse.

d. Utilize telematics to create more direct and hyper-personalized customer relationships.

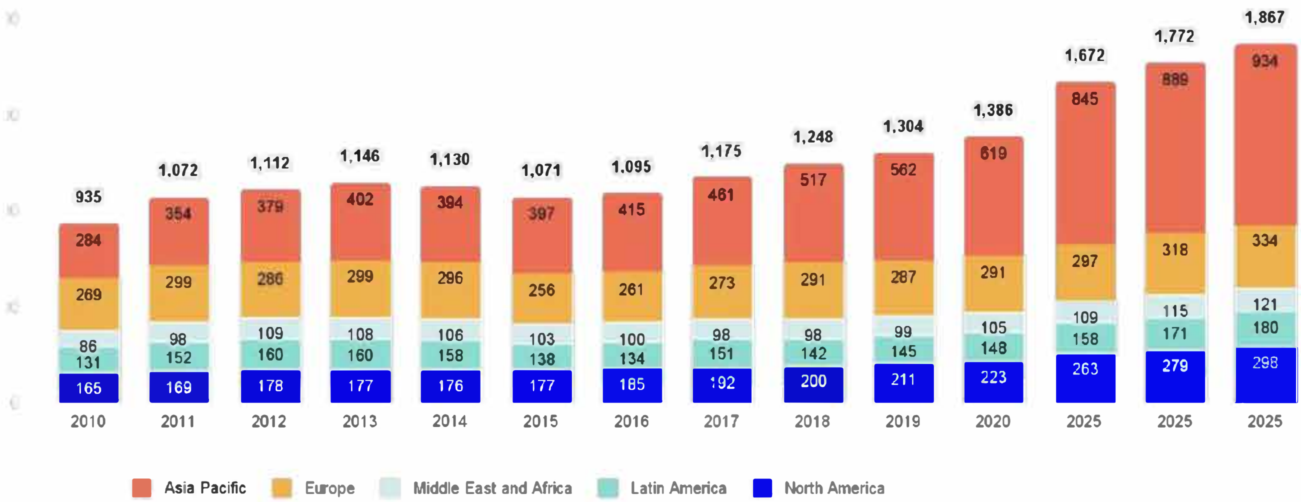
e. Provide pay-as-you-go products that go beyond telematics and address the growing protection gaps in the gig and sharing economy.

f. Capitalize on new technologies to better understand and mitigate risks - be it natural catastrophes, fraud prevention or personal or work safety.

01

Closing the Protection Gap

What is the protection gap? | An overview



Global protection gap by region (USD bn)

Sources: PwC Market Research Centre, Swiss Re Institute, International Monetary Fund

The Geneva Association, a leading international insurance think tank, defines insurance protection gaps as, "difference between the amount of insurance that is economically beneficial and the amount of coverage actually purchased."[1]

Despite having limited access to health services, low-income populations in developing countries live in riskier environments with greater chances of illness, accidents, and theft. Their personal assets and health are exposed to a variety of significant risks, but they often do not have adequate, informal tools to manage these risks. As our planet's climate changes and becomes more volatile, specialized insurance models are critical to protect individuals, communities, and governments from natural disasters. Developing nations are often most vulnerable to the disastrous effects of climate change because they face the greatest barriers to obtaining insurance coverage.

A disproportionate protection gap exists in developing countries, and insurance companies have the opportunity to reach this market in creative ways. A number of insurance solutions have been developed to address this gap, such as parametric insurance, government collaboration, and new protective policies. It is essential to first consider these critical questions: Why is less insurance purchased than is economically beneficial? Why do we have a protection gap?

Why is there a gap? | A deep dive.

Affordability & awareness

The lack of affordable insurance plans is a significant cause of underinsurance. KFF, a nonprofit organization focused on health issues in the US reported that in 2019, 73.7% **of uninsured adults said that they were uninsured because the cost of coverage was too high.**[2] In 2019, the International Labor Organization reported a global median gross minimum wage of US$ 486 per month.[3] Half of the countries in the world have minimum wages lower than this amount, and some have minimum wages below poverty levels.[4]

Additionally, there is a global cost-of-living crisis. Food and energy prices have caused 71 million people in developing countries to fall into poverty, according to the UN Development Programme (UNDP).5 Purchasing insurance plans has been out of reach for these individuals when they are struggling to put food on the table.

Additionally, the issue of awareness is more prominent in developing countries, where financial literacy is low and access to education is limited. Both developing and developed countries face this challenge because people are unfamiliar with various types of insurance and product offerings. As such, **educating the market not only about the importance of insurance, but also about the types of coverage that are available,** is crucial to closing the gap and promoting buy-in.

Policyholder trust & Cultural factors

Trust among policyholders is a key issue in developing and emerging countries. Instability in governments and regulatory bodies often contributes to this lack of trust; individuals prefer to save their money than pay for an insurance plan with a high risk of not receiving payouts when they need them.

1. Cultural and social factors

Cultural differences in risk aversion can also contribute to a lack of coverage. Several studies have concluded that religion can influence a society's risk aversion, which can affect its financial decisions.[6] The stigma around insurance is that it is a western, capitalistic product, and those outside of developed societies value insurance protection less. In developing countries, communities often rely on informal protection such as family networks and are less aware of or willing to purchase insurance.

2. Behavioral biases

Cultural biases, demographic biases, and individual biases all contribute to behavioral biases. Loss aversion is an example of a behavioral bias that affects insurance purchasing. For insurance, the short-term loss of paying for coverage outweighs the long-term potential benefit of the claim.

3. Transaction costs, adverse selection & moral hazard.

There are also supply-side factors that contribute to a coverage gap, as market segments and products with the best returns on investment are the ones insurers focus on due to transaction costs. In the past, insurance providers have strategically invested in product sets that left gaps where coverage was still needed, such as in developing countries. Additional supply-side barriers include the lack of administrative resources, technical capacity to reach consumers, and regulatory and legal boundaries.

Adverse selection and moral hazard are also behavioral factors. Markets can suffer from adverse selection when there is imperfect and asymmetric information. Lack of knowledge and understanding of insurance's benefits, or even a negative stigma fueled by misinformation, can lead to this phenomenon. As another economic phenomenon, moral hazard occurs when people incur greater risks as it is not them who need to shoulder the burden, a challenge to the later discussed necessity of risk pooling.

Climate Change | The biggest gap.

Changes in climate and physical landscape have had many consequences, with increasing frequency (Figure 1). Increasing population puts more people at risk, and there is a greater concentration of assets in exposed locations. According to Aon, in 2019, **400 natural catastrophe events occurred and generated economic losses of $232 billion. Only $71 billion was insured,** 70% being uninsured.7 In 2021, total losses as a result of natural disasters totaled US$ 280B, and almost 60% of this loss was uninsured.8 The Swiss Re Institute's 2018 report Disaster risk financing: Smart solutions for the public sector states, "On average, over the last 10 years, only about 30% of catastrophe losses were covered by insurance. That means that about 70% of catastrophe losses – or USD 1.3 trillion – have been borne by individuals, firms and governments."9

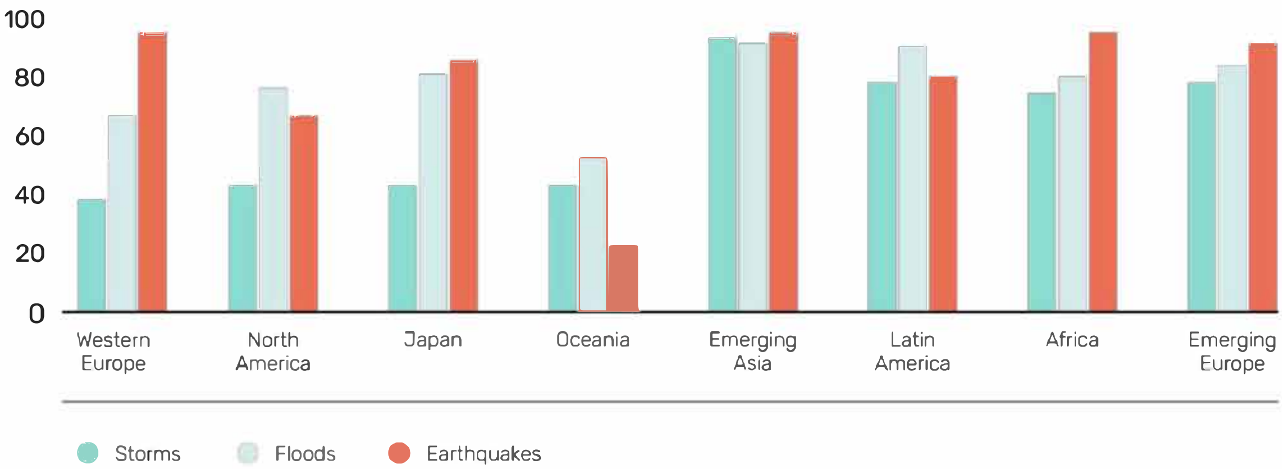


Figure 3:

Natural catastrophe uninsured losses as a % of economic losses, by region, 1975 - 2017

Source: Swiss Re Institute

Uncertainty caused by climate change results in unprotected risk, at a significant cost. Communities are not properly insured for catastrophic events like natural disasters due to the increase in widespread catastrophic events. In particular, this is a concern for coastal communities and those employed in agriculture. Due to climate change's indiscriminate impact, communities drowning in the gap are often in developing nations; because they are severely underinsured, and crop destruction causes significant economic damage, they face far greater risks. Underserved farmers in these developing countries are particularly vulnerable to the effects of climate change. **The great barrier of insuring these communities with an aversion to paying for coverage they do not understand or trust is one that can only be solved by taking the first step:**

  |

Impact | Mature markets.

Governments shoulder most of the financial burden when it comes to natural disasters. Natural disasters affect about 7% of the European population each year and cause losses of about EUR 12 billion, according to the World Bank.[10] Similarly, another study conducted with the European Commission found a large protection gap when analyzing Europe's preparedness to respond to and recover from natural disasters.[11]

Over 50% of total losses from floods and earthquakes are caused by damage to residential buildings, yet only 30% of EU member states have catastrophe insurance.[12] Due to this, most people rely on government aid, including humanitarian organizations and non-governmental organizations. The findings indicate a need to improve government's' disaster risk financing strategies to protect populations when disasters strike. Identifying priorities and sources of funding is part of building a disaster-risk financing strategy. Natural catastrophe insurance can mitigate initial economic and welfare losses resulting from natural disasters on an individual and government level.

Climate Transition Risk

Companies with complex supply chains and physical assets may benefit from a risk assessment when it comes to understanding their own climate risks and seeking protection against them. EY reports that increasing insurance coverage by just 1% may reduce the global cost of climate-related disasters by 22%.[13] An aspect of climate risk that is crucial for businesses to consider is transition risk. A comprehensive climate risk analysis considers two elements: physical and transition risk. Physical risk factors include natural disaster predictions and their impact on physical assets and populations. **Transition risk takes into account the cost of physical risks due to a changing climate, but focuses on the impact of political, economic, and social changes on businesses.** For example, in a world shifting to more sustainable practices and net zero initiatives force companies to consider the carbon cost. In order to protect supply chains, enterprises can diversify their supplier network and energy sources. **However, with increased supply chain complexity, business networks need to be protected.** Herein lies an opportunity for insurers to fill the gap by offering enterprises unique solutions to protect their geographically diverse supply chains. Therefore, transition risk is a vital metric to be monitored as its **futuristic modeling can provide insights into the future of insurance.**

Closing the Gap | From reactive to proactive.

The insurance coverage gap offers an opportunity for insurers to enter new markets, develop new business models, and **do well by doing good.** In order to address climate change's physical and transition risks, we must shift from a reactive to a proactive approach. When catastrophic events occur, many countries lack formal insurance programs and take reactive measures by reallocating budget positions, increasing taxes, borrowing from multilateral financial institutions, or soliciting international assistance. By properly insuring communities, the burden on the government could be relieved, the state budget would be less volatile, and planning for the public sector and long-term fiscal stability could be improved. Climate risk insurance is a vital contribution to building a resilient system that is protected against extreme weather events.

Research indicates that an optimal solution to address the underinsured is through a multistakeholder variation that can include governments, business leaders, homeowners, farmers, and individuals.[14] Some ways to transfer risks include three parametric insurance approaches: macro, national, and micro.[15]

Parametric Insurance

In parametric insurance, the amount payable is **precalculated by the model** so the policyholder can be paid immediately upon a triggering event. Parametric insurance offers speed, certainty, and the ability to plan ahead. As the algorithm already performs the calculations on a continuous basis, parametric insurance models reduce claims management costs.

Sovereign risk pools

To combat the climate emergency, risk pooling will be critical in absorbing financial shocks from national economies, businesses, and individuals alike. By reducing the reliance on fundraising after natural disasters and supporting proactive approaches via parametric insurance, insurance carriers can help build more resilient societies. Utilizing parametric insurance, disaster risk insurance has spurred the creation of four sovereign catastrophe risk pools in Africa, the Pacific, and the Caribbean and Central America. [16] In response to hurricanes, floods, and earthquakes, these pools have enabled 78 payouts to 24 low-income countries since 2008.[17] As sovereign pools innovate and provide rapid financial responses to their members' needs, they have expanded to provide other financial products and training programs, as well as tools for risk assessment.

National Risk Pools

Since governments often assume the risk of large-scale catastrophes, government entities need to be involved in planning and absorbing the costs. National solutions include compulsory natural disaster insurance offered by government-sponsored entities as seen across Europe.[18] In contrast, countries like Germany offer privately organized voluntary disaster insurance products. In Turkey, a catastrophe insurance pool has been established for 7 million homeowners, making it the largest in the world and an example of how public and private sectors can cooperate to better protect against disasters.[19]

Microinsurance

In order to protect their personal assets, individuals can purchase micro solutions. Education plays a crucial role in helping consumers choose insurance policies. Inclusive insurance is a tool for filling the protection gap in emerging economies as it is focused on covering excluded or underserved markets.[20] One tool to insure low-income populations is microinsurance where the size of the premium is lower and paid in sporadic installments to account for irregular streams of income. Microinsurance policies are also written in simple language, more easily understood by those with limited education and financial literacy.

Driving Initiatives to Reduce the Protection Gap in 2022

1. Parametric Insurance
2. Natural Catastrophe Tools for Risk Prevention and Transfer
3. Creating Affordable and Accessible Products for Underserved Populations
4. Blockchain and Smart Contracting for Insurance Lifecycle

Key Takeaways | The opportunity.

One of the greatest protection gaps exists in the damages and loss incurred from natural disasters - increasing in occurrence due to climate change. The largest and most vulnerable market is that of developing countries. There is immense opportunity to insure these large and expansive populations by taking action:

1. Developing creative pricing strategies
2. Fostering collaborative partnerships with NGOs, nonprofit organizations, and governments
3. Executing education campaigns on the ability of insurance to protect against climate risk, and others.

These underserved, underinsured communities offer an opportunity for insurers to expand into new markets and do well by doing good.

02
The New Customer & Insurance

As we look ahead to 2023, insurance consumers' demographics are changing. While physical distribution, such as agents and brokers, was severely affected, digital channels were not. These digital channels, therefore, need to be harnessed by insurance companies to continue meeting the digital native, mobile-first consumer at their (literal) fingertips.

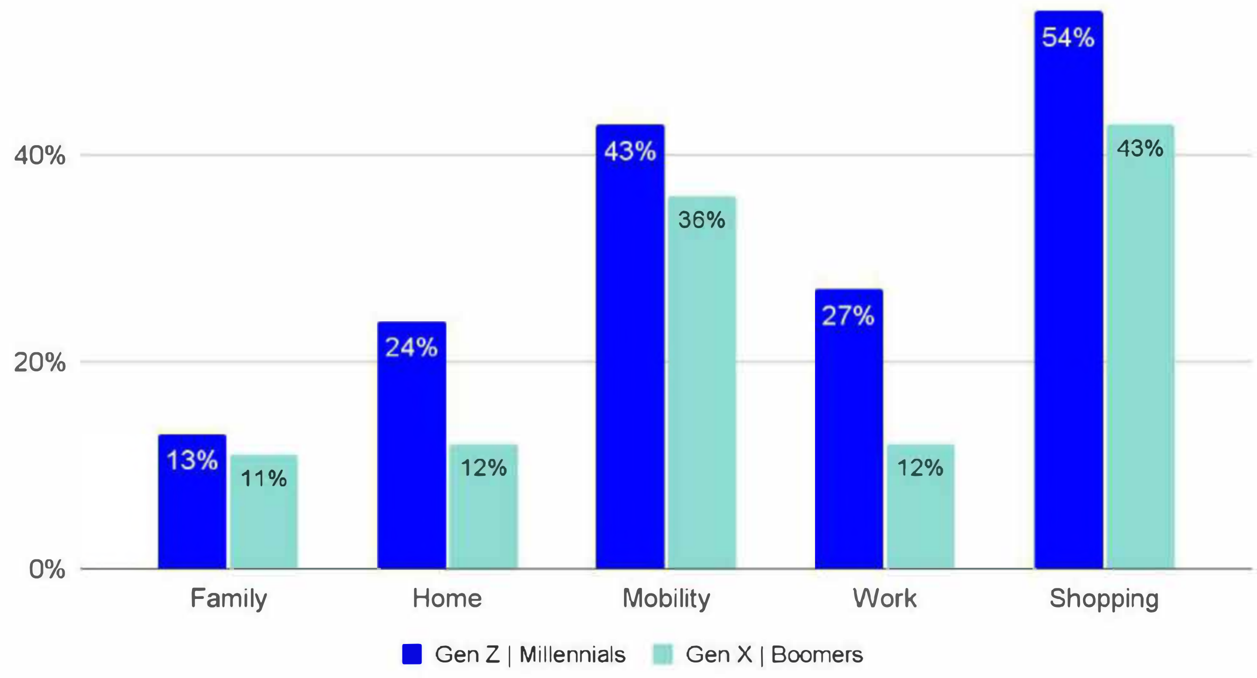
Zooming in on Gen Z & Millennials: Who are they, what do they want, and what do they need?

→ Millennials are the largest generation in the United States. The next gen, known as Gen Z, is rapidly following. Studies have shown Gen Zand younger millennials, or people born after 1990, are **more likely to spend and accumulate wealth in the digital world → key customers' preferences.**21

→ By 2025, these two groups of adults born after 1980 are expected to comprise 75% of the global workforce and will be the most influential market segment for the next few decades.22

→ In the next three years, Gen Z & Millennials will outpace Gen X & Boomers in lifestyle changes across all aspects, including home and work.23

→ High percentages of Gen Z & Millennials are single (42%) and not married but with partners (11%), reflecting a significant lifestyle shift from older generations, which likewise reflects different insurance needs.24



Major life stage changes/What life changes will they make in 3 years

Source: SOSA based on Majesco research, 2022.

Key Takeaways | The opportunity.

→ The Millennial and Gen Z populations desire a holistic customer experience – where digital offerings bring together other products and services to help the customer manage their lives.

→ Gen Z & Millennial's high interest level for both planning (money management, financial planning, debt management) and financial loss prevention and recovery services (identity theft insurance, credit monitoring), poses an interesting opportunity for a partnership.

→ Digital channels, therefore, need to be harnessed by insurance companies to continue meeting the digital native, mobile-first consumer at their (literal) fingertips.

→ With every business providing technological services, expertise or products will have wildly varying exposures to protect their operations, certain insurance policies should be further encouraged as parts of business insurance programs to mitigate

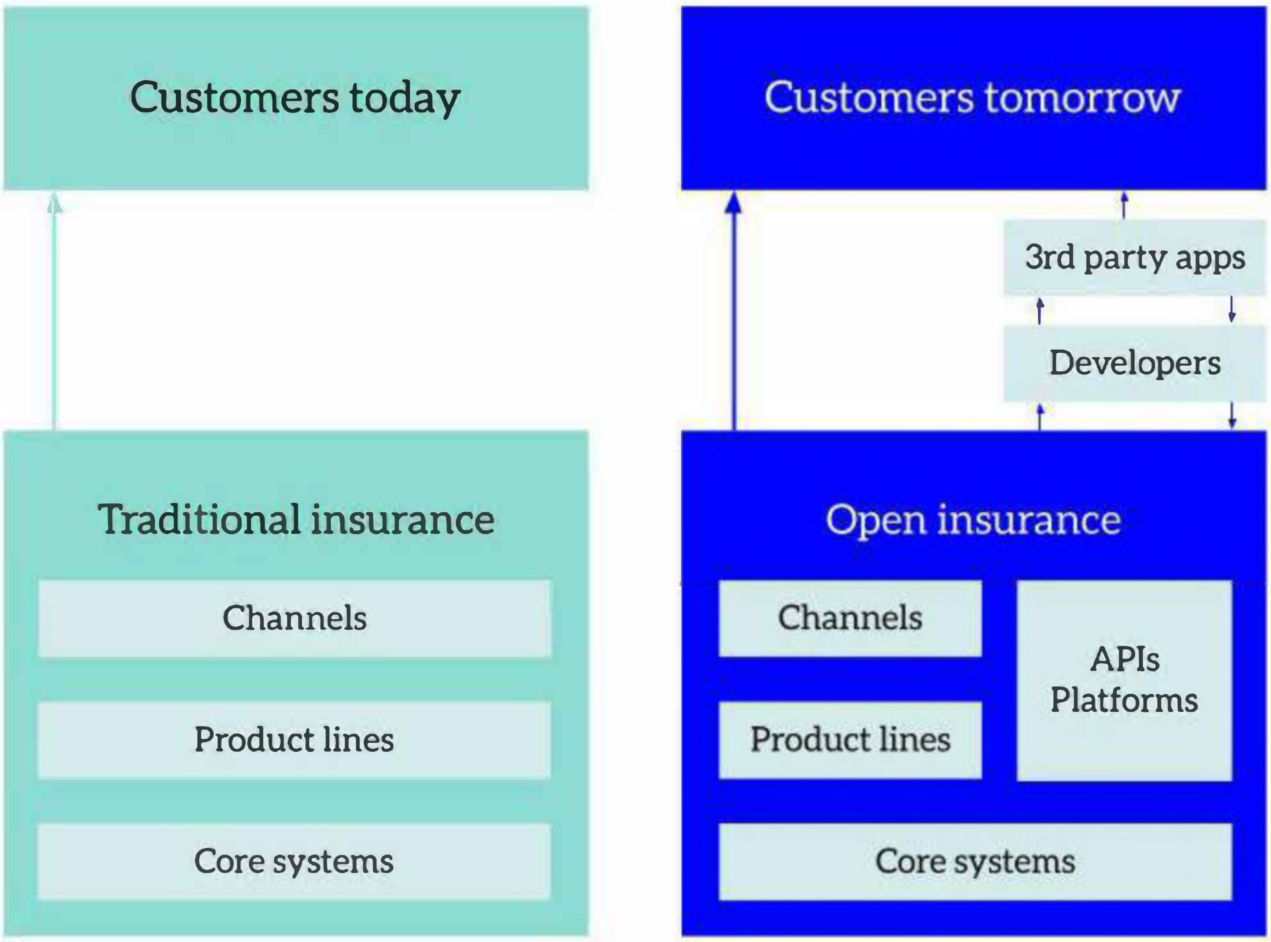
→ The sharing economy which is estimated to grow from $14 billion in 2014 to $335 billion by 2025. The insurance market opportunity for the sharing economy can be packaged from creating new insurance products for peer-to-peer-based activities to offering on-demand microinsurances.

Embedded insurance: the way forward for insurance distribution.

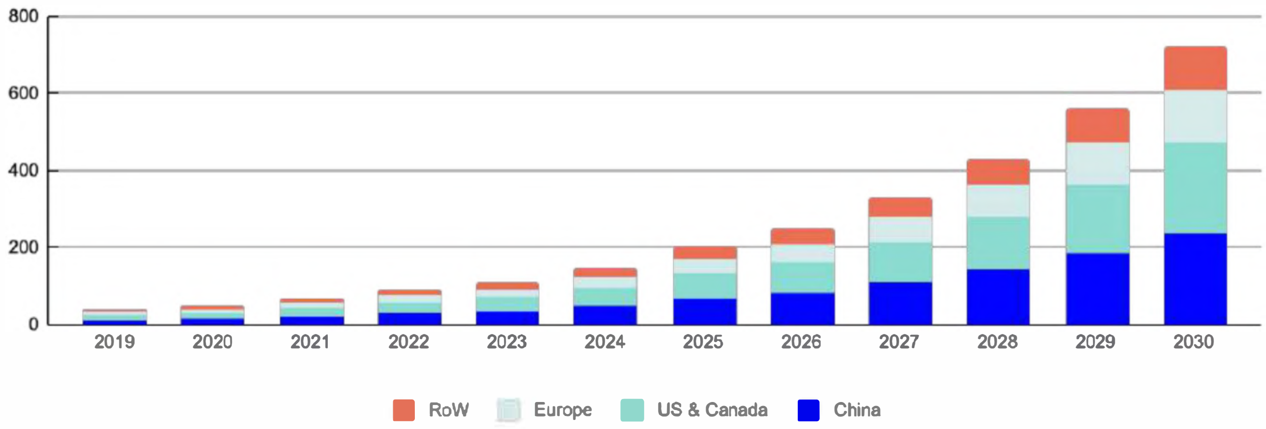
Across the insurance value chain, the industry has promptly responded to immediate-term impacts prompted by COVID and in fact witnessed market growth from $88.6 billion in 2020 to $92.2 billion in 2021. [25] Agents, brokers, and affinity programs alike rapidly digitized activities once regarded as crucial to their distribution model approach - such as face-to-face meetings and physical paperwork. By doing so, insurance companies are putting the customer experience first and moving away from selling insurance to offering relevant, affordable insurance. As Millenials and GenZers are increasingly purchasing from digital platforms and companies they already know and trust, such as Amazon, Apple, and Google, traditional business models won't necessarily resonate with their customer preferences, making it more apparent that traditional business models won't necessarily work for them.[26] Embedding insurance technology and affinity-based distribution channels are enabling insurance leaders to exponentially change their relationship with consumers by adapting the operational status quo and identifying long-term growth opportunities post pandemic.

The Opportunity

Globally, embedded insurance is growing rapidly, and is expected to reach $722 billion in Gross Written Premium (GWP) by 2030; in the European market alone, the opportunity of fully embedded channels will account for more than 24% of the market, or $140 billion .Embedded insurance provides customers with affordable, relevant, and customized insurance whenever they need it. [27]



By integrating an embedded solution into the digital customer journey of a non-insurance company through an open application program interface (API), insurance carriers can meet customers on the digital channels and devices of their choice. At the point of sale, insurers can capture consumer information, analyze the submitted data, and offer the right policy. Predominantly driven by convenience and trust, consumers have a high interest in embedded insurance distribution models. In a recent survey, Cover Genius found that 45% of US customers were interested in bank-embedded insurance; strikingly, globally the average is even higher, reaching 70%.[28]



Embedded Insurance Forecast, P&C, GWP $USD bn, 2019-2030.

Sources: PwC Market Research Centre, Swiss Re Institute, International Monetary Fund

Insurers are increasingly embracing embedded insurance to keep up with customer trends, as well as the innovative disruption arising from the insurtech sector and increasing competition. Insurtechs skillfully focus on the marketing and distribution segmentations that address specific customer pains and provide tailored customer experiences-posing threats to incumbents.

As part of its embedded insurance strategy, Tokio Marine announced in October 2022 that it would lead bolttech's Series B funding round.[29] For Tokio Marine, a strategic partnership with bolttech presents promising commercial opportunities, as Masashi Namatame, Group Chief Digital Officer, Managing Executive Officer at Tokio Marine Holdings, notes, "The scale and breadth of bolttech's platform, coupled with its industry-leading tech and digital capabilities, and extensive insurance experience, uniquely positions the company as a clear leader within the insurtech space."

Tokio Marine leads bolttech Series B	
bolttech + TOKIO MARINE	→ Operates in 30+ markets throughout Asia and Europe, and all 50 U.S. states → Connects over 200 insurance providers and offers 6,000+ product variations

Key Takeaways | The opportunity.

→ Consumers want new products and services that respond to their needs and the added convenience of interacting with their insurers when, how and where they want.

→ Leveraging embedded insurance and affinity partnerships is the way forward for long-term opportunities to meet customer expectations, deliver seamless customer experiences and remain competitive in the plethora of coverage options in the market.

→ Insurtechs will continue to challenge the traditional market approach and corner insurers to explore and engage with the opportunities of embedded insurance.

→ Partnerships with digital platforms via API integrations will not only unlock coverage opportunities to new generation digital-native customers, it will also offer insurance companies direct access to new amounts of data that can give them the level of risk visibility insurtechs and some forward thinking insurers already deploy.

03

Market Differentiators | UX/CX + Personalization

A seamless, hyper-personalized, and digitized UX/CX is central to meeting the needs of today's customers. In this chapter, we will highlight three different ways that technology can be used by insurance carriers to transform the next generation of the customer-insurer relationship.

To understand the UX market differentiators of tomorrow, it's important to first define what digital transformation has focused on in recent years. In today's era of digital global adoption, the following trends no longer serve as market differentiators, but instead are regarded as the building blocks for the innovations that gives insurance leaders their competitive advantage today.

1st Gen Digitization Initiatives

Value added services for SMEs in the cyber customer journey.

As businesses digitize through 5G, cloud services, AI, and data analytics, they are also becoming more vulnerable to cyber risks. Cyberattacks cost the global economy up to USD 1.5 trillion every year, and few companies are adequately prepared to identify and manage these risks. Ransomware events increased 148% in 2021, leaving many executives overwhelmed. Munich Re reported that 83% of C-level respondents are not adequately protected against cyber threats.[30] To support clients' end-to-end cyber insurance life cycles, insurance carriers leverage value-added services from risk scoring to pre-loss risk mitigation to incident response. As carriers seek to build cyber resilience across their entire client base, they also aim to improve customer experience when insuring against cyber risk, especially amongst small and medium businesses (SMEs).

A 2022 multinational study performed by Munich Re found that global cyber premiums are steadily increasing.[31] A major protection gap, however, exists, particularly amongst Small and Medium Enterprises (SMEs). Recent Chubb data indicates that SMEs, like large organizations, are just as vulnerable to cyber attacks. In 2021, 34.3% of cyber claims handled by Chubb were filed by small businesses.[32] These new attacks have shown the limits of insurability for cyber and the need for better protection.

Algorithmic underwriting and decentralized finance (DeFi).

The high turnaround times, fragmented customer journeys, and high operating costs of underwriting make automated underwriting increasingly attractive to insurers. Algorithmic underwriting is set to revolutionize insurance by 2030 as it saves time and money due to more accurate underwriting and more efficient processes.33 Simply put, automated underwriting leverages **artificial intelligence (AI), robotic process automation (RPA), natural language processing (NLP), optical character recognition (OCR), and accesses real-time data from 3rd parties using APIs** - in order automate and map the risk profile associated with an asset or a scenario in the company's business rules. Automated underwriting improves accuracy, eliminates bias, and significantly reduces costs associated with an industry-wide process that has traditionally been costly.

To streamline this aspect of the customer experience, insurance automation is growing not only within underwriting but most interestingly in claims. It is estimated that 50% of claims will be replaced by automation by 2030.34 Insurers like Root Insurance, a leading insurtech are partnering with other tech companies to speed up the claims process. Its recently announced partnership with Tractable is set to leverage the company's AI subrogation solution to streamline and accelerate its end-to-end claims operations.35

The next iteration of automating and disrupting the claims process is already here and it is through offering insurance policies as blockchain smart contracts, which is the foundation of decentralized finance (DeFi). Smart contracts are similar to traditional parametric insurance in their data-driven approach, with **payouts occurring only after a clearly defined event/conditions take place.** The terms of the agreement between buyer and seller are directly written into code. The code and the agreements contained therein exist across a distributed, decentralized blockchain network. The code controls the execution, and transactions are trackable and irreversible.

Nearly 70% of Swiss insurers have already taken steps to simplify the contracting process, with more than 40% of German and UK insurers investing in smart contracts to simplify the payment process and to prevent fraud.36

As a new vision for banking and financial services, DeFi is based on peer-to-peer payments using smart contracts on blockchain technology - in doing so offers financial instruments for insurers without relying on intermediaries. In streamlining the claims process through a more sophisticated mechanism of parametric insurance and bypassing intermediaries, customers can receive quicker payout while insurers also lower their operating costs significantly.

Next Generation of Digital Connectivity - The Metaverse.

The metaverse is presenting new opportunities for the insurance industry to capture younger consumers for existing and new products. Insurers can use gamification to educate, advise, and provide personalized customer experiences as social and economic activities with metaverse avatars increase. To better understand the opportunities in the metaverse, some insurance carriers are stepping into the space.37 AXA France, for instance, has taken its first steps into the metaverse through the acquisition of a plot of land from The Sandbox, a Hong Kong-based video game company.38 As the insurance industry continues to assess the true potential gains of the metaverse, we take a look at a few business opportunities that are making traction.

Product development

→ Develop insurance products for risks faced by users in the metaverse (mainly for non-life insurance companies)

Sales and distribution

→ Engage in sales activities by using avatars

→ Use immersive experiences to make users aware of the need for insurance

Underwriting and policy servicing

→ Enable premiums to be paid in cryptoassets

→ Digitise and streamline various procedures by introducing NFT-based insurance policies

Claim processing

→ Make payouts in the form of cryptoassets

→ Conduct damage investigations by using digital twins in the metaverse

Asset management

→ Begin to invest in cryptoassets and digital assets in the metaverse

→ Develop risk management

approaches for new asset classes

Opportunities that the metaverse brings to the insurance value chain

Source: SOSA based on The impact of the metaverse on the insurance industry, PwC, 2022.

Why does this matter? Early adopters have begun establishing brand awareness and the building blocks and the operational infrastructure so when the opportunity ripens for the industry, they will have the internal buy-in and market understanding to take a competitive advantage in the metaverse. From there, early adopters will be better positioned and can focus on developing immersive customer experiences and protection products that can support the risk control and mitigation of virtual property, personal data, businesses, physical and mental harm, and even lives. 39

Key Takeaways | The opportunity.

Value Added Services in Cybersecurity Marketplace

→ While global cyber premiums are steadily increasing, a major protection gap, however, exists, particularly amongst Small and Medium Enterprises (SMEs).

→ From the procurement process to risk scoring, pre-loss risk mitigation and incident response services, insurance carriers leverage value added services to support the end-to-end cyber insurance life cycle.

Algorithmic Underwriting

→ Algorithmic underwriting is set to revolutionize insurance by 2030 as it saves time and money due to more accurate underwriting and more efficient processes.

→ The next iteration of parametric insurance and disrupting the claims process is already here and it is through offering insurance policies as blockchain smart contracts, which is the foundation of decentralized finance (DeFi).

The Metaverse

→ The metaverse will present new opportunities for the insurance industry to capture younger consumers; to better understand the opportunities in the metaverse, some insurance carriers are stepping into the space through brand awareness and upskilling workers.

→ The insurance industry continues to assess the true potential gains of the metaverse, particularly their role in creating products that can support the risk control and mitigation of virtual property, personal data, businesses, physical and mental harm, and even lives.

→ Early adopters have begun establishing brand awareness and the building blocks and the operational infrastructure so when the opportunity ripens for the industry, they will have the internal buy-in and market understanding to take a competitive advantage in the metaverse.

04

Market Differentiators | Telematics

The telematics sector has experienced massive growth in recent years and will continue on this trajectory to a global value of $3556m by 2026.[40] The main drivers of this growth are the introduction of 5G technology, advances in engineering and EV/AV technology, as well as AI in the automotive industry with relation to IoT. Consumers are also increasingly open to accepting the use of data from their driving behavior in exchange for being "rewarded" with lower, personalized insurance premiums. Approximately 7 out of 10 consumers (69%) say they would share significant data on their driving habits in exchange for lower prices, an increase of 19% from 3 years ago.[41] We're seeing interesting and unexpected partnerships between insurance companies and tech companies. Below are a few market highlights.

App-Based Program Expands Offerings

For carriers, telematics offers opportunities for improved risk analysis as it offers insights and direct access to holistic customer data and overall trends in driver behavior and performance. Not only that, providing personalized, usage-based offerings for customers also decreases claims, as it incentivises customers to drive better in order to reduce premiums. Furthermore, the pay-as-you-drive model also delights customers with online (paperless), seamless experiences that creates a stronger, more personalized insurer-customer relationship.

Telematics company Enters Insurance Market

The direct partnership between a telematics company and secondary data analysis company offers a new kind of dynamic pricing for the B2B market, and another layer of risk analysis. These tech-backed partnerships allow companies to differentiate themselves in the market through competitive pricing. What's more, these direct partnerships promote the improvement and development of the technology itself, continuously taking it to new heights.

OEMs Enter Insurance Market

Increasingly, car manufacturers are entering the insurance industry through usage based insurance (UBI) programmes or expanding their range of UBI programmes through partnerships and in-house activities. Over the years, OEMs have been engaging with additional aspects of the customer experience - moving beyond the preference of car model, style, safety, and reliability. Car manufacturers are now offering insurance products with value added services as a compliment to their core product. In the long term,

OEMs plan to be Connected, Autonomous, Shared and Electric (CASE)

Transitioning to this strategy will position them to offer on-demand insurance that is most relevant for these scenarios and create an overall closer relationship with their customers and create new revenue streams such as insurance products.

Key Takeaways | The opportunity.

→ Giving consumers the ability to see their driving behavior and "improving" their driving will enable great adoption rates for UBI and telematics as well as lowering claims and promoting safer driving habits on the road.

→ Car manufacturers are entering the insurance industry through usage based insurance (UBI) programmes or expanding their range of UBI programmes through partnerships and in-house activities.

→ OEMs plan to be Connected, Autonomous, Shared and Electric (CASE). Transitioning to this strategy will position them to offer on-demand insurance that is most relevant for these scenarios and create an overall closer relationship with their customers and create new revenue streams such as insurance products.

05

Market Differentiator | 'On-demand' insurance for flexible coverage

The concept of pay as you go extends far beyond automotive insurance and telematics. New mobility technologies and freelance workers are increasingly offering their services on a per-service basis and on-demand through gig economy platforms that facilitate the match between workers and customers. The advent of online platforms such as Uber, Airbnb, and TaskRabbit brought the gig economy towards an instantaneous alignment of supply and demand.[42]

What is driving the "on-demand" trend? The relationship between technology, demographic shifts, and COVID-19, have accelerated the gig economy's visibility and impact in the global economy so much so that its promising trajectory is expected to generate $45 billion globally by 2023.[43] While COVID-19 accelerated the gig economy era, it also highlighted the importance and vulnerability of these workers. During the height of the pandemic, gig workers were some of the essential workers making food and courier deliveries, transporting goods, all the while increasing their exposure to COVID at a time when most people were isolating in safety. While there were many benefits of mobility changes and job flexibility, the self-employed community became increasingly uninsured and financially insecure.[44]

A global survey (encompassing both advanced and emerging economies) conducted by the International Labor Organization (ILO) found that only 60% of all gig workers are covered by health insurance and that 35% have a (private or public) pension or retirement plan.[45] Even more precarious are protection levels for work injuries and disability, with just 21% and 13% of surveyed workers covered, respectively. [46]

What is being done? In order for insurers to keep up with the needs of the gig economy, coverage needs to be flexible, automated, customer-service, and fueled by data and AI. Below is an industry snapshot of insurers who are seizing the opportunity and offering flexible economy protection:

Key Takeaways | The opportunity.

→ The concept of pay as you go extends far beyond automotive insurance and telematics.

→ New mobility technologies and freelance workers are increasingly offering their services on a per-service basis and on-demand through gig economy platforms that facilitate the match between workers and customers.

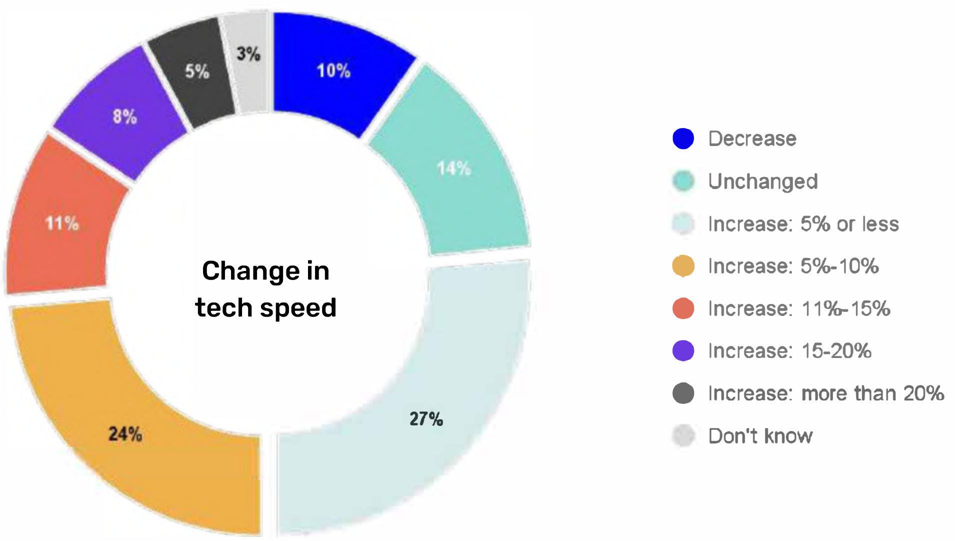
→ In order for insurers to keep up with the needs of the gig economy, coverage needs to be flexible, automated, customer-service, and fueled by data and AI.

06

Market Differentiator | Risk Prevention

It is becoming more important for carriers to invest in risk management technology, data analytics and automation tools because they provide valuable business insights for risk mitigation and efficiency. Firms that will achieve the most success in the future will be those that embrace change and effectively manage new risk exposures that arise. As the need to provide visibility into risk and risk functions across the interests of insurance, below are areas where insurance leaders are striving to capitalize technology to get a better grasp on managing their risk.

Insurance companies expect to significantly increase spending on risk management technologies



Sources: PwC

Natural Catastrophes

With California and other states experiencing more devastating wildfires, the ability of insurers to acquire new data rapidly will help policyholders proactively prevent damage from these wildfire events. A recent report by Aon found that three separate wildfires in 2021 alone caused economic losses exceeding $1 billion.47

Fraud Detection

Since the onset of the pandemic, cyber attacks and fraudulent activities have been on the rise with customers adopting new digital payment environments. The global insurance fraud detection market size was valued at [$3.3 billion in 2021,] with a projected reach of $28.1 billion by 2031.48 AI and analytics provide a level of context regarding behaviors, relationships and modus operandi so that prevention technologies and risk management strategies can combine big data sources with real-time monitoring, and apply adaptive and predictive analytics techniques.

Key Takeaways | The opportunity.

→ Insurance leaders are striving to capitalize technology to get a better grasp on managing their risk.

→ AI provides context to behaviors, relationships, and modus operandi so that prevention technologies and risk management strategies can integrate big data sources with real-time monitoring, and apply adaptive and predictive analytics.

Conclusion

Insurance is at a junction where innovation has become incessantly front of mind, while the need to adapt to customer preferences, address complex risk, and cement a digitized footprint for the industry of tomorrow is becoming increasingly challenging. Notions of traditional insurance, be it fixed, inflexible premiums, customer personas, distributions models and its competitors, are proving to be disconnected to true demand and growing reality of current and future policyholders. In the midst of these shifts, the impacts of climate change and its subsequent natural catastrophes is further exacerbating the global protection gap that largely resides in developing countries.

Adopting a digitization strategy that can balance the opportunities between addressing the widening protection gap both in developing and digitally mature markets and adopting the latest technology will be critical in the years ahead for the insurance industry. Leaders who understand the demand to provide hyper personalized customer experience and embrace the data-driven technologies that will cultivate an even deeper relationship with customers will be the rainmakers. Identifying mechanisms to automate the end-to-end insurance life cycle will continue to become critical, as the time and resources to address more complex customer demands and organizational trajectory will continue to rise. At this stage, the insurance industry has core areas where the customer-insurer relationship and tools to make one's organization more effective. Leaders who maintain a pulse on these changes and go the step forward to take action, will be the ones who understand the challenges are, in fact, clear opportunities for differentiation in the market.

Market Overview

2022 Market Activity Leaders

Closing the Protection Gap			
Lemonade	Munich RE	LAMI	中国平安 PING AN 保险·银行·投资
GP GLOBAL PARAMETRICS	hannover re	Cloud to Street	AXA
ARBOL	Allianz	GENERALI	
HAILIOS	Raincoat	Swiss Re	UNDP

Market Differentiators - UX/CX

UX/CX + Personalization | Technologies

Digital Sales Enablement Customer Journey	**Hybrid Work** Omnichannel Tools	**Digital Customer Service** Conversational AI
airkit EasySend Lightico	Surfly vizolution reach.	boost.ai Omilia inbenta

Cyber Customer Journey | Partnerships

Cyber Insurance Portal	**Cyber Marketplace for US clients**	**Coverage and support for SMEs**
CHUBB + JA ASSURE	Marsh	Allianz + Coalition

Algorithmic Underwriting | Partnerships

App-Based Program Expands Offerings	**Blockchain for Insurance Industry Hybrid Work**
MAERSK + ZURICH	The Institutes RiskBlock Alliance + Nationwide

UX/CX Metaverse | Partnerships

Marketing & Branding	**Customer Engagement**	**Hybrid Work**
StateFarm	Allianz	ZURICH FARMERS INSURANCE

Market Differentiators - Misc.

Telematics | Partnerships

App-Based Program Expands Offerings	OEMs Enter Insurance Market	Telematics company Enters Insurance Market
TRAVELERS	+ otonomo	ABAX + Tryg +

'On-demand' insurance for flexible coverage

Allianz · CHUBB · Goose · AIG · qover · wakam · Grab · baloise

Risk Prevention

Natural Catastrophes	OEMs Enter Insurance Market
Betterview + NFPA	FRISS + UNIQA
zesty.ai + BHHC	BAE SYSTEMS + ZURICH

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Tokio Marine Group consists of Tokio Marine Holdings and its subsidiaries and affiliates located worldwide, operating extensively in the non-life insurance business, life insurance business, and financial and general businesses. As the oldest and largest Japanese property/casualty insurer (established in 1879), Tokio Marine Group has been expanding its business globally from the domestic non-life insurance business to the life insurance business and the international insurance business. With a presence in 46 countries and expanding, Tokio Marine ranks as one of the world's most globally diversified and financially secure insurance groups.

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