



From Mainframes to AI:

# The Insurance Tech Journey



## Introduction

In today's competitive landscape, technology plays a crucial role in how businesses enhance their products and services. The insurance industry, in particular, has seen revolutionary changes due to technological advancements. These innovations have transformed the way policies are created, customer service is delivered, damages are assessed, and claims are processed. The pace of transformation shows no signs of slowing down. Consider the significant impact of wearables and electric cars on the sector.

This eBook will explore the journey of technology in insurance, examining its past, present, and the exciting innovations on the horizon. Discover how you can leverage these advancements to stay ahead in the ever-evolving insurance landscape.

## The Past

During much of the 1900s, there was a great deal of time-consuming paperwork and manual data entry involved in insurance. During the latter half of the century, the invention of the mainframe computer started to change things. However, early iterations of these computers were bulky, and they needed heavy-duty air conditioning units to keep them running and elevated floors to hide meters of cable.

In the 1980s, we saw the emergence of the first software companies, and insurers' computing capabilities quickly improved. Fast-forward a few more years, and many firms began commissioning software development teams to design cloud-based platforms that would automate parts of their workflows. While these endeavors certainly resulted in efficiency gains, a lack of interoperability between systems meant that problems often arose when information needed to be shared.



## Rise of the Digital Era

Over the last 20 years, mobile and web technology have fundamentally changed the insurance game. We've seen the rise of software giants and smaller niche players offering cloud-based, pay-per-use insurance platforms and tools.

Not only have these solutions taken automation to a new level, but they've also helped insurers adapt to a new and constantly evolving challenge: compliance. Today's leading firms see insurance software as integral to reducing risk.

Digitization has made a positive impact on many touch points in the insurance lifecycle. In policy underwriting, it enables hyper-personalized customer risk assessments. Self-service capabilities allow policyholders to access their documentation and pay their premiums online. Omni-channel customer communications tools ensure people can engage with their insurers when they want, through their channel of choice, be it over the phone or via text, email, or web chat.

Today, insurers don't need to rely on engineers to build and launch complex new products. The introduction of no-code and low-code software means internal IT teams can build quality insurance products with a fraction of the expertise. This saves insurers time and money, and they can reinvest these resources into creating added value for their policyholders.





## The Future

As digital transformation continues to take hold in the industry, here are some of the ways this shift will revolutionize the insurance space:

### AI's Impact Expands

Artificial intelligence (AI) has been emerging as a tool in insurance workflows for several years and the adoption trend isn't going anywhere. [As AI technology advances, it continues to offer more useful applications for insurers.](#)

Modern AI tools make it easier for insurers to analyze vast amounts of policyholder data and generate accurate predictions that result in more precise pricing and risk assessment.

### Continued Cloud Migration

A growing number of insurers have embraced cloud-based systems in recent years. According to a report from late 2023, [91% of banks and insurers](#) have initiated cloud migrations, up from only 37% in 2020.

Legacy systems are notoriously inflexible and have hampered insurers' ability to respond quickly to changing market demands and emerging trends.

As insurers continue to migrate to cloud-based core systems, it will be easier to launch new products and deliver an excellent policyholder experience, helping them stand out in today's competitive market.

## IoT and Connectivity

IoT has been making progress in the insurance space for some time. Many firms are already using telematics to enhance their auto-insurance products, but these technologies also hold the potential to reshape life, health, property, and commercial products and lines.

We're all familiar with fitness trackers, virtual home assistants, and smartwatches, but we can expect to see an explosion of new categories, such as clothing, eyeglasses, home appliances, medical devices, and even shoes! Sensors embedded in these items will exponentially increase the frequency and accuracy of data that insurers can collect about their customers. This will give them a more well-rounded understanding of their needs and the level of risk they represent.

## The Benefit of Modern Manufacturing Practices

Recent technological advancements not only impact how digital insurance processes are handled, but also physical operations.

Specifically, 3-D printing will revolutionize tomorrow's manufacturing and commercial insurance products. While not the norm today, the 3-D printing construction market is slated for significant growth this decade, with an expected compound annual growth rate of [101.9%](#) until 2030.

As 3-D-printed buildings become commonplace, touted benefits include reduced cost and time needed to replace damaged property. This could lead to lower replacement costs and claims payouts for insurers.

## Increased Usage of 'Smart Contracts'

Blockchain technology has many possible applications in the insurance space. One such example is the use of 'smart contracts' to facilitate more transparent and efficient transactions. This model allows the blockchain to authorize payments from policyholders' financial accounts instantly and without intermediaries, greatly reducing the time and effort needed to process contracts.

The implications of increased blockchain use in the insurance space are significant. According to research from [Boston Consulting Group](#), blockchain technology-related revenue in the industry is set to grow from \$425 million in 2022 to \$37 billion by 2030.

As more insurers begin to implement blockchain technology, it will be easier to pursue new revenue opportunities and expand business lines while maintaining operational efficiency.

## Smarter Claims and Risk Management

Claims processing will always be a core business process for insurers, but the percentage of automated claims is expected to increase dramatically over the next decade. That's thanks to the development of more advanced algorithms that can take care of initial claims routing activities, boosting efficiency and accuracy.

We'll also see a transformation in risk monitoring, prevention, and mitigation. For example, smart in-home IoT devices will proactively monitor people's residences for abnormal temperatures or water levels, immediately alerting homeowners and insurers of problems. Drones will start taking care of traditional, manual methods of first notice of loss.

## Higher Prevalence of Autonomous Vehicles

While fully autonomous vehicles (AV) are still not the norm, over the next decade the proportion of standard vehicles with autonomous features such as self-driving capability is set to skyrocket.

The growth of the AV market is set to create a safer driving environment for consumers. However, it will also significantly impact how insurers approach risk management, price policies, and process claims.

Recent commentary from [McKinsey & Co.](#) provides great insight into how this trend could play out:

"Auto insurance, now focused primarily on individual driver risk, will eventually need to pivot to account for technology risks associated with fleets of autonomous vehicles and potentially privately owned AVs. That means insurance coverage will likely need to shift from drivers to the automakers and software companies responsible for the development and maintenance of various autonomous-driving technologies."

## Insurance Becomes Cool Again

Traditionally, insurance hasn't been deemed the most exciting career, especially by younger generations. But as the industry becomes increasingly tech-centric, that's expected to change.

The insurance agent of the future will be digitally empowered to confidently sell almost any kind of coverage. They'll use their tools and experience to help customers better manage their health, life, mobility, personal property, and residential portfolios.



## Step into Tomorrow with Insuresoft

Insuresoft positions insurers to navigate the increasingly complex world of insurance through digital innovation. We work with our clients to deliver the personalized experiences their customers want today – before they demand them tomorrow.

Our all-in-one enterprise software solution is ideal for personal and commercial lines. It combines core policy processing, digital engagement, and intelligent data to help you navigate the many challenges associated with insurance quoting, compliance, and management of FNOL services.

### Why Insuresoft? The Diamond System.

- Our track record of 100% implementation success with Diamond is what sets us apart. Every client that has signed a contract with us has moved to production.
- Our all-in-one Diamond System works for any P&C product line, including Personal, Commercial, Farm, Specialty and Workers Comp.
- Diamond is one single system that can do it all: core policy processing, digital engagement, and intelligent data. It can be implemented as a suite or one component at a time.
- We're proud of our high satisfaction rates—over 95% of our customers renew.
- Diamond is built on a cloud-native architecture to reduce cost, optimize scalability, and support faster release cycles while easing the management burden on internal IT resources.
- We're proud to have received a 4.8 out of 5 average rating from clients rating us with [Gartner](#).
- Our team knows the insurance industry, and our people have an average tenure of 11 years at Insuresoft.

## Key Technical Features



**Powered by the cloud:** Say goodbye to heavy CapEx investments in physical infrastructure and hello to the cloud's flexibility and consumption-based pricing. Execute release faster and allow internal IT resources to focus on what matters.



**Flexible:** Our system is ideal for managing general agents and carriers of all sizes. The choice is yours as to whether you implement the Diamond Platform on a per-module basis or as a complete suite.



**Customizable:** Insuresoft staff uses the COMPOSER Configuration Tool to customize the rates, rules, forms, and workflows in the platform for each insurer's unique needs. Insurers can take control of this tool to make future updates.



**Service oriented architecture (SOA):** Our systems are loosely coupled, highly adaptive, and designed to deliver on dynamic business and customer needs.



**Enterprise ready:** Our platform is sufficiently robust to process enterprise-level data quickly and reliably.



**Scalable:** Our platform supports you as your business grows and your throughput needs and user loads increase.



**Affordable:** Enjoy impressive power and scalability gains at a low purchase and ownership cost. Plus, Diamond comes with over 200 pre-built integrations, enabling quick and cost-effective connections to third-party data and systems.



**Onshore:** Diamond was built by the Insuresoft team, and all implementations are handled exclusively by us—never by third parties. That's probably why we've had a 100% implementation success rate for more than 30 years.



**An ongoing focus on innovation:** We're always improving our platform by deploying the latest cloud-native software solutions and practices. This includes the best available Microsoft Technologies like MS.NET Core V8 for native cloud processing and Azure Kubernetes hosting of Docker containerized high-availability services.

**Contact us** today to find out more about our platform.