



Insuring tomorrow: the GenAI frontier

Leveraging GenAI to streamline operations, reduce fraud and improve customer service



Contents

01	Executive summary	
02	Unleashing the Potential of GenAI in Insurance	The Transformative Power of GenAI Navigating the Hype vs. Reality Navigating the Regulatory Maze: A Compliance Journey in AI
03	Strategic Integration and Risk Management in AI Adoption	Building a Robust AI Integration Strategy Mitigating Risks in AI Deployment Addressing Ethical and Security Concerns Driving Continuous Improvement and Value Generation
04	Insurance-specifics Market Overview and main Implications for Insurers	AI is disrupting the way we work, and it is only going to get more prolific Insurers approach different GenAI adoption maturity levels The integration of GenAI into the insurance business Key elements when embarking on their GenAI journey Navigating Key Opportunities and Challenges in GenAI Implementation
05	Implementation Strategy based on Use Cases	Defining Strategy: Key Considerations for Success Value Creation Framework: Essential Dimensions The Power of a Comprehensive Scorecard
06	Conclusions	
07	Bibliography	

Executive summary

GenAI is revolutionizing the future of insurance

For insurers, generative artificial intelligence (GenAI) presents a unique opportunity to streamline operations, enhance customer service and strengthen fraud detection, enabling businesses to remain competitive and efficient. However, innovation and careful management will be essential if they are to harness the full potential of AI while navigating the challenges of technological advancements and regulatory complexities.

Kodak was the last word in photography until their decision to stick with film rather than go digital. Led by GenAI, insurance is revolutionizing core insurance processes such as underwriting, claims management and customer engagement. By leveraging advanced machine learning models and analyzing large datasets, insurers can offer more personalized products, optimize pricing strategies and significantly reduce processing times.

The automation of routine tasks, such as claims inquiries, improves customer satisfaction while freeing up resources for more complex interactions. Additionally, GenAI's advanced pattern recognition capabilities enable more accurate fraud detection, safeguarding insurers against financial losses and ensuring fair claims handling.

However, with these innovations come challenges, particularly relating to transparency, ethics and regulatory compliance. Insurers must navigate evolving regulations, ensuring that their AI integration is both compliant and responsible. They must address issues relating to data privacy, the explainability of AI decisions and the prevention of bias. And as regulations for AI continue to develop, insurers must be proactive in aligning their AI strategies with legal and ethical frameworks.

A strategic and phased approach to integrating GenAI is essential for long-term success. This requires robust data governance, cross-functional collaboration and the ongoing evaluation of AI initiatives. Establishing clear oversight and using comprehensive metrics to measure AI performance ensures that the technology delivers value while mitigating risks.

The future of insurance is closely tied to the responsible and innovative use of GenAI.

By adopting a well-planned approach that balances technological advancement with ethical governance, insurers can unlock new efficiencies, enhance customer experiences and build a more resilient, forward-thinking organization poised for success in an AI-driven world.



Unleashing the potential of GenAI in Insurance

The transformative power of GenAI

The insurance industry is on the cusp of a significant transformation driven by GenAI. In fact, more than 68% of organizations in this industry are planning a significant investment in GenAI in the next two years.¹ This technology, which leverages advanced machine learning techniques to generate new data and insights, promises to enhance various facets of insurance operations, including underwriting, claims processing and customer service.

By harnessing the power of GenAI, insurers can increase efficiency and provide more personalized and competitive offerings to their customers.

Embracing innovation in insurance

Underwriting

GenAI can transform underwriting processes by analyzing large datasets, including historical claims, demographic information and external data sources. This leads to more accurate pricing and personalized policy offerings, giving insurers a competitive edge.

Claims processing

In claims processing, automation can drastically reduce processing times, increase accuracy and enhance customer satisfaction by enabling digital and self-service claims. For example, approximately 40% of inbound calls relate to basic claims-status checks¹ — GenAI models can quickly assess these claims, verify information, and predict patterns and even potential fraud, making the process faster and more reliable.

Fraud detection

Advanced fraud detection is another key area where GenAI can make a significant impact. By analyzing patterns and anomalies in data, AI-powered algorithms can detect fraudulent activities with greater precision. This not only protects insurers from financial losses but also ensures the fair treatment of legitimate claims.

Navigating the hype

Over 76% of C-suite insurance executives believe that GenAI is already a complete revolution and a game changer.¹

While GenAI offers numerous benefits in this sector, it is crucial for insurers to manage expectations realistically. Understanding the technology's capabilities and limitations helps in setting achievable goals and avoiding overhyped promises.

The initial excitement around AI can lead to unrealistic expectations, which, if unmet, can result in disappointment and skepticism. To manage expectations, it's therefore essential to communicate clearly about what AI can and cannot do, emphasizing gradual and measurable improvements, and to set realistic goals for what AI can achieve.

Successful AI integration requires a strategic approach to ensure that solutions are scalable and can be adopted across the organization. This involves careful strategic planning, stakeholder engagement and the continuous monitoring of AI deployments. This is being eased because of the dramatic fall in costs of implementing AI.

Over 76% of C-suite insurance executives believe that GenAI is already a complete revolution and a game changer.

Minimizing risks and addressing challenges

The rapid adoption of AI technologies in the insurance industry presents several challenges that need careful consideration. These include lack of transparency or explainability, discrimination, bias, unfairness, unaffordability, exclusion and data-related issues.

The most pressing concerns are ethical issues relating to AI decision-making, and the absence of robust AI regulation in the sector.

Overcoming regulatory hurdles

Compliance with regulations

The insurance sector is subject to stringent regulations such as General Data Protection Regulation (GDPR), Health Insurance Portability and Accountability Act (HIPAA) and various national and international laws.

To avoid legal and financial repercussions, insurance firms must align their AI solutions with legislation and regulations while leaving enough room for innovation, taking into consideration the specific characteristics of AI in insurance.

Ethical AI deployment

AI models need to be fair, transparent, explainable and bias-free, and their outcomes must be monitored constantly.

To meet ethical guidelines and avoid discrimination, insurers must apply AI responsibly, with human oversight.

Data management and security

Ensuring data quality

High-quality data is essential for training accurate AI models. Insurers need robust data management practices to avoid biases and inaccuracies that could compromise AI performance.

Protecting sensitive information

Safeguarding customer data is also critical. Implementing strong data security measures is essential to maintain trust and comply with data protection laws.



Navigating the regulatory maze: a compliance journey in AI

Implementing AI in insurance operations presents many legal challenges, particularly concerning data management and the regulation of AI-generated content. Given the highly regulated nature of the sector, it is important for firms to understand their obligations in the context of AI regulations.

AI is advancing rapidly, and regulators are under pressure to keep up. The challenge is to understand and control the safety of the technology while preserving its potential benefits.

Specific AI regulations in insurance are still evolving. Globally, AI regulations vary by country and region. The EU has implemented broad AI regulations that are bolstered by existing data protection and cybersecurity laws. The U.S. relies on sector-specific laws and general principles or guidelines.

It must be stressed that the unique characteristics of insurance and its well-established regulatory frameworks call for sector-specific rather than cross-sectorial regulation.

Moreover, integrating GenAI into insurance operations requires careful consideration of evolving regulatory factors.

Global leaders in AI regulation²

01 United Kingdom

The UK government's policy paper, "A pro-innovation approach to AI regulation", outlines a cross-sector framework for AI regulation based on five principles: safety, transparency, fairness, accountability and contestability. It balances innovation support with existing sector-specific laws. In April 2024, the Financial Conduct Authority (FCA), Prudential Regulation Authority (PRA) and the Bank of England published their AI regulatory strategies in response to the paper.

02 European Union

The EU AI Act, the first risk-based regulation for all AI systems that are developed, distributed and imported in the EU market, will have a two-year grace period after its adoption in June 2024. Alongside the AI Act, other important legislation in the realm of AI is in the pipeline. The EU's data strategy, which includes the Data Act and Data Governance Act, also shapes the AI landscape in the European insurance sector.

03 United States

The US has developed legislation for specific AI use cases, with various federal guidelines. There are also some insurance-sector-specific regulations per state (e.g. Colorado). In 2022, the White House released a nonbinding AI Bill of Rights to guide AI system design and deployment.

The 2023 Executive Order on the Safe, Secure and Trustworthy Development and Use of Artificial Intelligence directs agencies to develop specific AI regulations and interventions. Major players in U.S. AI standards include the National Institute of Standards and Technology (NIST) and the Federal Trade Commission (FTC).

04 China

Since 2022 China has enforced three key measures that have influenced global standards: the Internet Information Service Algorithmic Recommendation Management Provisions (2021), the Internet Information Service Deep Synthesis Management Provisions (2022) and the Measures for the Management of Generative Artificial Intelligence Services (2023).

05 Singapore

Singapore focuses on AI principles rather than specific regulations for insurance. The Monetary Authority of Singapore (MAS) created the FEAT principles (fairness, ethics, accountability and transparency) in 2018 to guide responsible AI use. The Veritas consortium, formed by MAS, helps to implement these principles and develops tools to assess AI fairness. The insurance industry has adopted FEAT well, showing effective collaboration with regulators. MAS also aims for international cooperation on AI guidelines for consistent compliance. Building on this, in May 2024 the Singapore government released an expanded framework that incorporates emerging principles, concerns and technological developments in GenAI.





Strategic integration and risk management in AI adoption

To fully harness the potential of AI, insurance firms need to reassess their business operations and develop a clear strategy for incorporating AI into their processes.

Building a robust AI integration strategy

Insurers will need a comprehensive and phased AI implementation roadmap of AI-based pilots and proofs of concept (POCs). The roadmap should be guided by high-impact use cases identified for GenAI, specifying which parts of the organization will require targeted investments.

AI integration will require a multiyear transformation strategy and a detailed schedule of milestones and checkpoints that encompasses operations, talent and technology. The plan for implementation must, however, be flexible enough to adapt to shifts in the evolution of AI technologies and significant changes or disruptions within the industry.

Cross-functional collaboration within the organization is critical to the success of GenAI deployments. IT, data science teams, business units and compliance teams will need to work together to achieve a successful AI integration.

Innovation and integration should not be confined to specialized teams. Although AI is a technology, it is not the responsibility of the IT team to address all issues related to AI in the organization. Senior leadership, customer experience teams and other areas of the business should also invest the time and resources to build a deep understanding of these technologies.



As AI technology evolves, so do regulations,
and insurers must keep pace with both.

Mitigating risks in AI deployment

Insurers must establish robust governance frameworks that ensure accountability and transparency.

Although existing regulations adequately address the primary risks and concerns associated with AI in insurance, some governance modifications may be necessary to bridge monitoring and control gaps and to capture unique aspects of AI decision-making that differ from human (organizational) decision-making processes.

This could involve setting up an AI oversight committee and establishing algorithmic catalogs to keep track of how AI is used and how algorithms are changing over time. Such record-keeping would enhance transparency, facilitate the assessment of AI-driven outcomes and decisions, and help to identify issues such as biases in underwriting.

Regulatory compliance is also extremely important, and organizations must continuously monitor and adapt to regulatory changes.

AI in insurance is already governed by rules such as data protection and insurance distribution regulation. In addition, regulatory frameworks in key insurance markets such as the EU, U.K., U.S. and China include laws and regulations that include anti-discrimination, gender-equality protection and consumer-protection provisions. They also emphasize transparency in data usage and processing, and the necessity for human oversight in automated decision-making.

Addressing ethical and security concerns

Insurers are implementing various measures to ensure fairness and mitigate bias.

These include:

- Methodologies for detecting and preventing unwanted correlations in AI models
- Adhering to AI governance principles like those issued by the European Insurance and Occupational Pensions Authority (EIOPA)
- Self-imposed limitations on the number of rating factors used in underwriting and governance structures tailored to manage AI-related risks

An audit trail for AI models, similar to the model catalogs used by several insurers, should also be considered. These catalogs register all new models introduced to the company and document changes to existing models.

The implementation of robust security measures is also critical — more than 80% of insurance firm CEOs consider cybersecurity as one of their major concerns², and the clean-up costs of attacks and breaches have risen sharply.

AI is both a potential vulnerability and a powerful tool for security. While advanced security protocols are needed to protect AI systems from cyberthreats, AI and high-performance computing are also being used to filter, detect and flag issues in real time, allowing organizations to recover quickly, ensuring business continuity and a loyalty-winning customer experience.

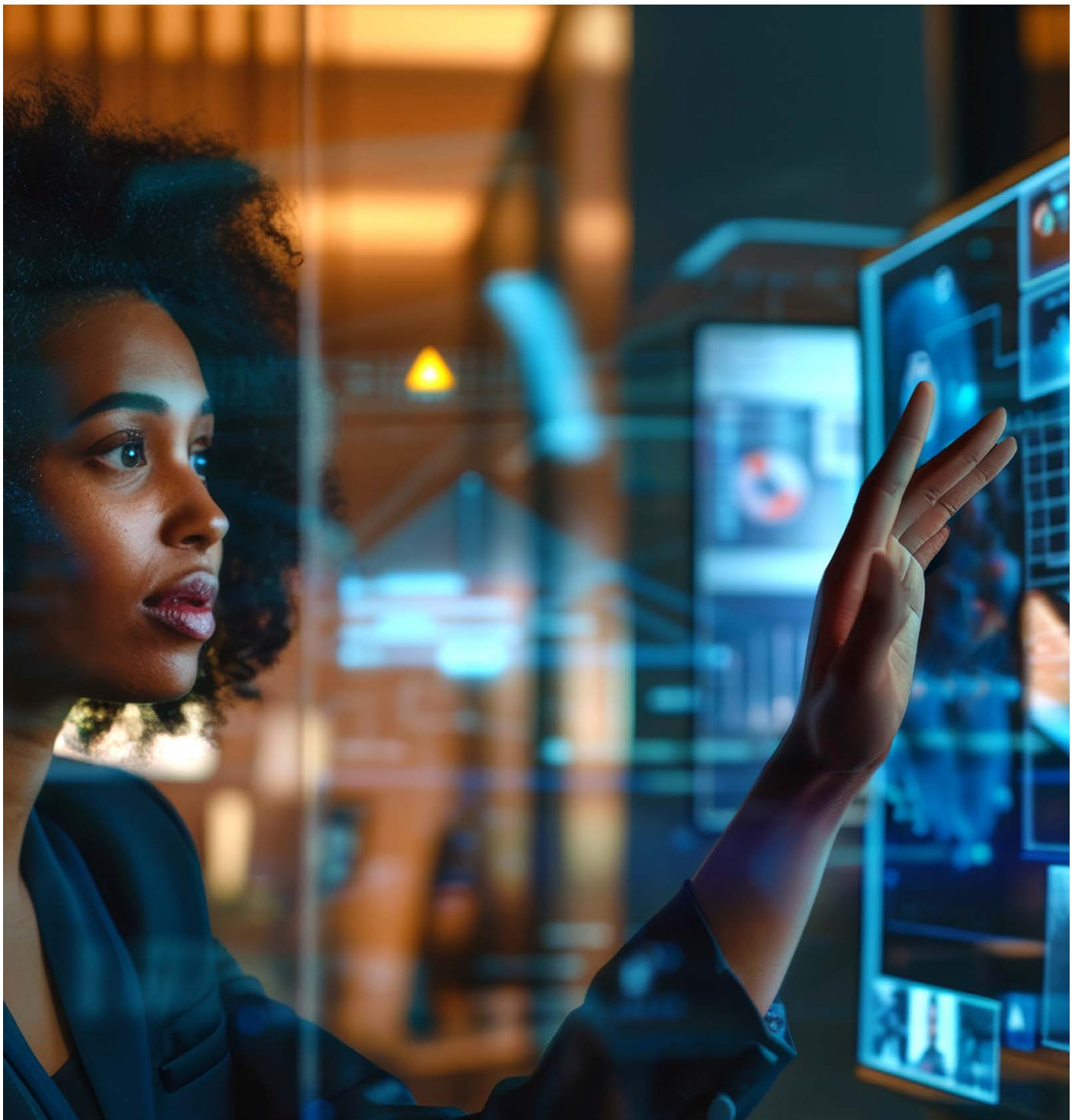
Driving continuous improvement and value generation

Well-defined metrics such as customer satisfaction and operational efficiency help to balance the organization's bold ambitions with its capabilities.

When clear KPIs and success metrics for each AI use case are defined upfront, potential benefits as well as pitfalls can be identified early on. Pilots and proof-of-concept (POC) projects will need to be designed to test not just how a

technology works but also how successful it might be in a particular role within a data- or IoT-based ecosystem.

To differentiate themselves in the market, insurance organizations need to offer innovative products and superior customer experiences. Derived from this effort, they must consider the exploration of hypothesis-driven scenarios in order to understand and highlight where and when disruption might occur.



Market overview and implications for insurers’ adoption

AI is disrupting the way we work, and it is only going to get more prolific.

Approximately 6 in 10 executives from insurance organizations expect significant industry transformation, driven by major investments in GenAI in 2025. The primary drivers for this investment include the need to boost revenue (including the development of new income streams), improve customer experience (including enhancing loyalty), and advance sustainability and environmental, social and governance (ESG) objectives.

Main motivators for the insurance organization’s investment in GenAI

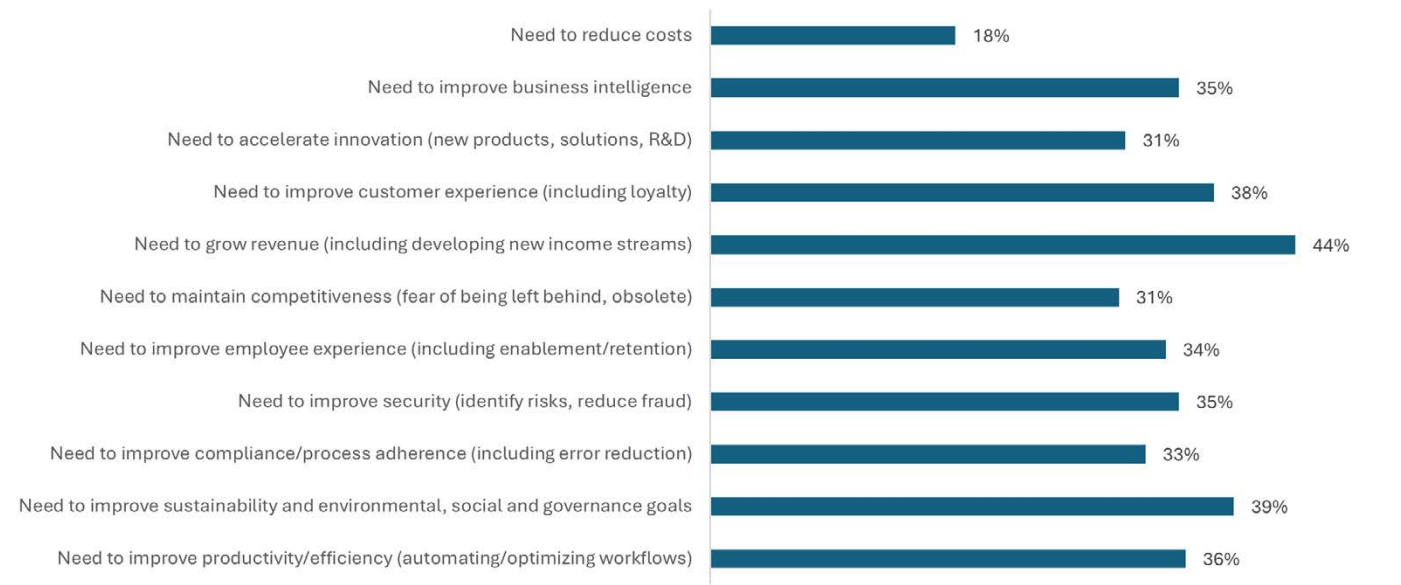


Figure 1: Source: Data from NTT DATA’s Global GenAI Report: How organizations are mastering their GenAI destiny in 2025

Three in every four insurance executives confirm that their company already has a defined AI and GenAI strategy, but half of these companies report that their GenAI strategy is not yet fully aligned with their overall business strategy.

Critical factors in GenAI strategy in insurance organizations



Figure 2: Data from NTT DATA’s Global GenAI Report: How organizations are mastering their GenAI destiny in 2025

Maturity levels of GenAI adoption

By assessing different stages of AI adoption and options for the efficient and effective deployment of AI, specifically GenAI, organizations can determine how best to leverage this technology for maximum business impact.



The integration of GenAI into the insurance business

From product development and marketing to underwriting, policy management, operations and support functions, AI is driving efficiency, innovation and customer satisfaction. Insurers who embrace these technologies are well-positioned to navigate the complexities of the modern insurance landscape and achieve sustainable growth.

For insurance businesses, GenAI has created many opportunities, in several areas:

- **Product and services strategy:** GenAI enables insurers to quickly introduce new products by analyzing market trends and customer needs, leading to the faster development of innovative insurance products.
- **Marketing and distribution:** AI-driven insights help insurers identify effective channels, enhance customer engagement through personalized marketing, and strengthen brand loyalty and market presence.
- **Quotation and underwriting:** GenAI reduces underwriting time by analyzing vast amounts of data to assess risk and determine premiums, improving efficiency and providing quicker, more accurate quotes for customers.
- **Policy management:** AI automates routine tasks, manages policy changes and handles customer inquiries efficiently, leading to improved service and long-term customer retention.
- **Operations and claims:** By automating tasks and leveraging advanced analytics, GenAI optimizes claims processing, detects fraud, improves operational efficiency, reduces costs and improves the accuracy of claims assessment.
- **Employee productivity and training:** AI-powered tools can equip employees to handle the complexities of the insurance industry more effectively.
- **Fraud/ICE and client-retention management:** GenAI-driven fraud detection reduces fraudulent claims, while AI tools help develop strategies to retain and enhance customer relationships.

6 elements of successful GenAI implementation



1 Workforce resilience

High priority

Fear of implementing GenAI can significantly impact workforce performance, productivity, talent retention and overall satisfaction. Organizations must foster a supportive and inclusive culture to facilitate successful adoption.



2 Risk management

High priority

Risks associated with GenAI implementation include security vulnerabilities, quality assurance challenges and ethical considerations. These aspects should be top priorities during planning and deployment.



3 Adoption and enablement

Medium priority

GenAI adoption transforms the entire operating model. Organizations must take on dual roles as adopters and enablers. Success in these roles has far-reaching effects on employees, partners and ultimately, customers.



4 Experience and skills

Medium priority

The shortage of experienced GenAI talent persists. Organizations must understand the required skill set, strategize talent sourcing and invest in skill development.



5 Compliance

Low priority

Governments adopt cross-sector frameworks for regulating AI. Legislative interventions and voluntary measures are expected to follow.



6 Data management

Low priority

Poor data quality, lack of relevant data and data silos can hinder GenAI implementation. Organizations must prioritize data hygiene and integration.

Navigating the opportunities and challenges

In the dynamic and often unpredictable world of insurance, the concept of VUCA — volatility, uncertainty, complexity and ambiguity — has become increasingly relevant. These four elements encapsulate the challenges that insurers face as well as the opportunities that GenAI presents.



Volatility

The insurance industry faces constant changes due to economic shifts, natural disasters or technological advances. GenAI helps navigate this by analyzing data to predict trends, mitigate disruptions and capitalize on new opportunities.



Uncertainty

The future is always uncertain, and insurers must adapt. GenAI automates business processes, reducing errors and improving efficiency. This frees up resources for innovation and growth, addressing uncertainty.

VUCA



Complexity

Insurers must manage complex regulations and customer expectations. GenAI fosters collaboration between systems and stakeholders, driving innovation and creating more resilient business models.



Ambiguity

Ambiguity reflects unclear interpretations in the industry. GenAI helps insurers embrace human-AI collaboration, fostering continuous learning and trust, while preparing employees to work effectively with AI.

Barriers to adoption

Insurers that can balance technological innovation with the careful management of social and labor impacts will be well-positioned to harness the full potential of GenAI and drive the industry forward into a new era of intelligent, data-driven decision-making. But first, they must overcome several barriers.

People

Impact on the workforce and society

GenAI's ability to learn and automate tasks raises concerns about job displacement and privacy. Insurers must address these issues through clear communication and training to help employees adapt to new roles.

Trust

Rapid AI advances have sparked concerns about data security and transparency. Insurers need to ensure their use of GenAI is ethical and transparent, fostering trust by demonstrating the benefits of AI and maintaining open communication.

Resistance

Resistance to GenAI adoption is possible, largely due to fear of change and misunderstanding. Insurers must educate both employees and customers on the advantages of AI, emphasizing its ability to improve services and operational efficiency.

Technology

Data quality

GenAI is reshaping the insurance industry by processing vast amounts of data and generating predictive insights, changing how insurers make decisions and interact with customers.

The emphasis is shifting from having large datasets to ensuring high-quality data. This is crucial for AI applications to produce accurate, reliable and personalized policy outcomes.

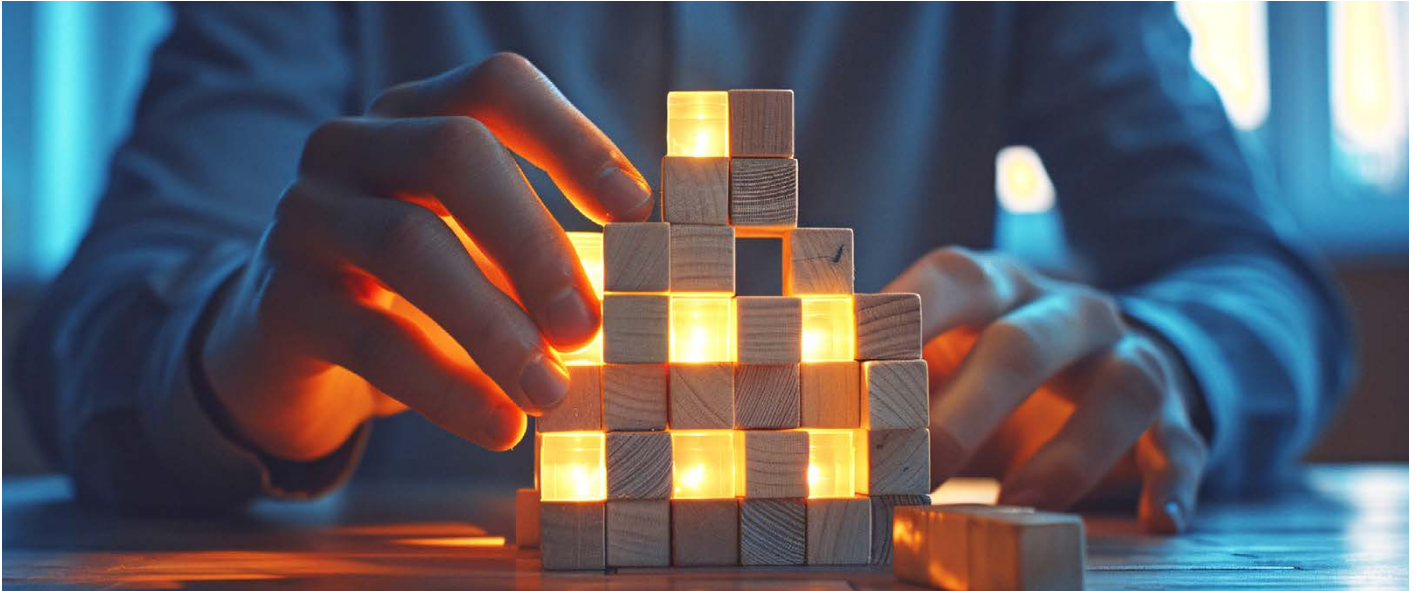
Challenges in integration

One of the major barriers is the maturity of "black box" technologies. These tools, while powerful, often lack the robustness required for seamless integration into existing systems. Insurers must address these issues to fully realize GenAI's potential in fraud detection and claims processing.

“

By relying on technology to achieve business goals, insurers can enhance their operational efficiency, improve customer satisfaction and drive sustainable growth.

Implementation strategy based on use cases



The implementation of GenAI use cases in the insurance sector brings many opportunities to enhance operational efficiency, improve customer experiences and drive innovation.

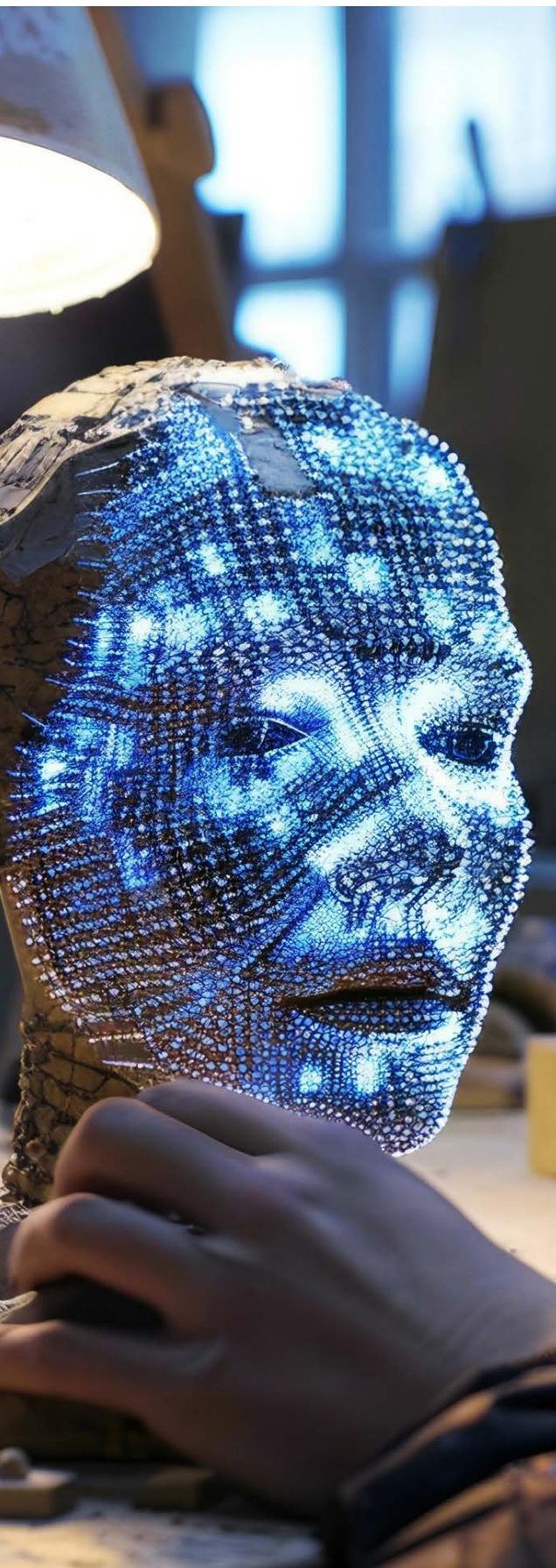
However, these must be pursued with a keen awareness of the regulatory landscape that governs the industry.

Compliance with regulatory requirements is not just a legal obligation but a cornerstone of ethical and responsible business practices.

Insurance companies must therefore conduct thorough assessments to identify and understand the specific legal standards that apply to the use of GenAI technologies. These include data privacy laws, consumer-protection regulations and industry-specific guidelines. By doing so, insurers can ensure that their AI initiatives are not only innovative but also compliant with all relevant legal requirements.

Ultimately, the successful implementation of GenAI use cases in insurance hinges on a balanced approach that integrates technological innovation with rigorous regulatory compliance. By adhering to strict data governance standards, understanding evolving industry regulations and safeguarding consumer rights, insurers can integrate GenAI while maintaining the highest levels of transparency, integrity and accountability. This not only mitigates legal risks but also enhances the credibility and sustainability of AI-driven initiatives in the industry.

It is imperative that we acknowledge the significance of adhering to regulatory requirements as we deploy GenAI technologies. Insurance strategy will encompass an analysis of potential implications and ensure full compliance with all legal standards.



Key areas of regulatory and ethical compliance

Data privacy

GenAI systems rely heavily on vast amounts of data to generate insights and predictions. It is therefore imperative that insurers adhere to stringent data protection regulations, such as the General Data Protection Regulation (GDPR) in Europe or the California Consumer Privacy Act (CCPA) in the U.S. These regulations mandate that personal data must be collected, processed and stored in a manner that safeguards the privacy and rights of individuals. Insurers must implement robust data governance frameworks to ensure that all data used in GenAI applications is handled in compliance with these laws.

Consumer protection

The use of GenAI in insurance must be transparent and fair. Customers must be fully informed about how their data is being used and about the implications of AI-driven decisions. Insurers must provide clear explanations of AI processes and outcomes, and offer mechanisms for customers to contest or appeal decisions made by AI systems. By fostering transparency and accountability, insurers can build customer trust and mitigate the risk of regulatory scrutiny.

Industry-specific regulation

Insurers must also consider industry-specific regulations that govern the use of technology in insurance. Regulatory bodies may have specific guidelines on the deployment of AI technologies, including requirements for the testing, validation and ongoing monitoring of AI systems. Insurers must stay up to date with these guidelines and ensure that their GenAI implementations meet all regulatory standards. This may involve regular audits, compliance checks and collaboration with regulatory authorities to address any emerging issues.

The GenAI value-creation framework

Insurers must define clear dimensions for value generation through GenAI within their core business model. This involves identifying key areas where GenAI can enhance efficiency, customer experience, risk assessment and innovation.

In our framework, each layer of concepts and strategies contributes to the overall value of GenAI in the insurance business.

Technology foundations

This is the bedrock upon which everything else is built. Without a robust technological infrastructure and capabilities, the potential of AI for innovation and progress cannot be fully realized.

Data

High-quality and high volumes of data fuel the insights and decision-making processes that AI systems rely on. And the data must be accurate, comprehensive and secure. Effective data governance and security measures are critical to safeguarding the integrity and privacy of the information used.

Use

This dimension is where the theoretical potential of AI meets practical application, transforming innovative ideas into tangible outcomes that drive business success.

Value

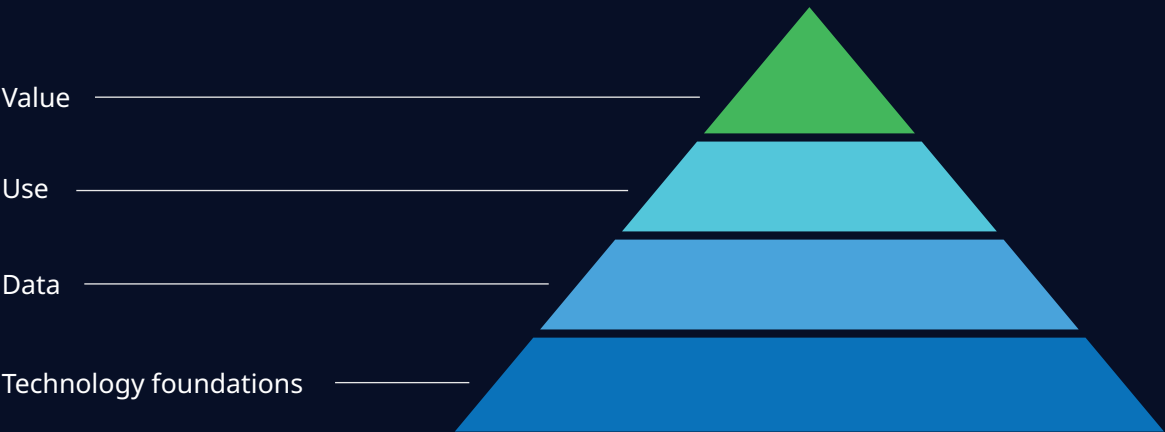
Value is the ultimate goal and crowning achievement of GenAI initiatives. It is measure not only in financial terms but also by enhanced customer experience and operational efficiency. It represents the tangible benefits brought forth by AI, transforming the way insurers operate and interact with their clients.

Flanking the pyramid are two guiding pillars:

- **From tech to business** is a bottom-up approach that allows for development based on different cognitive capacities created artificially. This approach ensures that AI solutions are grounded in technological innovation and are scalable across various business functions.
- **From business to tech** is a top-down approach in specialized fields, requiring tailored AI solutions aligned with specific business challenges. This ensures that AI initiatives are directly addressing the core needs and objectives of the business.

Lastly, IT for IT stands apart yet connected, symbolizing efforts for optimization through the repeated application of AI within IT operations themselves. This approach highlights the continuous improvement and refinement of technological resources, leveraging AI to enhance IT efficiency and effectiveness.

Dimensions involved in the creation of value



The journey begins with a Strategic Action Call, a clarion call for insurers to align their technological aspirations with their business objectives. This involves a comprehensive assessment of the current state of their operations, identifying areas where GenAI can deliver the most significant impact. By conducting a thorough analysis of their existing processes, insurers can pinpoint inefficiencies and opportunities for improvement, laying the groundwork for a targeted and effective AI strategy

Establish robust tech foundations

This involves investing in the necessary infrastructure and capabilities to support GenAI initiatives. Insurers must ensure that their IT systems can handle the increased data loads and computational demands that come with AI applications. This may involve upgrading hardware, implementing advanced data storage solutions and adopting cloud-based platforms that offer scalability and flexibility.

Focus on data quality and governance

High-quality data is the lifeblood of AI and insurers must prioritize the collection, cleaning and management of their data assets. This includes implementing stringent data governance policies to ensure data accuracy, consistency and security. By establishing a robust data governance framework, insurers can build a reliable foundation for AI-driven insights and decision-making.

Design and implement specific use cases aligned with strategic goals

This involves identifying high-impact areas where AI can deliver tangible benefits, such as underwriting, claims processing, customer service and fraud detection. By developing targeted use cases, insurers can demonstrate the value of AI to stakeholders and build momentum for further AI adoption.

Manage the cultural and organizational change

This involves fostering a culture of innovation and continuous learning, where employees are encouraged to embrace new technologies and adapt to changing roles. Insurers should invest in training and development programs to equip their workforce with the skills and knowledge needed to work alongside AI. By promoting a culture of collaboration and adaptability, insurers can overcome resistance to change and ensure a smooth transition to AI-driven operations.

Maintain regulatory compliance

As insurers deploy GenAI technologies, they must adhere to all relevant legal and regulatory requirements. This includes ensuring data privacy and security, maintaining transparency in AI decision-making and complying with industry-specific guidelines. By prioritizing regulatory compliance, insurers can mitigate legal risks and build trust with customers and regulators.

Continuously monitor and evaluate

This involves setting clear metrics and KPIs to measure the success of AI applications and making data-driven adjustments as needed. By regularly assessing the impact of AI on their operations, insurers can identify areas for improvement and ensure that their AI strategy remains aligned with their business objectives.

The strategic integration of GenAI in insurance, focusing on robust technology, data quality, targeted use cases and regulatory compliance, will **drive innovation, efficiency and superior customer experiences, transforming the industry and unlocking new opportunities.**



To actualize their ambition and vision, insurers must take decisive steps within their outlined strategy.

“This includes establishing planned actions that are both pragmatic and forward-thinking, ensuring the seamless integration of GenAI into their core processes.”



The power of a comprehensive scorecard

The **Insurance Applied GenAI Use Cases Scorecard** is a tool that guides executives and technology specialists to a seamless blend of business value and technical feasibility.

Visualizing AI's impact with the scorecard

The scorecard maps out the GenAI landscape on a two-axis graph:

- **Vertical axis:** Business value
- **Horizontal axis:** Technical feasibility

The graph is divided into four distinct quadrants, each packed with icons representing various **high-value use cases**.

The **top-right quadrant** is the sweet spot where **high business value meets high technical feasibility**.

Examples of the "scorecard sweet spot" in insurance.

- **Regulation and compliance reporting assistant**
Automating compliance to ensure accurate, timely reports and minimize fines.
- **Marketing content creation for distribution channels**

A comprehensive scorecard helps organizations to “evaluate the performance and impact of GenAI solutions regularly.

Personalizing marketing for diverse audiences to boost engagement and conversions.

- **Portfolio assessment and optimization**
Optimizing insurance portfolios and assessing risk more effectively.
- **Fraud detection**
Leveraging machine learning algorithms to detect suspicious patterns, protecting the financial health of the firm.
- **Policy and coverage reading**
Simplifying complex insurance documents for employees and customers.
- **Claims voice input**
Allowing customers to submit claims through voice commands, streamlining the process.
- **Personalized customer recommendations**
Tailoring products and services to each customer's unique needs, enhancing customer satisfaction and loyalty.



Conclusion

GenAI is set to revolutionize the insurance industry, offering insurers the tools to enhance operational efficiency, improve customer experience and bolster fraud detection. They can leverage GenAI to optimize processes like underwriting, claims management and customer engagement, thereby gaining a competitive edge in a fast-evolving market.

However, the **successful integration of GenAI requires careful strategic planning**. Insurers must ensure robust data governance, maintain transparency and adhere to ethical principles to mitigate risks such as bias, lack of explainability and data privacy issues. Furthermore, as regulations continue to evolve globally, aligning AI initiatives with compliance frameworks is critical to avoid legal challenges and safeguard customer trust.

Insurers must balance innovation with responsible implementation. By embracing a phased approach to AI adoption, they can unlock the full potential of GenAI, driving continuous improvement, enhancing fraud detection and delivering personalized, efficient services. Collaboration, ethical governance and strategic alignment are essential to navigating this transformation.

GenAI can do more than improve operational capabilities: it can also reshape the way insurers deliver value to their customers. And those that who embrace this potential with a well-defined strategy will be well-positioned to lead.

Bibliography

01 NTT DATA (2024). "Global GenAI Report: How organizations are mastering their GenAI destiny in 2025"

<https://benelux.nttdata.com/insights/reports/global-genai-report>

02 The Geneva Association. (2023). Regulation of AI in insurance

<https://www.genevaassociation.org/sites/default/files/2023-09/Regulation%20of%20AI%20in%20insurance.pdf>

About NTT DATA

NTT DATA – part of NTT Group – is a trusted global innovator of IT and business services headquartered in Tokyo and serving clients over the world operating in more than 50 countries. NTT DATA enables clients, as well as society, to move confidently into the digital future, supporting their transformation through consulting, industry solutions, business process services, IT modernization and managed services. As a trusted global innovator, our values come from our commitment to our clients' long-term success, combining global reach with local client attention.

As an AI service provider, NTT DATA has years of experience in AI and the tools to create awareness of the importance of ethical AI, define responsible governance and implement solutions in a secure and compliant way.

Learn more and drive competitive advantage with our data platform expertise

nttdata.com/global/en/services/data-and-intelligence

Key contacts

David Pereira

Data & Intelligence and GenAI Office Head

José Ramón Olmedo Manzanque

Head of Data at NTT DATA Insurance Spain

Authors

Alberto Martínez Caballero

Tech Advisory Senior Consultant

Adil Moujahid

AI CoE – Technical Manager

Cristina Álvarez Neira

Head of GenAI for Insurance EMEAL

Manuel Rodríguez Morales

Analyst

Visit nttdata.com to learn more

NTT DATA – a part of NTT Group – is a trusted global innovator of IT and business services headquartered in Tokyo. We help clients transform through consulting, industry solutions, business process services, IT modernization and managed services. NTT DATA enables clients, as well as society, to move confidently into the digital future. We are committed to our clients' long-term success and combine global reach with local client attention to serve them in over 50 countries.



