IDC FutureScape: Worldwide Insurance 2024 Predictions

Davide Palanza   Surya Narayan Saha   Ralf Helkenberg   Rahiel Nasir
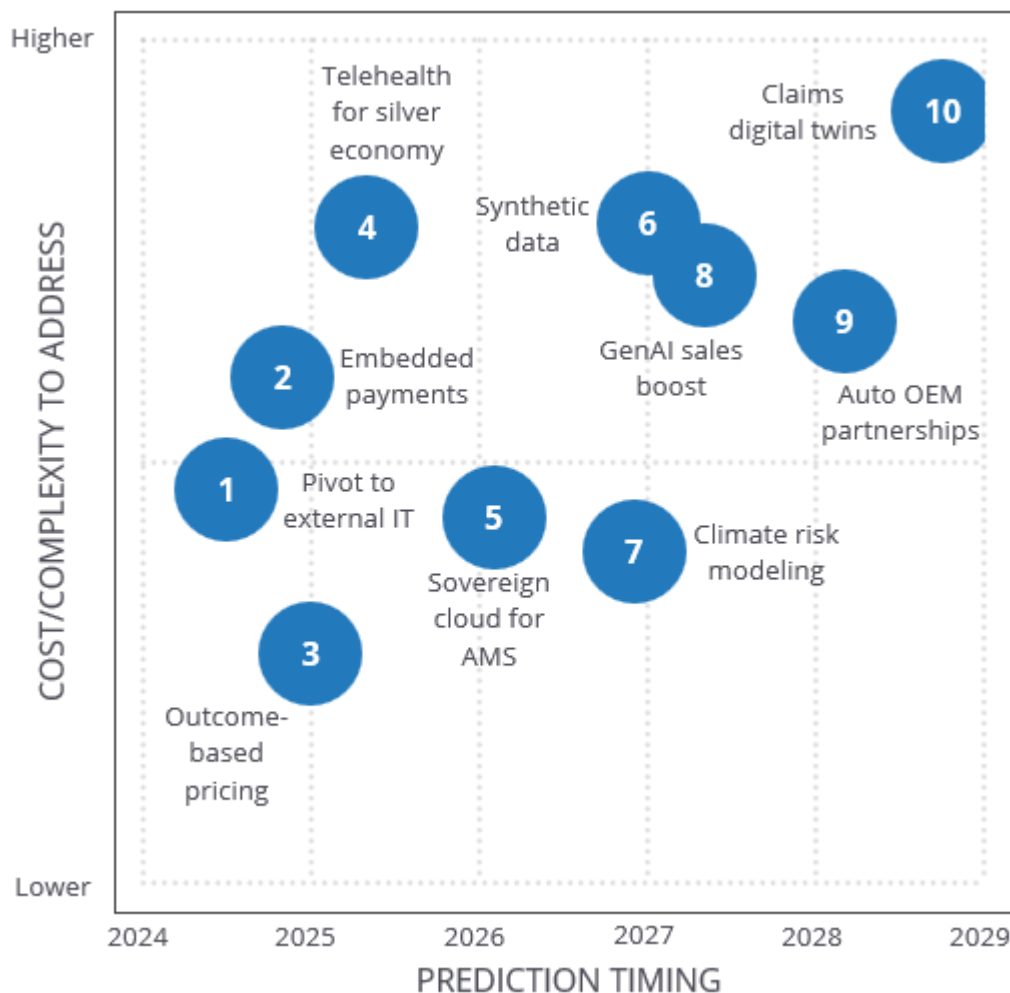Bjoern Stengel   Jeff Rivkin   Massimiliano Claps   Maria Adele Di Comite

IDC FUTURESCAPE FIGURE

FIGURE 1

IDC FutureScape: Worldwide Insurance 2024 Predictions

Note: Marker number refers only to the order the prediction appears in the report and does not indicate rank or importance, unless otherwise noted in the Executive Summary.

Source: IDC, 2023

EXECUTIVE SUMMARY

The global economy, which had enjoyed a relatively predictable environment for decades, is now facing unprecedented uncertainty. Amid disruption and turmoil, there is growing concern about financial health. Half of worldwide insurance consumers are seeking assistance to navigate unfavorable situations and secure their financial well-being, according to IDC's 2022 *Financial Insights Consumer Survey*. Despite the importance of financial health, access to insurance coverage and pension products remains alarmingly low. This can be attributed to factors such as adverse macroeconomic conditions, limited financial literacy, low risk awareness, and the perceived lack of value in insurance offerings. Consequently, a significant portion of the population, particularly less affluent consumers and younger generations, remains vulnerable to financial instability in the face of unexpected events or emergencies, as they are left on the fringes of insurance mechanisms.

As IDC research suggests, advanced insurance markets with higher digital maturity tend to exhibit greater insurance penetration. Insurers must prioritize digital initiatives such as digital sales, operational efficiency, and business model innovation to expand their market reach. Organizations have matured digitally, with digital spending on emerging technologies representing the typical boardroom conversation. However, economic uncertainty, geopolitical risks, and inflationary pressures are compelling business leaders to safeguard their balance sheets. This does not necessarily entail drastic budget cuts, but rather a meticulous reprioritization of investments based on anticipated business value. This marks the dawn of a new era in the digital business landscape: insurers are becoming more intentional in their digital spending and demand revenue-generating opportunities by adopting digital technologies, gradually narrowing the gap between digital and traditional revenue streams. While not all insurance operations will transition to digital overnight, they are increasingly adopting a digital-first approach.

IDC's predictions for worldwide insurance in 2024 are as follows:

- **Prediction 1:** By 2024, 33% of insurers will increase investments in external app development services, positively impacting digital monetization models and increasing the share of digital revenues by 15%.
- **Prediction 2**: By 2024, embedded payments in property and casualty (P&C) insurance will cut operational costs by 25% and streamline payments collection and reconciliation for policy bounding, renewals, and claims settlement.
- **Prediction 3:** By 2025, insurtech market consolidation drives outcome-based pricing adoption by 60% of tier 1 and 50% of tier 2 global insurers, enhancing value-driven partnerships and efficiency.
- **Prediction 4:** By 2025, bridging the silver economy protection gap will lead 60% of worldwide health insurers to collaborate with telehealth providers, offering wider access to personalized and preventative care.
- **Prediction 5**: By 2026, as public cloud is given priority for modernizing agent-producer relationship systems, 35% of insurers will adopt sovereign solutions to foster regulatory compliance.
- **Prediction 6**: By 2027, due to AI regulations, 60% of AI algorithms adopted by insurers along the policyholder value chain will leverage synthetic data to ensure system fairness and regulatory compliance.
- **Prediction 7**: By 2027, climate risk modeling tools will enable reinsurers to improve natural catastrophe (NatCat) risk exposure estimation accuracy by 50%, resulting in a reduction of NatCat loss ratio via risk-adjusted pricing.
- **Prediction 8**: By 2027, generative AI (GenAI)-based advisor enablement tools will lead to a 15% spike in distribution sales volume and a 20% boost in sales ROI by delivering personalized and empathetic engagement at scale.

- **Prediction 9**: By 2028, 60% of auto insurers will spend 30% more on trusted data exchange technologies to become preferred partners of OEMs bundling insurance, increasing auto coverage revenues and IP monetization.
- **Prediction 10**: By 2029, 80% of auto insurers adopting claims process digital twins will prioritize accident recreation underlying capabilities to reduce 40% of casualty claims adjustment expenses and fraud losses.

This IDC FutureScape presents the top 10 insurance industry predictions for 2024. Each prediction is shaped by a shared set of key drivers, serving as a planning tool for technology leaders and their line-of-business (LOB) counterparts in their IT strategic planning efforts. The 2024 edition of the IDC FutureScape for insurance underscores the vital need for insurers to embrace an ambidextrous approach. This approach is crucial for striking a balance between mitigating risks and exploring new opportunities to ensure survival and prosperity in the face of uncertainties. It has become imperative to shatter the industry's silos and organizational boundaries by strategically adopting digital technologies. These technologies are instrumental in unlocking the sector's full societal impact. For the next five years, insurers are at a critical juncture where they must pioneer digital-first strategies. This pioneering effort involves leveraging emerging technologies such as trusted data exchange platforms, telehealth solutions, "climatech" innovations, and digital twins, as well as the significant advancement of large language models (LLMs) and multimodal generative AI models such as DALL-E.

"In an era defined by uncertainty, where a multitude of challenges and opportunities coexist, digital maturity is no longer a choice – it is the essential foundation of the modern competitive arena. Insurers must master the art of balancing digital innovation with risk mitigation to enhance their digital capabilities," said Davide Palanza, research manager at IDC Financial Insights. "As insurance leaders grapple with the imperative of deriving tangible value from their digital endeavors, the future belongs to those that embrace emerging technologies with sharp business insight and foresight. What's at stake isn't merely survival; it's about leading the charge in reshaping the future of the insurance sector."

IDC FUTURESCAPE PREDICTIONS

Summary of External Drivers

- AI Everywhere – Generative AI Takes the Spotlight
- Cybersecurity and Risk – Building Resilience Against Multiplying Threats
- Economic Uncertainty – IT Malaise and Market Volatility
- The Digital Business Imperative – Competitiveness and Outcomes
- Everything as a Service Intensifies – Transforming Models to Drive Change
- Dynamic Work and Skills Requirements – New Work Mode Era
- Shifting Tech Regulatory Landscape – Navigating Risk and Opportunity

Predictions: Impact on Technology Buyers

Prediction 1: By 2024, 33% of insurers will increase investments in external app development services, positively impacting digital monetization models and increasing the share of digital revenues by 15%.

In the current macro-environment, organizations are being asked to respond to threats more quickly than in the past. Digital demands on the business continue to escalate, resulting in near-nonstop business-driven requests that range from small changes to full-scale modernization of critical custom-built applications. Staying ahead of the competition dependd on how well organizations are set up to deliver at speed and scale and increasingly at lower cost, with fewer resources. DevOps and software development teams are challenged to keep up with business demand and continuously maintain the reliability and security of their software. Development agility is therefore top of mind. After three years of increased investment, software development and DevOps teams are now navigating how to

improve time to value and productivity with tighter budgets and a growing skill gap. Insurers are not exempt; they face challenges in attracting and retaining adequate engineering and digital talent. These challenges are exacerbated by corporate cultures perceived as unwelcoming, making talent retention even more difficult.

In addressing the skill gap, there is growing recognition of the importance of partners in helping to plug into valuable engineering know-how, accelerate learning, and empower creativity. Recognizing the complexities of harnessing cutting-edge technology with in-house resources, insurers are exploring alternative models for IT staff capacity. Co-creation of digital services and applications is increasingly becoming the norm. Insurers have been relying on capacity-based outsourced application development teams, which provide them with the essential capacity to tackle digital challenges, respond to emerging trends, and enhance scalability effectively. IDC research indicates a big swing in 2024 (54% year-over-year growth) in financial services organizations' preference for application services providers for software development and delivery. By embracing external capacity-based application development services, insurers gain advantages such as access to specialized expertise and state-of-the-art technologies, resource stability, and rapid and high-quality development and deployment of new digital products and services. Beyond these benefits, outsourcing application development significantly enhances the overall employee experience as it frees up internal resources to focus on core business activities and improve efficiency.

Real-world examples further illustrate the effectiveness of these strategies. For instance, Allianz UK optimized its extensive internal IT staff and infrastructure by hiring an external application services provider. This transition resulted in a shift from waterfall to agile methodologies, significantly increasing the speed and reliability of product development and delivery. Another notable example comes from Generali, which partnered with a global application services provider to bridge its design expertise gap with custom software engineering and cloud capabilities to create a health-centric solution for Generali Vitality and its members. The expanded team created a cloud-native application that focused on world-class user experience, push-button deployments, and the adaptability and flexibility to future-proof the Generali Vitality rewards experience in only a few months.

Associated Drivers

- The Digital Business Imperative – Competitiveness and Outcomes
- Everything as a Service Intensifies – Transforming Models to Drive Change
- Dynamic Work and Skills Requirements – New Work Mode Era

IT Impact

- **Vendor lock-in:** Overreliance on external development partners may lead to vendor lock-in. IT departments in the industry should explore methods to reduce IT dependency, enhance portability, and preserve flexibility in their technology collaborations.

- **Data security and compliance:** Insurance companies manage extensive volumes of sensitive customer data. It is paramount for IT departments to guarantee that their technology partners strictly adhere to rigorous data protection standards and comply with regulatory provisions.

- **Integration complexity:** Many insurers rely on legacy systems that may not seamlessly integrate with newly developed digital applications. Ensuring that externally developed apps can smoothly integrate with existing IT infrastructure and data sources can be a significant hurdle.

Business Impact

- **Mitigating talent shortages:** Insurance organizations often struggle to attract and retain digital talent. Outsourcing DevOps functions to external experts helps mitigate talent shortages, ensuring that critical digital projects can proceed smoothly. This is especially crucial in an industry where digital skills are in high demand.

- **Enhanced digital capabilities:** By leveraging external software development and DevOps expertise, insurance organizations can significantly enhance their digital capabilities. This

translates to the development of cutting-edge digital applications and services that can meet the evolving needs of customers.

- **Streamlined digital projects:** Traditional resource-based IT project management approaches often fall short in the digital realm, leading to delays, cost overruns, and reduced output quality. Embracing software development and DevOps as services streamline digital projects, ensures efficiency, timely delivery, and budget adherence while maintaining high quality.

Guidance

- Seek multiple collaborators to avoid vendor lock-in. Foster a versatile IT ecosystem, promoting adaptability and reducing dependency risks. Embrace portability for flexible tech solutions. Insurers must thoroughly assess potential vendors based on factors such as expertise, experience, and a track record that aligns with their digital innovation objectives.

- Mandate stringent security measures and regular audits for tech partners to safeguard customer data. Prioritize compliance with industry regulations to ensure seamless integration and maintain data privacy and customer trust.

- Update legacy systems to enhance integration capabilities, ensuring seamless connectivity with new digital applications. Prioritize compatibility testing and establish robust protocols for external app integration to streamline IT operations and data flow. To ensure success, prioritize communication and collaboration between internal IT teams and external partners.

Prediction 2: By 2024, embedded payments in P&C insurance will cut operational costs by 25% and streamline payments collection and reconciliation for policy bounding, renewals, and claims settlement.

Claims have long been regarded as the decisive "moment of truth" in the property and casualty insurance sector. However, it can be argued that this designation involves multiple critical moments, with a primary focus on simplicity and efficiency of payment interactions. These essential payment stages span B2C transactions (including premium collection, claims settlements, and policy renewals) as well as B2B vendor disbursements. Traditionally, the P&C insurance process relies on outdated payment methods such as paper checks and manual procedures, resulting in inefficiencies, high costs, and delays. To address these issues, there is a pressing need for modernization within the industry's payment systems. Payment regulations around the globe such as PSD2 in Europe and global initiatives such as open banking have played pivotal roles in driving modernization.

A significant breakthrough in the payment sector that has garnered widespread attention is the emergence of embedded payments, which have profoundly transformed the integration of payments into insurance processes. Notable examples include automating claim payouts for immediate fund disbursement, which facilitates policy purchases and renewal payments through user-friendly apps and websites, and simplifying transactions with partners such as healthcare providers and auto repair shops. This innovation empowers customers to conveniently manage premium payments through their insurance portals while significantly reducing the costs and friction associated with manual payment processing. While enhancing the customer experience remains a significant driving force behind embedded payments in P&C insurance, substantial operational advantages are also evident. Embedded payments effectively reduce transaction costs, streamline reconciliation processes, and bolster security, mitigating fraudulent activities and errors. Furthermore, the introduction of instant payments optimizes cash flow management, offering obvious benefits from a budgeting, treasury, and liquidity planning perspective.

Established insurance firms are eagerly embracing integrated payment solutions, mirroring the industry's shift toward customer-centric, digitally driven experiences. Unipol in Italy serves as a prime example, providing online payment options and innovative solutions such as UnipolPay, solidifying its position as an e-money provider. This demonstrates its commitment to modernizing financial transactions. These joint initiatives emphasize the insurance sector's steadfast dedication to delivering enhanced and digitally advanced insurance experiences that cater to the evolving needs of customers and partners.

Associated Drivers

- The Digital Business Imperative – Competitiveness and Outcomes
- Shifting Tech Regulatory Landscape – Navigating Risk and Opportunity
- Cybersecurity and Risk – Building Resilience Against Multiplying Threats

IT Impact

- **Payment integration complexity:** Implementing embedded payments requires IT teams to manage the complexity of integrating various payment methods seamlessly into existing systems. This involves integrating APIs, implementing secure payment gateways, and ensuring compatibility with legacy systems.

- **Data security and compliance:** IT organizations must prioritize data security and compliance with industry regulations such as the General Data Protection Regulation (GDPR). Ensuring the protection of sensitive customer payment data is paramount to building trust and adhering to legal requirements.

- **Scalability and reliability:** As digital payment adoption grows, IT infrastructure needs to be highly scalable and reliable to handle increased transaction volumes without disruptions. Scalable cloud solutions, load balancing, and redundancy measures are becoming essential to maintain system stability.

Business Impact

- **Enhanced customer experience:** The adoption of embedded payments in insurance leads to faster, more convenient transaction processing, improving customer satisfaction and loyalty while strengthening the insurer-customer relationship.

- **Streamlined business operations:** Insurers benefit from reduced operational costs and increased efficiency, positively impacting profitability. Streamlined payment processes enhance financial performance by lowering operational costs and improving efficiency.

- **Profitability boost:** The optimization of payment workflows and reduced costs, coupled with enhanced customer retention, contribute to improved profitability for insurance companies. Embedding payments aligns with financial goals while ensuring a superior customer experience.

Guidance

- Develop a detailed integration plan, fostering collaboration between IT teams and payment providers. Implement continuous testing and optimization to resolve challenges and ensure the payment integration process is seamless and efficient.

- Implement encryption and tokenization techniques to safeguard payment data. Conduct regular compliance audits, educate users on secure practices, and enforce multifactor authentication, enhancing data security and regulatory compliance.

- Use scalable cloud platforms to ensure automatic scaling based on demand. Implement redundancy and disaster recovery plans, and continuously monitor system performance. These measures improve scalability, reliability, and overall system stability.

Prediction 3: By 2025, insurtech market consolidation drives outcome-based pricing adoption by 60% of tier 1 and 50% of tier 2 global insurers, enhancing value-driven partnerships and efficiency.

Over the past few years, the insurance industry has undergone a profound transformation, largely driven by the infusion of cutting-edge technology and primarily facilitated by B2B insurance tech providers, also known as "insurtechs." This transformative wave has brought about significant changes in the digital strategies of traditional insurance providers, with a strong focus on collaborative partnerships to accelerate innovation. However, the insurtech boom has encountered hurdles due to global economic uncertainties, exacerbated by the unsettling effects of the COVID-19 pandemic and the Russia-Ukraine War on capital venture markets, which have made it more challenging for insurtech start-ups to secure funding. This dynamic will likely lead to a consolidation in the insurtech

market at least in the short run, encompassing mergers, binding joint ventures, and a complete exit from the market for some entities.

IDC foresees that the competitiveness of the market will further drive technology providers' ability to emphasize business value and adapt to future business needs swiftly. Key aspects of this transformation include minimizing IT project risks, ensuring rapid return on investment, and establishing precise key performance indicators (KPIs). This trend will ultimately reach its peak when insurtech companies adopt outcome-based pricing in their software-as-a-service offerings. This strategic move positions them to capture a significant market share and showcases their readiness to share risks, all while providing superior value for money to customers. Unlike traditional fixed-cost models, outcome-based pricing ties the cost of a product or service to actual outcomes achieved, enhancing efficiency and innovation by aligning costs with the business value driven by technology. This pricing approach is already common in IT services, where integrators often tie compensation to the success of digital transformation projects. While system integrators and consulting firms have traditionally led the charge in implementing outcome-based pricing, independent software vendors are gradually embracing it too. This model is gaining traction in the enterprise software industry, where customers are billed based on the results delivered by a solution, benefiting both providers and customers.

IDC predicts the rise of an outcome-based pricing model in the insurance industry, promoting enduring partnerships built on mutual objectives and risk-sharing agreements. For instance, cybersecurity SaaS providers might connect subscription fees to the number of data breaches, encouraging stronger security outcomes. Similarly, commercial underwriting solution providers could correlate fees with expected profitability metrics such as surplus generated in underwriting and portfolio quality. Implementing this model involves internal adjustments and associated costs, so insurers must carefully evaluate these factors when considering partnerships with tech vendors.

Associated Drivers

- Economic Uncertainty – IT Malaise and Market Volatility
- The Digital Business Imperative – Competitiveness and Outcomes
- Everything as a Service Intensifies – Transforming Models to Drive Change

IT Impact

- **Complex metrics definition:** Measuring the precise outcomes that tie into software pricing can be a significant technical challenge. Quantifying these metrics in a way that accurately reflects the software's impact on the business requires sophisticated data collection, analysis, and reporting capabilities.

- **Adapting IT systems:** IT systems need to be adapted or developed to handle the complexities of outcome-based pricing. This includes additional indirect costs such as those related to implementing advanced analytics, reporting tools, and customer feedback mechanisms to track and demonstrate outcomes effectively.

- **Vendor dependence:** Relying on independent software vendors for outcome-based pricing introduces a level of vendor dependence. IT teams must consider the implications of this dependence on factors such as software updates, maintenance, and long-term support, which can impact the organization's IT strategy and vendor management processes.

Business Impact

- **Strategic technology alignment:** The outcome-based pricing model necessitates a strategic alignment of technology investments with overarching business objectives. It ensures that technology initiatives directly contribute to achieving key business goals, fostering a more cohesive and goal-oriented organizational approach.

- **Hedging risks through vendor collaboration:** Embracing outcome-based pricing promotes risk sharing and collaboration with software vendors. Insurance organizations can reduce the risk

of project failures and establish stronger partnerships with vendors that have a vested interest in delivering successful outcomes.

- **Competitive edge and customer-centric approach:** Implementing this pricing model can provide insurance companies with a competitive edge. By offering innovative solutions that tie technology costs to tangible benefits and outcomes, insurers demonstrate a customer-centric approach that can attract and retain clients seeking value-driven partnerships.

Guidance

- Prioritize creating comprehensive contracts with software vendors, clearly defining outcome metrics, pricing structures, data-sharing agreements, and dispute resolution mechanisms to ensure alignment and mitigate uncertainties.

- Conduct proof-of-value (PoV) studies to quantify potential business outcomes, costs, and risks before committing to outcome-based pricing. PoV studies will aid in making informed decisions and setting realistic pricing expectations.

- Develop a risk management strategy, including contingency plans, vendor diversification, and continuous monitoring. Maintain open communication, educate stakeholders, and prepare clear exit strategies for effective transition to outcome-based pricing.

Prediction 4: By 2025, bridging the silver economy protection gap will lead 60% of worldwide health insurers to collaborate with telehealth providers, offering wider access to personalized and preventative care.

The present era is witnessing a profound global demographic shift fueled by extended life expectancies and declining birth rates, leading to a notable increase in the elderly population. This demographic transformation has paved the way for a distinctive economic surge known as the "silver economy." This phenomenon requires tailored products and services aligned with the preferences, lifestyles, and needs of the silver population, generally aged 50 and beyond. Healthcare services are gaining significant traction within this segment. As the elderly population grows, so does demand for healthcare services and comprehensive coverage. With age-related health challenges in play, seniors often require more comprehensive and round-the-clock medical attention.

Healthcare institutions globally are compelled to revolutionize service provision. However, a significant challenge lies in determining the funding for this sustained and extensive attention. Health insurance plays a pivotal role in addressing this hurdle, ensuring vital medical services are available without causing financial strain. Unfortunately, the health insurance industry has notoriously struggled to adapt offerings to this demographic. Historically, older individuals have faced marginalization within insurance systems due to diverse factors. Traditional actuarial practices, informed by statistical risk assessment, considered seniors riskier to insure due to age-related conditions, translating to high premiums or coverage denial. Limited access to comprehensive healthcare data and evolving medical technology further exacerbated the challenge, hindering tailored insurance product development. Societal attitudes and biases added to the predicament, perpetuating ageism – the stereotyping of older adults as less productive and more prone to illness. Such biases influenced insurers to offer limited coverage, excluding conditions prevalent among seniors. However, the momentum of digitalization offers a robust avenue for transforming care delivery. A December 2022 *IDC Consumer Pulse Survey* underscores the popularity of virtual consultations, paralleling in-person visits in satisfaction.

Virtual care is emerging as a transformative opportunity for health insurers. It enhances accessibility, curtails costs, promotes preventive care, and fosters patient engagement. Crucially, it addresses the evolving needs of an aging population, fostering innovation in healthcare delivery. The potential impact on the elderly demographic is significant, especially as personalized virtual care gains ground, emphasizing wellness and prevention. As digital care evolves with shared charts, images, chat features, and video capabilities, aging baby boomers will likely embrace these advancements, influencing care delivery. Recognizing the critical need for collaboration, health insurers are increasingly forging strategic partnerships with healthcare providers, particularly in the realm of

telemedicine services. Prominent industry leaders such as Humana, Oscar Health, UnitedHealthcare, Doctor on Demand, and Teladoc are at the forefront of introducing pioneering initiatives focused on online consultations tailored for senior individuals. The profound impact of the COVID-19 pandemic has expedited the reshaping of home-based care, unveiling unprecedented opportunities to elevate patient experiences, curtail costs, and enhance overall treatment outcomes.

Associated Drivers

- Dynamic Work and Skills Requirements – New Work Mode Era
- AI Everywhere – Generative AI Takes the Spotlight
- The Digital Business Imperative – Competitiveness and Outcomes

IT Impact

- **Integrated data ecosystem:** Enabling virtual care for seniors through healthcare partnerships demands an integrated data ecosystem. IT systems must seamlessly exchange information between insurers and healthcare providers to ensure accurate patient records, streamlined care coordination, and informed decision-making, enhancing seniors' virtual care experience.
- **Interoperability challenge:** Achieving interoperability between health insurers and modern healthcare systems is pivotal. IT efforts must bridge technological gaps, ensuring smooth communication, data sharing, and collaborative care planning. Overcoming interoperability challenges is essential for delivering cohesive and effective virtual care to senior beneficiaries.
- **Privacy and security collaboration:** Implementing virtual care requires a collaborative approach to privacy and security. IT strategies must align with healthcare partners' security protocols, safeguarding sensitive senior health data during transmission and storage.

Business Impact

- **Enhanced patient accessibility:** Virtual care offers seniors greater accessibility to healthcare services from their homes. This convenience minimizes travel and waiting times, making medical consultations and check-ups more manageable, especially for those with mobility challenges.
- **Holistic care management:** Virtual care facilitates comprehensive and personalized care plans. Seniors benefit from real-time monitoring, timely interventions, and seamless communication between healthcare providers, enhancing overall well-being and chronic disease management.
- **Patient empowerment and engagement:** Seniors gain active participation in their health management through virtual care. They become informed decision makers that engage in preventive measures and treatment discussions, ultimately fostering a sense of control over their healthcare journey.

Guidance

- Invest in advanced data integration solutions that facilitate seamless information exchange between insurers, healthcare providers, and other stakeholders involved in senior care. These solutions should be capable of integrating diverse data formats and standards, ensuring that patient records are accurately shared and updated in real-time.
- Engage with healthcare providers and IT vendors to establish interoperability standards that bridge the technological gaps between different systems. Encouraging the adoption of standardized protocols for data communication and sharing will enable seamless interaction between insurers and healthcare providers.
- Collaborate closely with healthcare partners to establish robust security protocols that align with industry standards and regulations. Encryption techniques, secure transmission channels, and stringent access controls should be implemented to safeguard senior health data during transmission and storage.

Prediction 5: By 2026, as public cloud is given priority for modernizing agent-producer relationship systems, 35% of insurers will adopt sovereign solutions to foster regulatory compliance.

In the current era marked by rapid innovation and technological progress, our daily lives benefit from continuous advancements that enhance consumer experience. However, this progress comes with a growing challenge – vast amounts of data generated by businesses in their digital pursuits pose increasing threats to individual privacy. Striking a delicate balance between the convenience of technological advances and the confidentiality of personal information defines the core challenge of our digital age. Data sovereignty is therefore emerging as a vital solution to safeguard the rights and interests of data owners and generators. This concept ensures that data is governed by the laws of the nation where it is collected, preventing unauthorized access and misuse by foreign entities. Several regions have already enacted specific regulations in response to this issue. For example, China's Cybersecurity Law mandates data storage within its borders, while India's Personal Data Protection Bill proposes a similar requirement. Also, the European Union's GDPR empowers citizens and imposes stringent data handling rules. Cloud service providers such as Oracle, Microsoft, AWS, and Google have responded by establishing datacenters worldwide and offering sovereign cloud services, aligning with data sovereignty requirements and the specific needs of enterprises.

The global insurance industry, particularly the P&C space, is increasingly adopting sovereign cloud solutions to meet growing demand for data sovereignty. Insurers face mounting pressure to maintain strict control over their data within specific geographic boundaries, and sovereign clouds offer a valuable solution to this challenge. However, the industry's shift towards hybrid cloud and multicloud IT environments has added complexity to integrating sovereign cloud solutions. To navigate this complexity, insurers are strategically planning their path to data sovereignty. This path begins with organizations assessing which data and workloads are suitable for migration to the cloud, focusing on which sensitive data might be specifically subject to sovereignty requirements. IDC anticipates that agent management systems (AMSs) will play a critical role in advocating for data sovereignty. AMSs are software tools that empower insurance carriers and agents to collaborate more efficiently, assisting with onboarding, training, performance tracking, and commission management. Consequently, such software holds highly confidential and sensitive information, including agents' commissioning rulebooks, customers' risk assessment snapshots, contractual policy legal practices and standards, and other critical data that could result in substantial business losses if exposed. Therefore, data sovereignty becomes paramount, especially for insurers that have strategized international expansion by forging alliances with managing general agents (MGAs) or agents in foreign countries, leading to complex compliance issues in data residency. By using an AMS hosted on a sovereign cloud, insurers can ensure that data is stored and processed within the borders of the country where the data is generated, which can help address data sovereignty concerns.

Global cloud service providers are increasingly focusing on sovereign cloud solutions, recognizing the pivotal role of AMS in the P&C insurance sector. Microsoft has been at the forefront of addressing this demand by developing the Microsoft Cloud for Sovereignty, a customized solution that meets stringent requirements related to data residency, privacy, access control, and compliance. This initiative enables insurance organizations to seamlessly migrate, develop, and digitally transform their workloads, while maintaining control over the specific location where their data is hosted.

Associated Drivers

- Everything as a Service Intensifies – Transforming Models to Drive Change
- Shifting Tech Regulatory Landscape – Navigating Risk and Opportunity
- The Digital Business Imperative – Competitiveness and Outcomes

IT Impact

- **Increased costs and complexity:** Deploying multiple instances of cloud services in different jurisdictions and working with multiple cloud providers to meet sovereign requirements can

increase the cost and complexity of insurers' cloud infrastructure. This may affect their profitability and competitiveness.

- **Data sovereignty and compliance challenges:** Compliance with various international, national, and industry-specific regulations requires meticulous attention to detail. Managing data within specific geographic boundaries, aligning with diverse regulations, and ensuring compliance with sovereignty requirements pose considerable IT challenges.

- **Security and confidentiality concerns:** Ensuring robust security measures to safeguard this information from unauthorized access, both within and outside the organization, is a critical IT concern. This is particularly challenging when dealing with international expansion and collaborations with MGAs or agents in foreign countries.

Business Impact

- **Enhanced business resilience:** Sovereign clouds are designed to ensure business continuity, even in the face of unforeseen events. By hosting applications on such platforms, insurers can maintain uninterrupted access to essential systems and data during disasters or system failures, minimizing downtime and safeguarding customer service and operational efficiency.

- **Facilitated international expansion and alliance building:** Using sovereign cloud solutions, insurers can navigate complex compliance issues related to data residency in different countries. This facilitates seamless collaboration and data sharing between international partners, enabling insurers to expand their business globally while adhering to local data protection regulations.

- **Enhanced data security and privacy compliance:** The adoption of sovereign cloud solutions ensures that sensitive customer data as well as critical business information such as commissioning rulebooks, risk assessment snapshots, and contractual policies are stored and processed within specific geographic boundaries.

Guidance

- Conduct a thorough risk assessment that considers the costs, complexities, and compliance challenges associated with sovereign cloud solutions. A detailed analysis of the specific regulatory requirements of each jurisdiction where insurers may wish to operate is essential. By understanding the legal landscape, insurers can choose the right cloud service provider.

- Invest in robust security measures, including encryption, access controls, and continuous monitoring, to safeguard sensitive information. Having a dedicated team or partnering with experts who are well-versed in international, national, and industry-specific regulations is also crucial.

- Collaborate with cloud service providers that have experience in dealing with data sovereignty issues. By leveraging shared knowledge and experiences, insurers can navigate challenges more effectively and adapt their strategies as the regulatory landscape evolves.

Prediction 6: By 2027, due to AI regulations, 60% of AI algorithms adopted by insurers along the policyholder value chain will leverage synthetic data, to ensure system fairness and regulatory compliance.

The insurance sector is experiencing a rapid and transformative revolution, largely propelled by the seamless integration of AI algorithms across the entire policyholder value chain. This integration spans various aspects, including improving underwriting processes through historical and telematics data analysis, implementing personalized and flexible pricing structures, deploying data-backed fraud prevention techniques, optimizing marketing outbound campaigns with comprehensive customer insights, and streamlining virtual claims handling with straight-through-processing mechanisms. However, at the heart of these groundbreaking innovations lies the utilization of sensitive personal data, sparking global concerns about potential risks to consumers. Despite the exemption of anonymous data from the EU's GDPR, the U.S.' California Consumer Privacy Act (CCPA), and various international privacy laws, traditional privacy protection methods (e.g., data minimization, anonymization, purpose limitation, and encryption) still harbor certain residual risks and costs, notably

re-identification and compromising data utility. Insurers can only maximize the benefits of AI algorithms by ensuring they are well trained with fully representative data. To achieve this, it is crucial for insurers to develop strong guidelines and frameworks that might instruct the organization on how to consistently ensure strict privacy compliance, address any inherent biases in the data, and enhance the transparency of the algorithms. An essential development in this context is the European Commission's proposal of the EU AI Act in April 2021, categorizing AI systems into four groups based on their associated risk. Particularly pertinent to insurers, the updated draft released in November 2021 designates "AI systems intended for insurance purposes" (which covers systems used in insurance premium calculation, underwriting, and claims assessment) as high risk.

Synthetic data presents a revolutionary solution in the insurance sector, enabling the use of AI while adhering to privacy laws and regulations. It can be described as an artificial data set meticulously designed to closely resemble real-world data while intentionally excluding sensitive attributes. Recent advancements in generative AI have significantly improved the realism and accuracy of synthetic data, thus enhancing the capabilities of AI models trained on it. The adoption of synthetic data offers several advantages within the insurance sector. Firstly, it empowers the training of AI models without the need to expose personal or confidential information, effectively addressing privacy concerns. Synthetic data offers high realism and statistical representativeness while eliminating the risk of re-identification, preserving privacy and detailed statistical insights. Furthermore, synthetic data is free from historical biases, ensuring fairer and more impartial risk assessments. Synthetic data also simplifies the creation of extensive and diverse data sets — a crucial factor in training robust AI models. Using synthetic data is also a cost-effective alternative to the laborious process of anonymizing personal data, which falls outside the scope of the GDPR.

Practical examples demonstrate the substantial benefits of synthetic data. For instance, a U.S.-based homeowner P&C insurance company, grappling with privacy regulations such as CCPA, effectively employed synthetic geolocation data when assessing home insurance pricing. This synthetic data enabled its modeling teams to analyze crucial climate factors using synthetic home addresses, yielding results on par with real data. This approach also eliminated re-identification risks and sped up data processing while maintaining utility and statistical accuracy. Likewise, prominent health insurer Humana used generative AI synthetic data to transform healthcare services. Faced with data access restrictions and sensitivity issues, synthetic data facilitated risk-free data exchange platforms, benefiting vendors, researchers, and partners. These platforms aided in creating more precise disease progression prediction models, enabling proactive interventions and fraud prevention.

Associated Drivers

- AI Everywhere – Generative AI Takes the Spotlight
- Shifting Tech Regulatory Landscape – Navigating Risk and Opportunity
- Cybersecurity and Risk – Building Resilience Against Multiplying Threats

IT Impact

- **Data quality and accuracy:** Ensuring synthetic data faithfully mirrors real-world contexts demands meticulous validation. By employing sophisticated generative algorithms and embracing the latest in AI advancements, IT teams can guarantee precision and reliability in their data sets, fostering robust decision-making processes.

- **Ethical AI:** Upholding ethical principles is of utmost importance; it involves the mitigation of biases and adherence to regulatory standards. These initiatives provide stakeholders with confidence, ensuring that synthetic data is precise as well as ethically and legally sound.

- **Integration and scalability:** Seamless integration within existing IT infrastructures requires careful assessment of compatibility. Scalability, especially in handling expansive and diverse data sets, is a fundamental concern. Robust synthetic data solutions must efficiently adapt to evolving business needs while ensuring optimal performance in a data-intensive landscape.

Business Impact

- **Accelerated innovation and development:** Synthetic data expedites the data preparation phase, enabling faster development and iteration of AI models. Businesses can bring products and services to market more swiftly, gaining a competitive edge.

- **Cost-efficient data-driven insights:** Generating synthetic data reduces the costs associated with data collection, labeling, and storage, which are often significant in traditional data-driven approaches.

- **Enhanced privacy and compliance risk exposure:** Using synthetic data mitigates privacy concerns associated with using real customer information. This enables businesses to comply with stringent data protection regulations more easily.

Guidance

- Clearly define the use cases and objectives for which you intend to use synthetic data. Outline the attributes and characteristics that the synthetic data needs to exhibit to accurately represent real-world scenarios.

- Prioritize a responsible AI framework to uphold ethical standards, tackle biases, and adhere to regulations. By ensuring accuracy, ethical integrity, and legal compliance, stakeholders can trust the synthetic data's reliability and credibility.

- Prioritize seamless integration within existing infrastructures by assessing compatibility thoroughly. Focus on scalability, adapting to evolving business needs while maintaining optimal performance. Implement robust synthetic data solutions that efficiently meet these challenges, ensuring a streamlined and adaptable IT ecosystem.

Prediction 7: By 2027, climate risk modeling tools will enable reinsurers to improve NatCat risk exposure estimation accuracy by 50%, resulting in a reduction of NatCat loss ratio via risk-adjusted pricing.

Over the past two decades, the global insurance industry has faced a growing number of major natural catastrophes. In 2023, it encountered the second-highest insured catastrophe losses on record, with secondary perils such as winter storms, wildfires, heatwaves, and severe flooding contributing significantly to these losses. Experts, including the Intergovernmental Panel on Climate Change (IPCC), increasingly agree that climate change's physical effects are leading to more frequent and severe weather events, directly impacting the insurance sector. Even if some reinsurers believe the full effects of climate change will not manifest for some time, there is a scientific consensus that it is already affecting extreme weather frequency and intensity. If insurers fail to account for climate change and its impact in their catastrophe modeling and pricing, it could result in unforeseen earnings and capital volatility. This, in turn, may lead to pricing adjustments that affect the cost of reinsurance for primary insurers, impacting their profitability and risk profiles.

Climate risk modeling tools hold immense value for reinsurers, transforming their risk assessment and decision-making processes. These tools consider climate change scenarios, geographic variations, and other critical factors, enabling precise evaluation of climate-related risks. Reinsurers can harness these tools to create tailored reinsurance capital allocation and pricing strategies that align with evolving climate risks, thus enhancing their overall risk management capabilities. A pivotal advantage these tools provide lies in their ability to quantify risk exposure in meticulous granularity. Reinsurers can identify high-risk areas, allocate resources efficiently, and formulate effective risk mitigation strategies. For instance, they can assess the likelihood and severity of climate-related events in specific regions, enabling them to design reinsurance contracts that address these specific risks. Furthermore, climate risk modeling empowers reinsurers to proactively develop and implement climate adaptation strategies. By gaining insights into the potential impacts of climate change on their portfolios, reinsurers can adapt their business models and introduce new reinsurance products tailored to address climate-related challenges for primary insurers and businesses.

Within the insurance market, several initiatives are actively addressing climate change risk. Impact Forecasting, the catastrophe modeling unit of Aon, collaborates with researchers to incorporate climate change data into models, assisting reinsurers in comprehending evolving risks and pinpointing areas of concern. The 2° Investing Initiative (2DII), a nonprofit think tank, focuses on developing tools to assess climate transition risk within reinsurance portfolios to align financial regulations with climate policy. CLIMADA, an open source modeling tool, plays a critical role in estimating economic damage resulting from climate change within the reinsurance context, providing decision makers with insights into the cost effectiveness of risk reduction measures. These initiatives are instrumental in helping the reinsurance sector seamlessly integrate climate objectives into risk assessment and decision-making processes.

Associated Drivers

- Shifting Tech Regulatory Landscape – Navigating Risk and Opportunity
- Cybersecurity and Risk – Building Resilience Against Multiplying Threats
- AI Everywhere – Generative AI Takes the Spotlight

IT Impact

- **Data integration challenges:** Reinsurers need robust IT systems to integrate diverse climate data sources, including historical weather patterns, climate change scenarios, and geographic data.
- **Computational power requirements:** Substantial computational power is required for running complex climate simulations and risk assessments, necessitating investments in high-performance computing infrastructure.
- **Data accuracy and quality:** IT teams must ensure data accuracy and quality control, as minor errors can significantly impact risk assessments and pricing models, potentially leading to financial losses.

Business Impact

- **Enhanced risk assessment:** Reinsurers can more accurately assess risks associated with climate change, enabling data-driven decisions for underwriting policies across various lines of business.
- **Tailored reinsurance products:** Customized reinsurance structures can be created that offer coverage tailored to specific climate-related perils. This can attract primary insurers seeking comprehensive risk transfer solutions.
- **Pricing adequacy:** Improved risk quantification ensures that reinsurers can price their coverage adequately, reducing the potential for unexpected losses and maintaining profitability across lines of business.

Guidance

- Collaborate with industry peers, climate research institutions, and regulatory bodies to establish standardized formats and protocols for climate-related data. Emphasize interoperability to facilitate seamless data exchange between systems. By adhering to common standards, reinsurers can streamline the integration of diverse climate data sources.
- Prioritize substantial investments in high-performance computing infrastructure. Adequate computational power ensures timely and accurate analysis of extensive climate data, enabling reinsurers to make informed decisions and respond swiftly to emerging climate-related risks.
- Establish stringent protocols for data accuracy and quality control within IT systems. Implement thorough validation processes to identify and rectify errors promptly. Regular audits and checks must be conducted to maintain the integrity of climate data. Reliable and precise data form the foundation of robust risk assessments and pricing models.

Prediction 8: By 2027, GenAI-based advisor enablement tools will lead to a 15% spike in distribution sales volume and a 20% boost in sales ROI by delivering personalized and empathetic engagement at scale.

In the swiftly evolving landscape of the insurance industry, the emergence of generative AI technologies, represented by OpenAI's ChatGPT, has ignited curiosity and caution among chief information officers (CIOs). While some harbor reservations linked to privacy and ethics, others grapple with fully grasping the technology's potential; yet the fear of missing out (FOMO) sparks a palpable need for proactive action. Contrary to skeptics' concerns, the insurance sector has defied expectations, shifting focus toward augmenting insurance professionals instead of seeking their replacement.

A testament to this paradigm shift is the increasing prominence of knowledge management applications in insurance, highlighted by results of wave 2 of IDC's *Future Enterprise Resilience and Spending Survey* in March 2023. The survey revealed that nearly half of all insurance organizations recognize the potential of this use case. Leveraging expansive language models, insurance providers are striving to centralize knowledge resources, thus empowering agents and professionals. This underscores the criticality of investing in knowledge management, as it directly impacts sales productivity by arming agents with customized insights and effective engagement strategies. Traditionally, agents have grappled with challenges such as generic outreach, limited personalization, and manual note taking. However, generative AI is on the brink of revolutionizing this landscape by equipping agents with personalized tools gleaned from past interactions. Through AI-generated solutions and scripts, the preparation process becomes streamlined and precise. Outreach efforts gain precision and customization, leading to enriched cross-channel interactions. The era of generic follow-ups fades as AI crafts personalized connections and marketing materials. This fusion of generative AI and sales activities optimizes efforts, empowering professionals to prioritize, engage authentically, and elevate overall productivity.

Amid this technological renaissance, Sproutt emerges as a vanguard, steadfast in its dedication to cutting-edge solutions. The innovative life insurance company harnesses its groundbreaking AI engine to propel sales agents and brokers to unparalleled heights. By integrating its SmartLife platform with generative AI capabilities, agents gain a formidable competitive edge. They can access personalized content seamlessly, communicate with unparalleled efficiency, and effortlessly foster robust client relationships. In this transformative era, Sproutt's resolute commitment indicates a brighter and more efficacious future for the entire life insurance industry.

Associated Drivers
- AI Everywhere – Generative AI Takes the Spotlight
- Economic Uncertainty – IT Malaise and Market Volatility
- The Digital Business Imperative – Competitiveness and Outcomes

IT Impact
- **Privacy and ethics concerns.** The adoption of generative AI raises questions about privacy and ethical considerations, as these technologies often process large amounts of sensitive customer data. IT professionals need to ensure that customer privacy is protected and ethical guidelines are followed in the use of AI-generated insights.
- **Technological integration challenges:** Integrating generative AI technologies such as ChatGPT into existing IT infrastructures can be complex. Ensuring seamless interoperability with existing systems, developing APIs, and adapting current technologies to accommodate AI applications are significant challenges faced by IT departments.
- **Skill gap and workforce training:** The introduction of generative AI necessitates upskilling and reskilling IT professionals. Training staff in AI model development, data governance, and security protocols becomes essential. Bridging the skill gap and keeping the IT workforce updated with the latest technologies are ongoing challenges.

Business Impact

- **Elevated sales effectiveness:** Generative AI elevates sales preparation, equipping agents with tailored insights for personal client engagement. This empowers agents to address unique needs, resulting in impactful interactions and improved conversion rates.

- **Amplified client-centric strategy:** AI tools redefine client outreach, guiding sales professionals toward a focused approach. By prioritizing clients aligned with their offerings through AI insights, agents engage in more meaningful conversations, enhancing satisfaction.

- **Seamless follow-up and continuity:** Generative AI simplifies follow-up for sales. AI-driven tools enable personalized marketing and customized discussions, deepening connections. Seamless continuity across channels, from chatbots to in-person interactions, builds trust and strengthens client relationships.

Guidance

- Establish a comprehensive data protection strategy (including encryption, access controls, and compliance audits) to safeguard customer data. Prioritize ethics and privacy in AI use, ensuring transparency and responsible data handling.

- Develop a road map for seamless integration of generative AI into existing IT systems. Invest in API development and adapt infrastructure to harness AI capabilities effectively. Regularly evaluate and update technology stacks to stay competitive.

- Launch upskilling and reskilling programs for IT professionals in AI model development, data governance, and security practices. Foster close collaboration between IT and business units to align AI strategies with sales objectives and co-create tailored solutions for enhanced productivity.

Prediction 9: By 2028, 60% of auto insurers will spend 30% more on trusted data exchange technologies, to become preferred partners of OEMs bundling insurance, increasing auto coverage revenues and IP monetization.

The rapid rise of electric vehicles, connected and autonomous driving, and digital mobility solutions is ushering in transformative business models such as ride hailing, ride sharing, and demand-based transit, all aimed at delivering on the promise of mobility as a service. These technology-enabled business innovations are creating opportunities for global enterprises as well as start-ups and scale-ups to monetize mobility data. Central to this latest shift of the mobility landscape are car original equipment manufacturers. These OEMs are launching new products and services, where lease plans, after-sales service subscriptions, fleet management, shared mobility, or a bundle of those are enabling them to move away from one-off sales to car-as-a-service revenue models. For instance, Stellantis announced that by 2030, it expects to generate $22.5 billion in revenue from software and subscription services. Data and technology are the strategic enablers of car-as-a-service offerings and can be offered at a premium, including data plans for 5G connectivity, telematics features, and concierge services for a monthly fee (such as GM's OnStar, Mercedes' Concierge, or Audi's Connect).

As OEMs chart their course, insurance integration becomes a key consideration. OEMs are considering different options on how to bundle insurance, such as setting up their own captive carriers, partnering with reinsurers, or collaborating with carriers by acting as an MGA. Setting up own insurance carriers will provide car OEMs the highest level of control over products and customer experience; however, the capital constraints of operating in the highly regulated insurance market will discourage most of them. Not many reinsurers have auto coverages in their portfolio, so IDC expects this type of business model to be residual. The MGA approach will give OEMs the right level of control and responsibility over the insurance process, the design of insurance products, and the potential to access underwriting profits — the difference between the premiums collected and the claims paid out — particularly as they can leverage more connected and autonomous car features to deliver on the promise a more favorable loss experience (i.e., fewer and less costly accidents and claims than anticipated). Nationwide, in the U.S., is an example of an insurer building partnerships with OEMs through white labeling with OEMs such as Rivian, Ford, and Toyota, with the Nationwide brand still

involved throughout the customer journey. Although IDC expects the MGA model to prevail, different levels of insurance market maturity, the availability of new OEMs' subscription services, and regulatory constraints will drive different levels of adoption across geographies.

Insurance companies that invest in OEMs partnerships and align their technology capabilities to gain access to OEM mobility data (including in real time) will profit from these new business models. Those that are left behind will lose control of the customer experience and product management.

Associated Drivers

- AI Everywhere – Generative AI Takes the Spotlight
- The Digital Business Imperative – Competitiveness and Outcomes
- Everything as a Service Intensifies – Transforming Models to Drive Change

IT Impact

- **High volumes of data:** Insurance organizations collaborating with OEMs in the MGA model must upscale data storage and processing capabilities to accommodate real-time, high-volume data influx from connected vehicles.
- **Data exchange:** Establish robust data exchange protocols to ensure compliance with regulations and safeguard sensitive information shared between insurers and OEMs.
- **Analytics:** Implement advanced analytics for on-the-fly risk assessment and pricing adjustments. Capitalize on real-time data insights from OEMs to refine insurance offerings and enhance profitability.

Business Impact

- **Opportunities with OEMs:** By partnering with OEMs to offer simplified insurance options and utilizing their customer data, insurers can access new customer segments, enhance market penetration, and provide tailored insurance solutions, thus boosting customer satisfaction and loyalty.
- **Enhanced risk management:** The integration of OEMs' customer insights empowers insurers to enhance risk management practices, resulting in refined policy offerings and pricing strategies that cater to evolving mobility needs.
- **Continuous adaptation:** Collaborative partnerships with OEMs enable insurers to innovatively adapt to market trends while respecting legal requirements for intellectual property protection and privacy, fostering a responsive and compliant approach to product development.

Guidance

- Establish OEM partnerships aligned with long-term strategic objectives such as reducing customer churn, minimizing losses, and accelerating product innovation. Embrace a forward-thinking approach to counter short-term legal complexities.
- Use cloud platforms to enhance scalability and facilitate seamless data exchange. During the selection of cloud partners, prioritize understanding their alignment with business needs, especially in creating comprehensive driver profiles. Emphasize stringent data privacy and security practices in data governance and exchange processes.
- Foster collaboration among technology, data science, product management, and marketing teams. Encourage the synergy of these departments to develop products that optimize dynamic pricing for subscription models, ensuring a cohesive and action-oriented approach to product design and development.

Prediction 10: By 2029, 80% of auto insurers adopting claims process digital twins will prioritize accident recreation underlying capabilities to reduce 40% of casualty claims adjustment expenses and fraud losses.

In recent years, the insurance industry has witnessed a dynamic shift toward digitization and predictive tools, with claims management emerging as a pivotal focus area. This transformation has been

propelled by factors such as technological advancements, the rise of self-service options, and the acceleration brought about by pandemic-related lockdowns. The impact of these changes has been most pronounced within auto insurance, particularly personal auto coverage. The proliferation of advanced camera optics in mobile phones has spurred carriers to introduce innovative self-reporting tools. These tools empower policyholders to meticulously document and capture images of losses, evolving into AI-driven self-adjusting mechanisms that swiftly assess losses and propose settlement offers in real time. Moreover, the increasing adoption of telematics has led to the emergence of a new generation of connected vehicles built by design with sensors that facilitate more precise and expeditious claims adjustments and settlements. These sensors automatically trigger the first notice of loss (FNOL) and provide comprehensive insights into the event's dynamics, vehicle damage, and even the feasibility of repairs. However, such advancements primarily apply to auto physical damage claims, leaving a notable gap in the treatment of auto casualty claims, namely, bodily injuries (BI) compensations. Casualty claims have historically been less targeted by automation and digitalization initiatives in this segment due to factors spanning the intricate and diverse nature of human bodies and the underlying legal considerations and jurisdictional nuances. This complexity hampers the application of advanced digital technologies, rendering the deployment of these tools more challenging and riskier compared with their application in auto physical damage claims (i.e., property claims).

Step into the age of Industry 4.0, where the convergence of IT and OT is reshaping every sector and ushering in a new era of technological transformation across industries. At the forefront of this new era is the game-changing digital twin technology. Digital twins provide virtual replicas of physical assets, systems, processes, or even enterprises in the most advanced scenarios, enabling real-time data collection and analysis for insights generation and iterative feedback loops for risk hedging and constant improvement. Continuous real-time tracking of crucial metrics such as vehicle health diagnostics, traffic patterns, driving performance scores, location data, environmental factors, and road conditions can significantly empower insurers. This concurrent analysis enhances the accuracy and timeliness of risk assessment and facilitates improved performance monitoring and claims processing. Moreover, with this detailed knowledge of adverse event dynamics, insurers can proactively prevent high-severity auto claims, leading to a more comprehensive understanding of potential risks and hence minimizing claims losses and adjustment expenses. Claims process digital twins hold the potential to equip claims organizations with evidence-based reporting mechanisms that go far beyond testimonies and tribal institutional claims adjuster's knowledge, leading to proactively assist insurers in liability assessment, ensure fair injury severity evaluation, and provide real-time notifications for suspected fraudulent cases.

As insurers get more familiar with these digital technologies (e.g., sensor-based technologies, high-computing and data storage, and artificial intelligence) by increasingly deploying them through the end-to-end claims processes, insurers will be able to bridge the digital maturity gap between property and casualty domains. Initially prominent in auto property risk management, digital twins technology is now poised for substantial growth in auto casualty claims. In recent years, numerous players in the claims technology arena have emerged, either already incorporating or planning to include accident reconstruction and forensic capabilities as part of their claims management solutions. This trend highlights the industry's shift towards more advanced, technology-driven approaches to enhance the accuracy and efficiency of claims processing in the auto casualty sector.

Associated Drivers

- AI Everywhere – Generative AI Takes the Spotlight
- Dynamic Work and Skills Requirements – New Work Mode Era
- Cybersecurity and Risk – Building Resilience Against Multiplying Threats

IT Impact

- **Data integration challenges:** Implementing and integrating digital technologies such as sensor-based systems, high-computing capabilities, and AI across the entire insurance claims process poses significant challenges. Insurance organizations need to ensure seamless

integration of these technologies with their existing IT infrastructures and consider compatibility and data consistency between different platforms and applications.

- **Cybersecurity concerns:** With the influx of real-time data from diverse sources such as connected vehicles, mobile devices, and IoT sensors, insurance organizations face heightened concerns regarding data security and privacy. Protecting sensitive customer information, transaction data, and proprietary algorithms from cyberthreats and unauthorized access is a critical challenge.

- **Human-machine collaboration and IT skill gap:** The adoption of advanced digital technologies, including AI-driven analytics and digital twins necessitates a shift in the digital skill sets required within IT organizations. IT employees need to be trained to work alongside these technologies effectively.

Business Impact

- **Improved claims accuracy and efficiency:** The integration of digital twins enables insurers to gain real-time insights into accident dynamics, vehicle conditions, and potential bodily injuries. This leads to more accurate and efficient claims processing, reducing the time required for assessment and settlement.

- **Improved risk management:** Through continuous monitoring of crucial metrics such as vehicle health and driving patterns, insurers can proactively identify potential risks. This proactive approach prevents high-severity claims and minimizes losses and adjustment expenses, enhancing overall risk management strategies.

- **Advanced fraud detection:** Digital twins enable insurers to employ evidence-based reporting mechanisms, aiding in fair injury severity evaluation and providing real-time notifications for suspected fraudulent cases. This advanced approach enhances fraud detection capabilities, ensuring fair compensation and reducing financial losses due to fraudulent activities.

Guidance

- Develop a phased adoption strategy that focuses on interoperability and scalability. Plan carefully how you will invest in such emerging digital technologies to avoid technical disruptions and ensure a smooth transition into the digital landscape. Conduct regularly audit data flows for accuracy, ensuring compatibility and optimal performance for efficient claims management.

- Prioritize cybersecurity with regular vulnerability assessments, encryption protocols, and employee training. Implement multilayered security measures to safeguard customer data, and ensure trust and compliance with regulatory standards.

- Identify up front which tasks can be automated without compromising the quality of customer service and decision making. Developing a workforce with a deep understanding of insurance practices and emerging technologies is essential for maximizing the benefits of IT advancements while ensuring a human touch in claims resolution processes.

ADVICE FOR TECHNOLOGY BUYERS

In a constantly shifting insurance terrain characterized by uncertainty and rapid technological advancements, insurers across the globe find themselves navigating the intricate challenge of adjusting to volatile conditions while preparing for unforeseen disruptions. The future demands that insurers exhibit resilience and adaptability, not merely to bounce back from crises but propel themselves forward to capitalize on growth prospects. Central to this transformation is technology, finally recognized as the catalyst for fresh revenue streams that insurers can tap into through innovative digital monetization initiatives. Achieving this goal necessitates striking a careful balance between streamlined processes demanded by line-of-business professionals and the agility of IT professionals in meeting those needs.

The era of digital transformation in the insurance industry is coming to an end, and IDC is tracking the effects of this change through ongoing research on digital-versus-non-digital spending forecasts, which have demonstrated a repurposing of IT spending from how to start a digital company (i.e., non-digital spending being greater than digital spending) to how to keep a successful one going (i.e., non-digital spending being less than digital spending). Despite senior industry professionals' initial reluctance to change, digital-first insurance businesses – insurers that adopt digital technologies as the foundational driving force of their business models – are coming to the fore and are now successfully redefining the purpose of the industry by emphasizing transparency, social responsibility, and alignment with customer values. The success of digital insurers has created strong consumer demand for convenient and purpose-driven insurance experiences, forcing traditional incumbents to adjust their business strategies.

To advance their digital business strategies, insurers should consider the following advice based on IDC's observations:

- **Embrace digital business now.** Delaying digital strategies will only make it more challenging to catch up. Mature digital insurance organizations continue to invest in building digital business models, reaping new revenues. Initiate your digital journey promptly to stay competitive.

- **Empower technology leaders.** Technology leaders play a pivotal role in driving digital value. Ensure they have the authority and resources needed to implement digital strategies effectively. Establish a supportive structure for leading digital initiatives and fostering innovation.

- **Identify and prioritize revenue opportunities.** Determine your top digital revenue opportunities and concentrate on those that align best with your strategic goals. Focus resources on core digital business revenue models rather than spreading efforts too thin.

- **Develop strategic partnerships with insurtech companies.** Collaborate with insurtech companies that specialize in digital innovations. These partnerships can provide access to cutting-edge technologies and expertise, enabling insurers to enhance their digital capabilities rapidly and efficiently.

- **Embrace embedded payments and digital transactions.** Embrace embedded payments within insurance processes. Streamlining payments collection and reconciliation through digital transactions reduces operational costs and enhances the overall efficiency of policy management, renewals, and claims settlement.

- **Focus on data security and compliance.** As digital initiatives involve handling vast amounts of sensitive data, prioritize data security. Invest in robust cybersecurity measures and ensure compliance with regulations. Safeguarding customer data is paramount to building trust in the digital ecosystem.

- **Prepare for AI regulations and fairness.** With the increasing use of AI algorithms, prepare for upcoming regulations related to AI ethics. Ensure that AI models adopted along the policyholder value chain leverage synthetic data to guarantee fairness and regulatory compliance. Stay ahead of regulatory requirements to avoid disruptions in digital operations.

- **Explore climate risk modeling and sustainability.** Given the rising importance of climate risk modeling, explore technologies that enable accurate estimation of natural catastrophe risk exposure. Invest in solutions that contribute to sustainability efforts. Demonstrating commitment to environmental responsibility can enhance your brand image and meet the growing consumer demand for socially responsible insurance products.

EXTERNAL DRIVERS: DETAIL

AI Everywhere — Generative AI Takes the Spotlight

- **Description:** With intelligence becoming the primary source of value creation, we are on the verge of the "Intelligence Revolution," in which AI and automation-oriented technology will be

the main accelerators of business change. In the realm of "AI everywhere," generative AI emerges as a transformative force, potentially revolutionizing the future. This branch of artificial intelligence enables a machine-driven autonomous creation of new content, from images to music to even written text, with remarkable accuracy. Early applications of GenAI have showcased its potential in fields such as creative arts, content and code generation, and personalized recommendations. However, it raises concerns regarding bias and privacy. AI algorithms can inadvertently perpetuate biases and pose threats to personal data. As a result, regulation becomes crucial to ensure responsible and ethical use of GenAI. Despite these challenges, the possibilities are vast, ranging from improved customer experiences to innovative problem solving. Harnessing the power of GenAI and navigating its associated complexities has the potential to shape the future of industries and drive advancements in the AI-driven world.

- **Context:** Businesses are already jumping to get a piece of the AI pie, afraid to miss out on the opportunities it presents. Although we are in the early days, monetization for and scale of AI solutions are expected to evolve rapidly. However, this comes at a time of relative economic uncertainty and increasingly constrained IT budgets. Furthermore, AI is not without risks, especially when it comes to ethical AI and data privacy, and companies need to carefully consider the best use cases to implement AI effectively.

Economic Uncertainty — IT Malaise and Market Volatility

- **Description:** The global markets have been thrown into a state of prolonged uncertainty. The era of low interest rates and easily accessible corporate debt has abruptly transitioned into an economic slowdown, accompanied by a surge in interest rates. Despite monetary policy interventions, inflation persists due to the compounding effects of global conflicts and supply chain constraints. As a result, economic growth is stifled, hindered by soaring commodity prices and mounting sovereign debt. In certain cases, this instability has even escalated into recessions. These conditions have created a situation of IT malaise, especially in the U.S. and Europe in early 2023, as uncertainty makes budget planning and forecasting challenging for executives. Many IT leaders are now bracing for an onslaught of AI-driven technology while battling uncertainty about which current expenditures and assets they should keep or discard. While technological innovation may be a rejuvenator, it further contributes to disruption and uncertainty in today's already-volatile economic environment.

- **Context:** Given uncertainty around inflation and interest rates, C-suite executives need to strategically plan IT spend. Most executives view IT as a deflationary measure but striking this balance between digital investments and cost management becomes increasingly challenging given volatile conditions. With generative AI, IT executives further find themselves caught up in questions of strategic spending. While many IT organizations initially focused on constraining new expenditures and optimizing the use of existing assets, they now find themselves grappling with how to invest in AI and other drivers of innovation while reining in costs.

Cybersecurity and Risk — Building Resilience Against Multiplying Threats

- **Description:** The era of digital business has resulted in a significant increase in the interconnectedness of devices, people, applications, data, and networks alongside movement of workloads to the cloud. However, this progress has led to a broader vulnerability to cyberattacks. Ransomware attacks have multiplied exponentially; the dark web is teeming with low-cost, high-quality hacking services; and generative AI is threatening with more believable, humanlike phishing and pretexting attempts. A shortage of skilled cybersecurity professionals presents a continuous challenge for organizations to respond effectively. Cyberattacks have impacted all types of organizations, from governments to universities to businesses, and are often\ entangled in geopolitical motives. The increase in high-profile data breaches is furthermore leading to increased policy interventions regarding privacy and sovereignty.

- **Context:** An organization that is unprepared for cyberattacks may suffer various consequences, including data loss, financial implications, harm to the organization's brand

reputation, decreased employee morale, and loss of customers. Cyber-resilience — the ability of an organization to anticipate, withstand, recover from, and adapt to any threats to its resources — is key for an organization to defend against cyberattacks and prepare for swift response to and recovery from attacks.

The Digital Business Imperative — Competitiveness and Outcomes

- **Description:** A digital business creates value using digital technologies for internal and external processes, including customer engagement, employee experience, and product and services development. Building and leading a digital business is imperative for organizations to be competitive. While certain operational aspects may always have a nondigital component, digital businesses prioritize a digital-first strategy that aligns all parts of the business and IT landscape with digital workflows to drive value and growth. Development strategies for both digital and nondigital assets now require leveraging multiple channels for the digital business to obtain support or funding. This places strong emphasis on providing digital experiences for customers and citizens, employees, and partners and necessitates a shift toward fully digital operating models and resilient supply structures enabled by digital technology. The focus of a digital business is increasingly on delivering measurable outcomes. Businesses that have recognized the value of digital anticipate maintaining or even increasing their investment in technology, even in times of economic uncertainty.

- **Context:** As more enterprises embrace digital strategies and technology, they prioritize technology investments that drive innovation or enable competitive differentiation. Technology is no longer viewed as a tool to keep the business running — it is the foundation for building new revenue-generating experiences and products. Laggards will need to adapt quickly and develop their digital road maps and embrace a digital business platform. Identifying top digital revenue opportunities that deliver value will be crucial for overall business success and the implementation of organizational digital-first strategies.

Everything as a Service Intensifies — Transforming Models to Drive Change

- **Description:** The concept of "everything as a service" (XaaS) is driving change across all sectors and ecosystems, affecting the supply side and the demand side of businesses. Organizations are adopting as-a-service models at different speeds out of necessity, but complex delivery strategies make requirements more complicated and the impacts less predictable. The shorter decision cycles enabled by on-demand services enable industry leaders to approach things differently, but the commitment models are fundamentally changing. On the supply side, there is rising demand and higher customer expectations. As a result, suppliers are compelled to convert and enable their offerings more quickly using a secure services-based model. Buyers are now making decisions based on commitments to measured outcomes in terms of optimization, reliance, and financial models. Architecture and solution strategies are now critical to the service provider, where proprietary systems being maintained or migrated can materially impact the efficacy of the as-a-service solution. Leaders face the challenge of finding new financial, operational, and governance models that support a successful transition to an as-a-service approach. Critical factors for organizations to thrive through the as-a-service change landscape include solution control, contractual clarity on roles and responsibility, and accountability alignment including geoeconomic assurance and data.

- **Context:** To deliver optimally, companies are looking to better manage their as-a-service offerings. They are changing product design, delivery, and pricing alongside adjusting management and operations to best optimize as-a-service technology. This is the new model for the tech industry, and suppliers and buyers will need to adapt accordingly. This includes developing cloud-based control to manage provisioning, tracking usage continuously, and improving architectural efficiency.

Dynamic Work and Skills Requirements — New Work Mode Era

- **Description:** In the wake of COVID-19 pandemic-driven accelerated work transformation, enterprises continue to face dynamic work conditions. These range from experiencing lack of skilled employees to codifying more flexible ways of working that rely on a broad range of technologies and services. In some regions, most notably in Asia/Pacific, organizations are focusing on building more secure and technically sophisticated office environments. In North America, remote and more flexible work models are driving investments in technologies that support collaboration across and within disparate work environments. Across this spectrum of work models, organizations are investing in infrastructure, hardware, software, and services to enable and manage increasingly automated ways of working. These include automated remote onboarding, learning in the flow of work, and use of AI and generative AI to facilitate basic tasks and workflows. While the pandemic drew much-needed attention to the employee experience, enterprises have shifted to aligning employee requirements more plainly with strategic business goals. The key challenge around the globe has been to find or upskill/cross-skill employees to scale and meet the demands of complex, automated work processes. Flexible work models continue to change to become even more agile, with digital workspaces highlighting skills, workforce management, automation, changing demographics, and as-a-service talent resourcing.

- **Context:** New modes of working are now intrinsic to leadership and organizational resilience and go well beyond traditional staff planning methods. They are also having an impact on frontline workers who have historically been neglected in favor of higher-paid front- and back-office peers. New work models require agile cross-functional teams — including HR, IT, LOB, finance, facilities management, and operations — to engage top talent and meet client brand expectations. While headlines debate the fate of environmental, social, and corporate governance initiatives, environmental concerns will clearly be an embedded element of workplace design and flexible work models. C-suite leaders and their teams must collaborate to recalibrate work culture, augmentation, and space/place planning to enable more secure, dynamic, and refined work models of the future.

Shifting Tech Regulatory Landscape — Navigating Risk and Opportunity

- **Description:** With frontier technologies such as generative AI, geopolitical concerns, and cyber-risks, the tech legal landscape is rapidly changing. While the GDPR in the EU is perhaps the most well known of privacy laws, other countries have enacted legislation to ensure that personal information is protected and ethically used, such as China's Personal Information Protection Law (PIPL) and Japan's Protection of Personal Information Act (APPI). Nations all over the world are considering frameworks to regulate AI, including the EU's AI Act and the U.S.' AI Bill of Rights. Cybersecurity is top of mind with the U.S.' CIRCIA Act, Japan's Basic Act on Cybersecurity, and the EU's Cybersecurity Act. And with ongoing chip wars, countries around the world have mandated domestic production for certain parts of semiconductor manufacturing and banned foreign-created semiconductors in some cases — often along geopolitical lines. Tech regulation, however, is not just a blockade; it presents an equal amount of opportunity as well. The aforementioned chip laws also incentivize domestic production and innovative chip manufacturing through tax subsidies. Other strategies such as electric vehicle subsidies are accelerating the green transition across many nations. Larger industry verticals are receiving big boosts, such as Saudi Arabia's investments in healthcare technologies.

- **Context:** Businesses must navigate an increasing number of regulatory rules. Even if it is not always the primary focus, tech is often a crucial part of these regulations. Most of these rules are intended to hedge against risks, but some are entrenched in geopolitical divides, so firms that stay ahead of the game and build upon resilience will be best equipped to comply with these regulations. Moreover, regulations and policies are not just restraints — they are also often springboards for investment with many regulations proposing tax subsidies and other kinds of incentives.

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IDC U.K.

IDC UK
5th Floor, Ealing Cross,
85 Uxbridge Road
London
W5 5TH, United Kingdom
44.208.987.7100
Twitter: @IDC
blogs.idc.com
www.idc.com