

# Fast-track the future of insurance

An insurance executive's guide to driving business growth, enhancing customer experiences, and achieving operational excellence.

# A closer look at the insurance industry today: Understanding the need for modernization

**The insurance industry is at a pivotal point, with rapid technological change, evolving customer needs, and fierce competition driving transformation. To succeed in this environment, insurers must modernize and adapt their strategies to meet the demands of tomorrow, today.**

To succeed, insurers must be agile and innovative, modernizing operations and leveraging new technologies to remain competitive and ensure long-term success.

## **Customers are demanding personalization everywhere**

Customers demand a seamless, personalized insurance experience. They want products that are tailored to their needs and services that go beyond traditional coverage. By leveraging advanced technologies such as GenAI and data analytics, insurers can meet these demands and provide exceptional customer experiences.

## **Greater risks and tighter regulatory mandates**

Insurance regulations are shifting, with an emphasis on transparency and safeguarding the interests of policyholders. Adhering to these evolving regulatory mandates necessitates advanced systems for data management and compliance. Modernization equips insurance companies with the tools to ensure that their operations are aligned with industry standards and prepared for the legal frameworks that are yet to come.

## **Market entrants are forging new paths**

The insurance industry is undergoing yet another significant transformation, with new market entrants disrupting traditional business models and challenging established players. Many of these new competitors are leveraging digital platforms and innovative models to capture market share and customer loyalty. To remain competitive, insurers must act with urgency to modernize their core systems and processes and invest in digital transformation initiatives that can help them level the playing field.





# Priorities: How insurance executives are planning to respond

**Insurance executives are used to the rapid changes that technological developments and market forces bring. They are investing in digital transformation to modernize on multiple fronts.**

With innovative technologies promising to shake up the industry, insurers are looking for inventive ways to support profitability and growth, cut costs and enhance operational intelligence and efficiency.

## **Embracing new technologies, especially GenAI**

Technological advancements are changing customer expectations and the insurance landscape. Modernizing outdated systems and processes is critical for carriers to gain operational efficiencies, deliver personalized experiences and respond quickly to market changes. However, insurers face obstacles in modernizing their systems, including process complexities, cost constraints and misaligned strategies and business goals.

## **Upholding security and data protection**

The second major challenge is improving security and protecting sensitive data. As the industry becomes more digitally dependent, the risk of cyberattacks, fraud and data breaches grows. It's now essential for insurers to implement

advanced cybersecurity measures and adhere to data protection regulations. Failing to do so could result in losing customer trust and significant financial and reputational damage.

## **Responding faster to geopolitical and environmental challenges**

Thriving in today's dynamic insurance landscape requires insurers to be visionary and adaptable. Market shifts and external pressures demand agile responses and strategic planning. The growing influence of geopolitical and environmental challenges on insurance products and risk assessments underscores the need for agility in strategic planning and innovation in product development.

## **Finding creative ways to meet looming workforce demands**

The future of the industry will also depend on how it manages its human capital. Many experienced insurance professionals are approaching retirement age, and the industry is facing a talent shortage. Insurers will need to consider innovative strategies, such as outsourcing to access global talent and developing new talent through targeted recruitment efforts. A resilient workforce is critical to the industry's growth and sustainability. Insurers will need to develop new talent management strategies to remain competitive.

# Strategies: Fast-track insurance modernization

Continuous transformation can seem disruptive and costly to industry leaders who are stuck in their ways. Insurance leaders have become increasingly cautious regarding how and when to spend their scarce resources.

## IT budgets spent investing in transformation and innovation through new insurtech and digital technologies:

- Life and annuity (L&A): 10.8%<sup>1</sup>
- Property and casualty (P&C): 22%<sup>2</sup>

While ongoing transformation can be costly and disruptive, the benefits outweigh operating in a disconnected status quo. Disconnected teams, processes and data contribute to siloed working conditions that prevent maximum efficiency. By investing in core modernization, insurance leaders enable seamless connectivity and collaboration. Ultimately, this investment increases business growth through superior insights and productivity gains.

New technologies, such as GenAI or blockchain, often drum up excitement in any workplace. However, the secret is to dig deeper to find where the true value lies within the bigger picture of core modernization.

A pointed modernization strategy enables insurers to create the foundation that allows all other internal systems to work together seamlessly. Here's a brief overview of the key topics we will explore in this guide:

- 1. Modernizing mainframe systems:** Discover the importance of updating core systems to enhance agility and efficiency in insurance operations.
- 2. Using data optimization and AI:** Learn how artificial intelligence (AI) and data optimization are essential to accelerating integration, boosting operational efficiency and elevating the customer experience.
- 3. Enhancing cybersecurity measures:** Understand the critical role of robust security protocols in protecting sensitive information and maintaining trust in the digital era.
- 4. Building the workforce of the future:** See strategies for cultivating a skilled workforce that can thrive in a technologically advanced environment.
- 5. Fostering personalization and trust:** Find out how insurers can use data-driven insights to personalize offerings and build stronger, trust-based relationships with customers.

“Most organizations today are unable to ride the wave of cutting-edge technologies, including generative AI technologies, digital humans, metaverse and quantum simulations, because of outdated systems and practices. Apart from inhibiting them, it also has an impact on their long-term trajectory of modernization.”

**Nitin Bajaj**

Vice President,  
Digital Offerings, NTT DATA

# Out with the old systems: Modernizing the mainframe

**Modernizing mainframe systems in the insurance sector is not only a technological upgrade. It's a strategic necessity that builds substantial economic and operational benefits.**

Current data reveals that application modernization is a very high or top priority for approximately 62% of organizations, and this figure is expected to rise to over 70% in the next three years.<sup>3</sup> For some insurers, the focus on modernization is even more critical. This shift both enhances business flexibility and drastically accelerates the roll out of new features and products.

Furthermore, modernized mainframes facilitate the integration of advanced technologies such as AI and machine learning. This enables real-time decision-making and improves data processing efficiency. These capabilities provide insurers with a competitive edge, crucial for thriving in today's market. Modernization also helps bridge the looming skills gap caused by the retirement of seasoned mainframe professionals while attracting new talent to this revitalized field. Each of these factors underscores the critical importance of leaving legacy systems behind to embrace a future-oriented approach to insurance modernization.

# Reduce infrastructure and IT operations cost up to 70% with mainframe rehosting<sup>4</sup>

**Mainframe rehosting enables organizations to capture the benefits of cloud without having to invest in new skills for managing the cloud and modern applications.**

NTT DATA offers UniKix, a mainframe rehosting software solution designed to help insurance companies maintain their existing application investments while enabling them to harness the virtualization benefits of cloud. The solution also extends the benefits of distributed platforms to migrated IBM CICS transactions, IBM IMS applications, IDMS, Natural Adabas and other assets.

UniKix helps insurance companies:

- Reduce infrastructure and IT operations costs by 30–70%<sup>4</sup>
- Adopt cloud more easily by removing the need to re-architect mainframe applications for cloud technical architecture
- Identify dead code and technical debt
- Enable foundations for continuous integration/continuous delivery/deployment (CI/CD) pipelines by moving mainframe apps to the cloud

[Learn more](#)



## Case study

# Modernized apps lower maintenance costs, improving employee productivity and response

Jackson National Life Insurance Company has more than four million annuity policies and contracts in force. It sells annuities through an indirect sales force of 140,000-plus advisors. To support this large and vital indirect channel, the company's 4,000 associates rely on more than 400 applications. With scores of applications needing updates, the company wanted to increase digitalization to improve application development and quality assurance. The company partnered with NTT DATA to modernize 40-plus critical but outdated applications.

The updated applications lower maintenance costs while enabling users to be more efficient, productive and responsive. NTT DATA also helped the company establish an architecture and standards to fast-track its digital journey.

*"We trust NTT DATA because of their global outreach, thought leadership, as well as their expertise in diverse industries. That blend has been very valuable for our success."*

— Muhammad Shami, Vice President,  
Jackson Enterprise Technologies

**Outcomes:**

- Improves application performance
- Boosts organizational efficiency and productivity
- Sharpens the company's competitive edge
- Provides an architecture and standards to increase digitalization
- Enables greater focus on new products and channels
- Streamlines IT support of key business applications

[Read the full case study](#)

## Create patterns to pragmatically implement AI into the organization.

1. AI strategy and governance: Create a framework to maximize the value of AI investments
2. AI tools and technology: Build a technology foundation that will enable AI at scale and AI as a service that uses key data products
3. AI use cases: Roll out a specific use case designed to integrate GenAI into a corporate function or front-end process

## How OTS AI tools can speed success

Insurers can use AI to transform the rate-making process with real-time feedback to deliver personalized experiences with Earnix, a global provider of AI-based SaaS solutions. NTT DATA and Earnix's collaboration provides insurers with intelligent cloud-based solutions for pricing, rating, underwriting and policy personalization. It also helps top global insurance companies achieve results like:

- 10-times faster quoting experience
- 14% increase in policy quote conversion rates
- Streamlined rate planning process to less than 4 days
- 95% reduction in error correction time

# Optimize data and use AI to power integration, increase efficiency and improve customer experience

**While AI is not new, GenAI has been transforming the insurance sector with numerous projects launched since 2023—many of these aimed at back-office gains.**

While these new applications of AI have the potential to revolutionize corporate job functions, customer interactions and business models, they also introduce new risks. P&C and L&A insurers must proactively redesign their strategy, risk and governance frameworks to balance AI innovation and risk management. Doing so will keep them competitive and ahead of the changing regulatory environment.

What does the AI opportunity landscape for insurers look like today, tomorrow and farther in the future?

- **Today:** Most insurers are using GenAI to do the same things a little faster, better, cheaper – like customer service and claims processing. Value is being delivered, but largely through incremental productivity and operational efficiency improvements.
- **Tomorrow:** AI agents are starting to change the game because they can tackle and complete actions on behalf of humans. This is really ramping up the value that GenAI can deliver in areas like customer engagement and revenue generation.
- **The future:** The GenAI opportunity for insurers ultimately builds toward real competitive advantage like dynamic policy packaging and personalized products. However, realizing this future will require insurers to resolve unique governance challenges, simplify data and technical complexity, and get serious about user adoption and change management.

# Where are you on the GenAI Maturity Spectrum for insurers?

	Experimenting	Adopting	Competitive advantage
Strategy	<ul style="list-style-type: none"><li>Minimal formalized strategy</li><li>Limited understanding of value propositions</li></ul>	<ul style="list-style-type: none"><li>Formalized strategy</li><li>Clear key performance indicators (KPIs) and goals</li><li>Alignment to business goals</li></ul>	<ul style="list-style-type: none"><li>AI is central to business differentiation and ongoing operational activity</li><li>Ongoing strategic investments</li></ul>
Risk and governance	<ul style="list-style-type: none"><li>Ad hoc governance</li><li>Compliance checks</li><li>Risk profiling</li></ul>	<ul style="list-style-type: none"><li>Cross-functional AI council</li><li>AI governance framework</li><li>Dynamic risk profiling and alignment with risk tolerance</li></ul>	<ul style="list-style-type: none"><li>Agile and proactive approach that balances innovation with AI and leading risk mitigation techniques</li><li>Holistic process across data governance, regulatory and compliance needs</li><li>Industry-leading governance and risk management practices</li></ul>
Use cases and applications	<ul style="list-style-type: none"><li>Initial exploratory proofs of concept</li><li>Narrowly focused (for example, corporate function tasks, software engineering)</li></ul>	<ul style="list-style-type: none"><li>Integrated formal intake and prioritization</li><li>Demonstrated business value</li><li>Broader use cases (for example, claims, underwriting, customer service)</li></ul>	<ul style="list-style-type: none"><li>Fully captured return on investment and return on equity</li><li>Proactive discovery and deployment of complex and/or innovative use cases (for example, multi-agent and multi-model GenAI systems for customer interactions)</li></ul>
People and education	<ul style="list-style-type: none"><li>Limited AI expertise</li><li>Basic training</li><li>No formal operating model</li><li>No support model</li></ul>	<ul style="list-style-type: none"><li>Defined roles and responsibilities</li><li>Cross-functional AI operating model</li><li>Structured training</li><li>Change management and adoption plans</li></ul>	<ul style="list-style-type: none"><li>Highly skilled and specialized workforce</li><li>AI thought leaders in the industry</li><li>Fully embedded operating model for development, support</li><li>Scalable change management and adoption practices</li></ul>
Process	<ul style="list-style-type: none"><li>Siloed or fragmented processes</li><li>Limited or no workflow integration</li></ul>	<ul style="list-style-type: none"><li>Aligned and integrated AI workflow processes</li><li>Embedded documentation and stress-testing practices</li></ul>	<ul style="list-style-type: none"><li>Industry-leading process efficiency with continuous refinement</li><li>GenAI at the core of innovation practices, embedded in workflows</li><li>Fully integrated AI processes in the product lifecycle</li><li>Automated documentation and stress testing</li></ul>
Tools and platform	<ul style="list-style-type: none"><li>Ad hoc AI platform</li><li>Limited scalability</li></ul>	<ul style="list-style-type: none"><li>Certified and standardized AI platforms and tools</li><li>Modular and scalable architecture</li><li>Embedded GenAI productivity tools (for example, Microsoft Copilot)</li></ul>	<ul style="list-style-type: none"><li>Next-gen AI technology as a core differentiator, integrated in business processes at scale</li><li>Built-in transparency and compliance checks</li><li>AIOps and robust dashboards</li></ul>
Data and analytics	<ul style="list-style-type: none"><li>Siloed data sources</li><li>Basic data governance</li><li>Limited quality sources</li></ul>	<ul style="list-style-type: none"><li>Aligned AI and data strategy</li><li>Integrated sources and common data platform</li><li>Automated quality checks and lineage</li></ul>	<ul style="list-style-type: none"><li>Full knowledge data maps (data used and produced by AI)</li><li>Real-time, high-quality data access</li><li>Integrated AI and data product lifecycle</li></ul>

# Quick tips: How data and AI investments can fast-track positive outcomes

**Integrating data and AI across the insurance value chain helps businesses optimize processes, unlock new opportunities for employees and provide more value to their customers. AI implementation empowers insurance companies to strategically position products, identify target consumers and effectively harness data for market penetration.**

**Insurers** use financial, weather, municipal, social, ISO vehicle and other data to better tailor products and services to the people they serve. Using AI and machine learning to process and better understand data, insurers can streamline claims processes, innovate insurance products with a tailored and more competitive edge, assess risks more accurately and reduce costs with AI-led automation.

**Brokers and agents** can use data analytics and AI tools to enable agents to assess and underwrite policies more efficiently. Doing so results in more accurate pricing and reduces the potential for underwriting risks. With tools to process data much quicker than before, agents can improve customer experiences sooner, so they can help more customers in a day.

**For clients,** data-driven, AI-powered experiences lead to enhanced customer service tailored to their personal needs. Personalized experiences that use customer data provide seamless and efficient support throughout the client journey. Clients get the help and the answers they need faster so they can continue on with their day.



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According to Fortune Business Insights, the worldwide insurance analytics market was worth \$11.11 billion in 2022, and it is expected to experience robust growth, reaching \$12.65 billion in 2023 and further expanding to a substantial **\$35.00 billion by 2030**. This growth represents a noteworthy compound annual growth rate (CAGR) of 15.6% throughout the forecast period.<sup>5</sup>

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## Case study

# Customer-centric transformation cuts policy delivery time in half and reduces expenses by 21%

National Life Group is one of the fastest-growing life insurance companies in the United States. It sought to improve its customer experience and digitally scale operations to support customers and agents. The company also wanted to modernize its technology and use a “no touch” data-driven digital experience to create a competitive advantage while leveling IT spending.

The organization relied on their 15-year partnership with NTT DATA to complete this core modernization project. Together, the companies focused on several application modernization projects that would speed up and simplify National Life’s processes and systems, improve the customer experience and reduce unit cost across operations.

**Outcomes:**

- 21% reduction in expense through automated underwriting
- 50% shorter policy delivery time
- Increases application processing capacity from 50,000 to 250,000 yearly
- Accelerates policy processing from 25 per hour to one every 30 seconds
- Eliminates lab work for customer policies that qualify up to \$3 million
- Saves the equivalent of 25-plus acres of rainforest annually with paperless policy delivery

[Read the full case study](#)

“NTT DATA integrated our solutions into an end-to-end, no-touch process. Their expertise enabled us to accelerate product development and delivery. It used to take a year to deliver a product, but with our partnership, we can deliver in less than six months on average — faster than the industry benchmark.”

**Nimesh Mehta**

Chief Information Officer,  
National Life Group

# Increase security to mitigate risk and prevent fraud

As technology continues to advance, so too do the tactics that cybercriminals use to find ways to exploit holes in older technology. Modernization is the perfect catalyst for enhanced fraud protection and improved fraud prevention.

Improved data, analytics and technology capabilities can detect patterns and anomalies that may indicate fraudulent activity. This allows insurers to take proactive steps to protect their customers and businesses from potential losses.

Often, organizations begin modernization journeys after they experience system failures or exploitations. It's only then that they recognize the critical need to bolster their infrastructure for seamless operations, disaster recovery and business continuity. Should another attack take place, a modernized environment can facilitate a smooth transition between primary and backup sites while safeguarding data and procedures and ensuring any fraud controls are in place regardless of the situation.

## Advice

As risk and fraud schemes become increasingly complex, modernization efforts become even more imperative. By fortifying infrastructure, using AI, centralizing data and providing ethical AI practices, insurers can create comprehensive fraud prevention strategies that not only safeguard their operations but also enhance their ability to serve customers effectively and efficiently.

Insurance fraud costs in the United States are substantial, at more than **\$308.6 billion per year**.<sup>6</sup>

# Creating the workforce of tomorrow

The insurance sector faces a significant challenge in attracting new talent. Many young professionals view it as an outdated field in dire need of a refresh. The fact that the average age of employees in the industry is 44, with nearly a quarter aged 55 or older, underscores this perception.<sup>7</sup>





## Advice

Unconventional talent sources and innovative project teams are key strategies to remain competitive in the hiring landscape. It's important to remember that employee satisfaction significantly impacts customer experience. Investing in technology and solutions that streamline operations doesn't only enhance customer satisfaction. It also empowers employees by removing cumbersome workflows and improving access to necessary data for decision-making. By adopting these strategies, the insurance industry can transform its image, attract and retain top talent and foster a culture of innovation and inclusivity.

# Modernizing recruitment strategies

**Traditional recruitment methods are proving less effective in today's job market. To invigorate hiring, the industry must explore new avenues for talent acquisition.**

Initiating low-cost internship programs with local colleges and high schools remains a valuable approach. However, insurers also need to explore alternative talent pools. This might involve reevaluating job requirements and considering whether certain educational prerequisites could be substituted for robust on-the-job training.

As specific skills become less important due to advancing technology, ongoing training and reskilling have become crucial. Companies must prioritize these aspects to stay competitive and maintain relevance.

### **Improving corporate culture and diversity**

The insurance industry workforce is made up of approximately 60% women, but they are significantly underrepresented in leadership positions — holding slightly less than a quarter (23%) of officer and executive roles at publicly held insurers.<sup>8</sup> Evening out the playing field in an organization's board room can attract a younger workforce looking for diversity and equity at all levels of the business.

### **Fostering innovation through autonomy**

One effective strategy to invigorate an organization is to empower teams to innovate. Using Skunkworks is a potentially beneficial option.

The concept involves creating teams with considerable autonomy to work on advanced projects without bureaucratic interference. While these teams operate openly rather than in secrecy, their ability to bypass red tape and rapidly prototype new ideas offers a low-risk environment for innovation that doesn't disrupt the company's core operations.



## Advice

Insurance leaders should aim to transform their organizations into customer-centric entities. They should use modern technology for customization and align employee experiences with customer satisfaction goals. Positive employee experiences translate into superior customer service that boosts revenue and satisfaction with timely, relevant responses and solutions.

[Read more](#)

# Create personalized experiences while building trust

**Research shows that poor user experiences significantly impact customer attrition. Because acquiring new customers in the insurance sector is more expensive than retaining them, emphasizing service excellence and customer satisfaction is essential.**

Traditionally, insurance interactions were tedious, involving long phone calls and face-to-face meetings that frustrated customers. Technological advancements have now introduced more convenient communication methods, including AI-powered chatbots, email and interactive voice response (IVR). Each of these systems can facilitate improved customer interactions.

However, these new channels can still lead to disjointed experiences if contact center platforms aren't updated. A modern approach involves integrating all communication channels — phone, email, chat and social media — into a single platform for seamless service and consistent, personalized support.

The “segment of one” approach, customizing services for individual needs, has been possible for two decades. However, only now is it being effectively implemented thanks to advanced technologies. By equipping employees with effective communication tools and the information they need, they can better meet customer needs and improve the overall customer experience.



# Ignite tomorrow, today.

**In the fast-evolving insurance sector, staying competitive means committing to continuous modernization. Modernizing core systems goes beyond keeping pace with technology. It transforms operations to better meet customer needs and improve customer engagement. This strategic shift helps insurers deliver more effective, tailored solutions that respond to the changing demands of their customers.**

Modernization is key to improving profitability and growth. It enables insurance executives to streamline processes, cut costs and increase operational intelligence. Better efficiency and decision-making help insurers provide superior services that appeal to both new and existing customers. Ultimately, by fast-tracking modernization, insurance leaders not only prepare for the future — they actively shape it.

# Let's talk

NTT DATA partners with insurance organizations that are ready to break free from the confines of their current technological abilities. We help insurers plan for what's waiting on the horizon, equipping them to face the challenges to come. By helping solve today's challenges, we provide insurers with blueprints for tomorrow. Maximizing resiliency means staying competitive and relevant for years to come.

Ready to maximize your modernization investment? Get in touch with NTT DATA today.

[Learn more about our solutions](#)



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